PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND:GEF Trust Fund

PART I: PROJECT IDENTIFICATION

Project Title:	Strengthening management effectiveness and resilience of protected areas to protect biodiversity under conditions of climate change		
Country(ies):	Mexico	GEF Project ID:	TBD
GEF Agency(ies):	UNDP	GEF Agency Project ID:	4647
Other Executing Partner(s):	National Commission for Protected Natural Areas (CONANP), National Forestry Commission (CONAFOR), National Commission for Knowledge and Use of Biodiversity (CONABIO)	Submission Date:	November 30, 2011
GEF Focal Area (s):	Biodiversity	Project Duration (Months):	60
Name of parent program (if applicable): ➢ For SFM/REDD+ ☐	N/A	Agency Fee ($):	**1,017,273**

A. FOCAL AREA STRATEGY FRAMEWORK:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative Grant Amount ($)	Indicative Co-financing ($)
BD-1	Outcome 1.1: Improved management effectiveness of existing and new protected areas.	**Output 1.1.1**. New protected areas (number to be determined during PPG phase) and coverage of unprotected ecosystems (600 000 hectares). **Output 1.1.2**. New protected areas (number to be determined during PPG phase) and coverage (600 000 hectares) of unprotected threatened species (number to be determined during PPG phase). **Output 1.1.3.** Sustainable financing plans (12)	GEFTF	9,814,091	43,754,100
		Sub-Total		9,814,091	43,754,100
		Project Management Cost	GEFTF	358,636	1,600,000
		Total Project Cost		**10,172,727**	**45,354,100**

B. PROJECT FRAMEWORK:

Project Objective: The Mexican Protected Area system is spatially configured and managed to mitigate the adverse impacts of climate change on biological diversity

Project Component	Grant type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount ($)	Indicative Co-financing ($)
Component 1. National PA system readiness framework	TA	Safeguarding BD across the entire Mexican PA system (25,384,818ha) from predicted CC impacts (increase in temperatures, compression of rainfall, increased intensity of storms; increased frequency of droughts)	1.1 Decision making tools aimed at informing management and finance decisions to address CC risk to PA estate under conditions of uncertainty: fire, droughts; IAS, pests, diseases etc. • Stratified regional downscaling of meteorological forecasts and predicted CC impact on PA system informs decision making • GIS BD database and map layers produced and linked to annual operational planning and budgetary allocation • Communication system prepares PA managers and PA stakeholders to address in advance anticipated impacts from climate induced threats	GEFTF	1,998,388	6,143,480 CONANP 800,000 UNDP

			• Specific management guidance available and updated informs decisions on the ground			
		Adaptive capacity of the PA authorities cost effectively enhanced to address CC risk including institutional readiness framework and staffing skills	1.2 Multisectoral financing framework to implement the ECCAP • Internal budgetary restructuring (CONANP) to allow finance and human capital to be deployed to address specific risks • Brokering CC finance from national budgets to address CC threats on PA system • Budgetary coordination between sectors (CONANP, SAGARPA; CONAFOR, INE etc.) to ensure coherent investments and address threats cost effectively 1.3 ECCAP implementation monitoring mechanisms • Nationwide system for monitoring, analysing, disseminating and responding to information on the impacts of climate change on PAs and on the effectiveness of vulnerability reduction strategies • Long term BD monitoring systems in place for targeted species and ecosystems	GEFTF		
Component 2. PA system expansion to protect important refugia.	INV	At least 600,000 ha of new area included in new or existing conservation areas nationwide (from a baseline of 25,384,818ha) in order to promote connectivity and protect important refugia (sites to be confirmed during PPG phase) Functional conectivity between critical habitat blocks surronding PAs maintained to enhance resilience [covering at least 30,000ha] Reduced vulnerability of priority and/or threatened species to CC induced extirpation (for example montane species such as *Mortoniodendron ruizii* and the Mexican Elm *Ulmus mexicana*)	2.1 National PA expansion facilitated by GIS database in targeted ecosystems 2.2 Municipal ordinances on forest fragmentation, and integrated fire management 2.3 Incentive schemes in place (subsidies and market mechanisms etc..to be determined during PPG phase) 2.4 PA gazetting through Government declarations including boundary demarcation and management plans; provision for public consultation; determination of governance arrangements, zoning plan and use rights for different zones 2.5 Operationalization of PA management and surveillance/ enforcement 2.6 Functional connectivity improved between PAs and large habitat blocks outside PAs through stewardship: (conservation compatible land use on public and private lands)	GEFTF	4,000,000	12,000,000 CONANP 3,000,000 CONAFOR 500,000 CONABIO 500,000 ENDESU
Component 3. PA site management effectiveness in mitigating specific climate related threats to biodiversity	INV	Tested costeffective management mechanisms to address site specific threats in at least 12 priority vulnerable PAs, covering 2,000,000ha (e.g. increased frequency of fires, pest, fragmentation) Improved management effectiveness as measured by METT scores (target to be defined during PPG phase) Reduced vulnerability of	3.1 Strengthened management of vulnerable PAs based on site specific information to address predicted CC threats; protection of erosion; integrated fire management and control practices; improved disease outbreak control; management of corridors and improved production practices 3.2 Land use governance framework to deal with PA conservation and increased climate risk 3.3 Community capacity development programmes for planning, implementation and monitoring of site specific strategies for mitigating the impacts of climate change on PAs.	GEFTF	3,815,703	6,000,000 CONAFOR 14,810,620 CONANP

		threatened vegetation types by CC (Trans-mexican Volcanic Belt Pine Forests; Cloud Forest species such as *Fagus Grandifola* ; endangered mangrove species such as *Rhizophora mangle. Laguncularia racemosa* , etc..)				
			Sub-Total		9,814,091	43,754,100
			Project Management Cost	GEFTF	358,636	1,600,000 CONANP
			Total Project Costs		**10,172,727**	**45,354,100**

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, ($)

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount ($)
National Government	National Commission for Protected Natural Areas (CONANP)	Grant	34,554,100
National Government	National Forestry Commission (CONAFOR)	Grant	9,000,000
National Government	National Commission for Knowledge and Use of Biodiversity (CONABIO)	Grant	500,000
GEF Agency	UNDP	Grant	800,000
CSO	Natural Spaces and Sustainable Development (ENDESU)	Grant	500,000
Total Co-financing			$45,354,100

D. GEF/LDCF/SCCF RESOURCES REQ-UESTED BY AGENCY, FOCAL AREA AND COUNTRY

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (a)	Agency Fee (b)	Total c=a+b
UNDP	GEF TF	BD	Mexico	10,172,727	1,017,273	11,190,000
Total Grant Resources				**10,172,727**	**1,017,273**	**11,190,000**

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

A.1. THE GEF FOCAL AREA STRATEGIES:

1. The proposed project aims to transform management and coverage of terrestrial and coastal protected areas in Mexico to alleviate the direct and indirect impacts of climate change on globally significant biodiversity. This will be achieved through a three-pronged approach: development of management systems (monitoring and early warning systems, management decision making tools and sustainable financing) in order to optimize readiness at national level to address the anticipated implications of climate change for the PA system as a whole; expanding PAs in landscapes that are particularly sensitive to climate change, in order to protect refugia and corridors; and building readiness to address specific climate change impacts in vulnerable PAs.

2. The project will contribute directly to the GEF Biodiversity Focal Area Strategic Objective on Protected Areas. Climate change is predicted to become one of the principal drivers of biodiversity loss in Mexico in future; a conjunction effect of existing threats and climate change induced pressures is likely to have a severe impact on biodiversity. Clearly, not all these impacts may be mitigated, and there are numerous uncertainties regarding the nature and scale of many of them. The protected area system is currently ill prepared to address these threats, and presently, is not spatially configured to reduce risks. A precautionary approach is needed to increase the preparedness of PA authorities and other stakeholders to address the challenge. The project seeks primarily to enhance the management effectiveness of the PA system to address the threats; however, it will also contribute to the expansion of the PA system to incorporate critical refugia for threatened biodiversity. This initiative will build on other projects that have sought to strengthen management of the Mexican PA system, and will fill an important gap by addressing threats specifically related to climate change in particular aimed at enhancing ecosystem resilience. This is in accordance with the GEF guidance governing investments in protected areas to support "the development and integration of adaptation and resilience management measures as part of (GEF V) protected area management projects".

3. The project will contribute to the following goals of the CBD Programme of Work on Protected Areas (POWPA): 1.1 "To establish and strengthen national and regional systems of protected areas integrated into a global network"; 1.2 "To integrate protected areas into broader land- and seascapes and sectors so as to maintain ecological structure and function"; 1.5 "To prevent and mitigate the negative impacts of key threats to protected areas" and particularly 1.4 "To substantially improve site-based protected area planning and management", which makes specific reference to the "[integration] of climate change adaptation measures in protected area planning, management , and in the design of protected area systems" (activity 1.4.5).

A.2. NATIONAL STRATEGIES AND PLANS OR REPORTS AND ASSESSMENTS UNDER RELEVANT CONVENTIONS:

4. Mexico's National Development Plan 2007-2012 (Section 4.3[1]) recognizes the importance of the country's biodiversity and the significance of the threat posed to it by climate change. It prioritizes the conservation of biodiversity (Objective 10) and recognizes the role of protected areas in this regard. It specifically proposes the expansion of the protected area estate (Strategy 4.2). The present project responds directly to the provisions of the Climate Change Strategy for Protected Areas in Mexico (ECCAP[2]), prepared by the National Commission for Protected Natural Areas (CONANP) in accordance with the National Program for Protected Natural Areas 2007-2012 and as a response by CONANP to the Special Program on Climate Change of the Federal Government, and the Policy Framework for Adaptation to Climate Change that was presented at COP16. The general objectives of the ECCAP are to increase the resilience of ecosystems and reduce the vulnerability of the communities that live within them and depend on ecosystem services for their livelihoods to the anticipated impacts of climate change and to contribute to the mitigation of greenhouse gases and enhancement of carbon stocks. The vision of the ECCAP is to conserve the natural heritage of Mexico in order to address the effects of climate change, by converting protected areas (PAs) into an effective instrument for adaptation and mitigation, with the participation of a diverse set of stakeholders.

5. The project has been selected through a competitive process by the National Committee for Evaluation of GEF projects in Mexico, on the basis of its compliance with overarching national policies that include the reduction of vulnerability to climate change. The project amply satisfies the criteria stipulated by the National Committee, inasmuch as it will contribute significantly to the area under conservation, management and sustainable use with direct benefits for the conservation status of biodiversity, guided by sound scientific and technical analyses; it will generate social benefits by helping to sustain the capacity of protected areas to deliver environmental services to the local and national population, under conditions of climate change; it will strengthen institutional capacities for the planning and execution of natural resource management, and coordination between different institutional actors in the environmental and economic sectors; and it will apply an interdisciplinary approach that integrates social, biophysical and economic considerations in enhancing PA management effectiveness.

B. PROJECT OVERVIEW

B.1. DESCRIBE THE BASELINE PROJECT AND THE PROBLEM THAT IT SEEKS TO ADDRESS:

6. Mexico is a 'mega-biodiverse' country, in which an estimated 12% of the world's species are represented. 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. Mexico is also of high global biodiversity importance as the centre of origin of many species with great use potential in both the agricultural and forestry sectors. Notable examples include the agricultural crops maize (*Zea mays*), squash (*Cucurbita* spp.) and cotton (*Gossypium hirsutum*), and *Leucaena* spp., a multi-purpose tree genus with massive potential in smallholder agroforestry systems.

7. Mexico is predicted to be at risk from a number of adverse climate change impacts, including increases in temperatures (over most of the country, but particularly in the north-west), of between 2 and 4^{o}C[3]; reductions in rainfall levels, especially in the north-west of the country; compression of rainfall into fewer rain days; intense storms; an increase in the severity of hurricanes; and increases in sea levels[4]. The nature of impacts will vary greatly across the country, with for example increases in the maximum number of dry days per year in some parts of central and southern Mexico and decreases in parts of the northwest.

[1] http://pnd.calderon.presidencia.gob.mx/sustentabilidad-ambiental/biodiversidad.html
[2] Estrategia de Cambio Climático para las Áreas Protegidas de México
[3] http://siteresources.worldbank.org/INTLAC/Resources/SDWP_Future_Climate.pdf
[4] http://cccma.seos.uvic.ca/ETCCDMI/papers/Aguilar_etal_2005.pdf

8. Conditions in Mexico are in theory particularly favourable for the survivability of biota under climate change, due to the fact that the country lies at the intersection of nearctic and neotropical bioregions, which results in high levels of genetic diversity and adaptability, and the presence of extensive corridors linking different altitudinal and latitudinal zones, along which biota can migrate in the event of changes in climatic conditions. Despite this, climate change does pose significant risks:

- Ecological perturbations and corresponding reductions in the distributional area of species. Models to date under two climate scenarios[5], using data managed by CONABIO, predict that although extinctions and drastic range reductions of fauna species are likely to be relatively few, species turnover in some local communities may be high (>40% of species), suggesting that severe ecological perturbations may result. Many species will experience drastic reductions and fragmentation of distributional areas, or extend their distributions, creating new natural communities with unknown properties. 0–2.4% of species are predicted to lose at least 90% of their present distributional area, and 5.1–19.5% are predicted to lose at least 50% of the present distributional area by 2055, under three different assumptions of dispersal capacity. The west Mexican chachalaca (*Ortalis poliocephala*), for example, is likely to encounter between 29.7% and 33.7% less habitable area by 2055 as a result of climate change, depending on the climate change scenario used. The main foci of species turnover are expected to be the Chihuahuan desert in northern Mexico, interior valleys extending south to Oaxaca, and the Baja California peninsula (where predicted species turnover rates are as high as 45%). Similar effects are likely for flora: for example, a predicted 2°C increase in temperature and 20% reduction in rainfall in cloud forests of eastern Mexico are likely to result in a drastic contraction in the distribution of the tree species *Fagus grandifolia* var. *mexicana*, meaning that most of the remaining populations will inhabit restricted areas located outside the boundaries of the surrounding reserves[6].

- Changes in species composition in montane ecosystems: historical analyses have shown that cloud forest taxa, for example, tend to become reduced during intervals of aridity[7]. The upward movement of the isotherms that define the limits of these ecosystems results in reductions in their areas and increased fragmentation, to the detriment of the viability of the populations of biota. Cloud forests cover less than 1% of the country's land surface, but are thought to contain about 12% of the country's plant species, 30% of which are endemic to Mexico; these include the Critically Endangered *Mortoniodendron ruizii*, which has lost over 80% of its habitat in recent decades, and the Endangered Mexican Elm (*Ulmus mexicana*), which is threatened by land conversion to coffee plantations.

- Increases in the susceptibility to fire of terrestrial ecosystems due to increasing ambient temperatures and falling humidity. An example of one of the ecosystems affected is the Critically Endangered Trans-Mexican Volcanic Belt Pine Forests, which is an important center of taxonomic diversity for the genus *Quercus* and the family Asteraceae; most of the endemic vertebrates of Mesoamerica, restricted-range vertebrates, and plants of the family Lamiaceae, occur exclusively in pine-oak forests. In addition, these forests play an important role as a "rain trap", contributing to the re-fill of underground aquifers that supply water to the nearby towns.

- Increased susceptibility of ecosystems to stress, pests and diseases due to climate change. Studies of oak decline in Mexico (Alvarado-Rosales et al., 2007) concluded that low temperatures and water deficits cause stress and, in some cases, result in death of oaks.

- Localized increases in demographic pressures due to immigration from areas where livelihood sustainability has been undermined by climate change-induced livelihood collapse

- Weakening of traditional systems of environmental governance and natural resource management in areas affected by emigration due to climate change-induced livelihood collapse, and a transition to more extensive forms of production, balanced to some extent by reductions in demographic pressures.

- Increased wave erosion of mangroves, coastal dunes and other coastal ecosystems due to rising sea levels and increasingly frequent and intense storms and hurricanes. The mangrove ecoregions include the Alvarado

[5] Townsend Peterson A, Ortega-Huerta MA, Bartley J, Sánchez-Cordero V, Soberón J, Buddemeier RH and Stockwell DRB (2002): Future projections for Mexican faunas under global climate change scenarios. *Nature* Vol 416, 627-7. http://www.ibiologia.unam.mx/vscscience/Naturepaper.pdf

[6] http://www.springerlink.com/content/u818n4x853137683/

[7] Figueroa-Rangel, B.L., Willis, K.J. and Olvera-Vargas, M. 2010. Cloud forest dynamics in the Mexican neotropics during the last 1300 years. *Global Change Biology* **16**: 1689-1704

mangroves in the Gulf of Mexico and the Mexican South Coast Pacific mangroves on the west coast, both of which are classified by WWF as Vulnerable. The mangrove species affected include *Rhizophora mangle*, *Laguncularia racemosa*, *Avicennia germinans* and *Conocarpus erectus* (Seeliger 2001). These ecosystems are hugely important as habitat for species such as green iguanas (*Iguana iguana*), Mexican beaded lizards (*Heloderma horridum*), yellow bellied slider (*Trachemys scripta*) and mammals including pumas (*Puma concolor*), ocelots (*Leopardus pardalis*), jaguars (*Panthera onca*), southern pygmy mouse (*Baiomys musculus*), Saussure's shrew (*Sorex saussurei*) and many bat species such as *Durmanura phaeotis*, *D. aztecus* and *D. toltecus* and myotis (*Myotis volans*, *M. furtidens*). They are also vital for migratory birds and as breeding and grow-on zones for commercially important fish.

- Increases in moisture and salinity levels in seaward parts of coastal ecosystems, such as mangroves, due to rising sea levels, beyond their tolerance thresholds, resulting in landward regression. The salinity of the water and the degree of flooding in the area determine individual species abundance (Rzedowski 1988): *R. mangle* is relatively resistant, while *A. germinans* and *C. erectus* are rare if the floods are permanent and submerge the trees too deeply in the mud. This may to some extent be compensated by processes of landward colonization of these ecosystems, as humidity and salinity levels increase there[8].
- Mortality of coral reefs due to reduced photosynthesis, as sea levels rise above the coral faster than the coral is able to grow and light penetration is reduced due to increased phytoplankton production. The east coast of the Yucatán peninsula is the location of the northernmost, and largest, part of the Mesoamerican barrier reef. Coral mortality is likely to have major impacts on the conservation status of a large number of globally important species that depend directly or indirectly on the ecosystem, including the largest population of manatees in the western Caribbean, the American crocodile, several species of sea turtles (green, hawksbill and loggerhead), as well as the Nassau and Golaith groupers, whale, bull, nurse, reef, and hammerhead sharks, and birds that rely heavily on the richly productive feeding grounds of the reef such as the magnificent frigate bird, red-footed booby and olivaceous cormorant.
- Coral bleaching, as rising sea temperatures force corals to expel their symbiotic algae that provide much of their food. Corals in the Mesoamerican reef on the eastern side of the Yucatan Peninsula have experienced bleaching events in at least 1995, 1998, 2003, 2005, 2008, 2009 and 2010; corals that are stressed by pollution and overfishing are less likely to recover from coral bleaching events[9].
- Reduction in calcification rates in reef-building corals and algae due to reduced availability of carbonate ion (CO_3^2), resulting from reduced pH.

9. In addition to direct impacts on biodiversity itself, climate change is likely to have indirect impacts by modifying the nature and magnitude of anthropogenic threats currently affecting BD. Increases in the degradation and fragmentation of ecosystems, due to climate-related stress and altitudinal regression, are likely to increase their exposure to encroachment by agriculture and logging, which in a 'vicious circle' effect will in turn lead to further degradation and fragmentation. These processes will also place increased demands on the management capacities of protected area authorities, opening up new ecosystem edges that need protecting and requiring modifications in management practices. Climate change is also likely to affect the dynamics of the production landscapes surrounding PAs, again with indirect implications for the PAs themselves. Increased water stress, for example, may affect the functioning of the existing productive systems in these landscapes, leading farmers to expand the areas under production (of crops or livestock) into hitherto intact ecosystems, or to abandon their existing production areas and migrate into these areas. Changes in climatic conditions in production landscapes may also affect their ecological functioning and species/ecosystem composition, thereby reducing their value for connectivity between natural habitat blocks, as well as their capacity to provide environmental services for the population at national and local levels. One example is shade coffee farms, which play a vital role in these regards; in the absence of adequate adaptation measures, climate change may lead to increased incidence of coffee crop failure, and consequent conversion of these farms to less BD-friendly production systems. In addition, the upward movement of isotherms due to climate change may result in the upward migration of coffee farms and their encroachment into natural ecosystems such as already threatened cloud forest.

10. **Protected areas.** As outlined in Section A2 above, protected areas constitute a cornerstone of Mexico's efforts to conserve its globally-important biodiversity endowment. The country's national protected area estate consists of 174

[8] http://coastal.er.usgs.gov/wetlands/ofr99-441/OFR99-441.pdf
[9] Report Card for the Mesoamerican Reef. An evaluation of ecosystem health 2010. Healthy Reefs for Healthy People.

Protected Natural Areas, representing 12.92% of the nation's surface area, which are protected and administrated by the federal National Commission of Protected Natural Areas (CONANP), a federal agency (see Table 1). CONANP administers 67 National Parks, 41 Biosphere Reserves, 35 Protected Flora & Fauna Areas, 18 Nature Sanctuaries, 8 Protected Natural Resource Areas and 5 Natural Monuments. 58 of these PAs constitute the National System of Protected Areas (SINAP), which is made up of those PAs with biodiversity and ecological characteristics that are of particular global and national conservation importance.

Table 1: Categories of Federal PAs in Mexico

Categories	**Objectives**	**Number**	**Area (km^2)**
Biosphere Reserves	Conservation of intact ecosystems or those requiring preservation or restoration, containing nationally representative, endemic or threatened species. Core zones are limited to preservation, research and education, buffer zones can be used by existing local communities in ways compatible with conservation.	41	126,527.87
National Parks	Conservation of ecosystems of national importance due to scenic beauty, scientific, educational, recreational or historical value, the presence of flora and fauna, or tourism potential. Only activities related to natural resource protection, research, tourism and education are allowed.	67	14,824.89
Natural Monuments	Contain natural elements that are unique or exceptional, have aesthetic interest, historical or scientific value. Only activities related to preservation, scientific research, recreation and education are allowed.	5	162.68
Natural Resource Protection Areas	Areas intended for preservation and protection of soil, watersheds, waters and other natural resources located in land suited for forests, including forestry reserves and zones, protection zones for water bodies and water sources. Only activities related to the preservation, protection and sustainable use of natural resources are allowed.	8	44,440.78
Fauna and Flora Protection Areas	Established in areas that contain habitats on the equilibrium and preservation of which depend the existence, transformation and development of wild flora and fauna. Activities related to preservation, repopulation, propagation, acclimatization, refuge, research and sustainable use of these species are allowed, as well as related education and awareness raising. They can also be subject to sustainable use by existing local communities.	35	66,469.42
Sanctuaries	Established in areas with considerable wealth of flora and fauna, or by the presence of species, subspecies or habitat with restricted distributions. Only research, recreation and environmental education are allowed.	18	1,462.58
Total		**174**	**253,848.18**

11. In addition to these federal PA, there are five other broad categories of PAs in Mexico: state, municipal, community, *ejidal* and private. At least 22 states now have state-level PAs declared; Jalisco and Oaxaca have integrated these into State-level Protected Areas Systems. Over the last 10 years, many indigenous and ejidal communities have formalized PAs at community-level; there are currently more than 150 such PAs, typically with sizes in the range of 3,000 to 5,000ha.

12. The **long-term solution** to these threats is to design and manage PAs in Mexico in such a way as to increase the resilience of their constituent biodiversity to the effects of climate change; to establish new protected areas or expand existing ones in order to compensate for the loss and degradation of existing areas as a result of climate change; and to manage the landscapes surrounding and connecting PAs in such a way as to maintain their value in providing biological connectivity, and to contribute to the stability of the production processes carried out there under conditions of future climate change.

13. The **baseline** project on which this initiative will build is the establishment and management, by the Government of Mexico and its institutional and local partners, of protected areas, within the framework of the National Protected Areas System (SINAP). Currently the Government of Mexico invests around US$ 92.33 million per year in the establishment and management of protected areas, which is complemented by around US$36.37 million of external cooperation funds. To date these investments have focused on i) expanding and consolidating the SINAP and other conservation modalities; ii) formulating and developing a programme for the conservation of high risk species; iii) consolidating tourism in protected areas, generating benefits for local populations; iv) increasing the coverage and effectiveness of the strategy of conservation for development, which guarantees that local and indigenous communities and landowners received

incentives and benefits from their participation in conservation; and v) maintaining the participation of members of society in the conservation of protected areas[10]. The achievements to date as a result of these investments, in terms of the coverage of protected natural areas, are summarized in Table 1. It was not until the ECCAP was formulated in 2011 that specific proposals were developed for taking into account the implications of climate change for protected areas, the biodiversity that they contain and the environmental services that they provide. The ECCAP, however, is not adequate on its own to ensure that effective measures are taken to reduce the vulnerability of PAs to climate change: despite the afore-mentioned baseline investments there are still deficiencies in information availability, planning capacities, inter-institutional coordination and collaboration, technical capacities in PA institutions and land managers and local governance and planning mechanisms, which have impeded implementation.

14. The barriers to the achievement of the normative solution are as follows:

Lack of a concerted and coherent national planning and response framework for responding to implications of climate change for Protected Areas.	The Climate Change Strategy for Protected Areas in Mexico (ECCAP) establishes general guidelines, strategic directions and priorities, but there are as yet no clear national strategies for how to address specific ecosystems and threats in an effective and coherent manner, based on objective analyses of the relations between the location and nature of priority sites for BD conservation and the magnitudes and implications of climate change processes, or of spatial options for adaptation such as the establishment or expansion of protected areas or the definition of regional corridors. Furthermore, although major progress has been made in consolidating the financial sustainability of the PA estate, analyses of financial needs and corresponding strategies do not as yet take into account the additional funds that will be required to build resilience to climate change, for example through the expansion of PAs to compensate for ecosystem migration and fragmentation; neither are there as yet adequate systems in place for monitoring the impacts of the resilience development strategies on the conservation status of key species and ecosystems. The key institutions with responsibilities related to the management of protected areas and the surrounding landscapes (CONANP, CONABIO, CONAFOR, INE, SAGARPA) have each individually recognized climate change as an issue that requires action. In addition, instruments such as ECCAP, the Special Program on Climate Change of the Federal Government, and the Policy Framework for Adaptation to Climate Change are evidence of higher-level policy commitment. Despite this, the full nature and magnitude of the potential implications of climate change for the biodiversity conserved by PAs are not yet adequately recognized by actors in individual institutions, or reflected in concrete terms in the actions of the institutions and corresponding policies and strategies. Of particular significance in this regard are spatial planning and economic development policies. Furthermore, as yet the levels of cooperation and coordination between these institutions are insufficiently developed to permit the implementation of effective multi-sector and landscape-wide approaches for supporting resilience and adaptation of PAs to impacts of climate change.
Sector- and site-specific approaches to addressing the threats to PAs posed directly and indirectly by climate change	The definition of the location of protected areas in Mexico is guided by an ecosystem gap analysis initiated in 2004 by CONANP, INE, INEGI and NGOs including the Nature Conservancy. Missing from this analysis, however, was a consideration of how protected areas should be inserted into the broader landscape in such a way as to take into account the fragmentation and ecosystem migration that are likely to result from climate change. Also missing are concrete strategies, applicable at landscape level, for taking into account the additional costs of applying this landscape-wide approach to expanding the PA estate, for example by internalizing the value of the environmental services and other economic benefits provided by the PAs. Furthermore, institutional actors (e.g. SAGARPA, CONAFOR and CONABIO) and land managers have limited technical knowledge and experience of how to work in a collaborative manner to adapt the management of the landscapes surrounding and/or connecting PAs to the new and unfamiliar challenges posed by climate change, for example through the promotion of appropriately located agroforestry and agro-silvo-pastoral systems that are resilient to climatic fluctuations and provide habitat and connectivity for the fauna species that would otherwise be affected by ecosystem regression and fragmentation.
Limited capacities for application of climate change resilience/adaptation strategies in individual PAs	At present, management plans for most PAs do not take into account the potential implications of climate change, such as the risk of increased incidence of fires and pests, or make provisions for adapting their management accordingly. PA staff lack know-how to detect warning signs of the effects of climate change, to monitor processes and to develop and apply appropriate management responses. Their ability to combat threats is in likely to be further weakened in the future as opportunities for effective co-management become scarcer, as a function of processes of demographic change that weaken social capital in rural areas. Effective management of PAs will also be depend on conservation objectives being harmonized as much as possible with local development strategies: at present, relations between PA managers and local authorities are insufficiently developed to allow this.

[10] CONANP National Programme 2007-2012 http://www.conanp.gob.mx/quienes_somos/pnal2007.php

B. 2. INCREMENTAL COST REASONING AND THE ASSOCIATED GLOBAL ENVIRONMENTAL BENEFITS:

15. The project will focus on strengthening the capacities of PAs to withstand and adapt to the impacts of climate change and thereby to continue to yield ecosystem goods and services at national and international levels. This will redress the gaps in the baseline investments by the Government of Mexico in PA management, mentioned above, which have to date not allowed the provisions of the ECCAP to be put fully into practice.

16. Examples of the options of strategies that exist for improving the resilience and adaptation of biodiversity in PAs to climate change are shown in Table 2.

Table 2: Threats related to climate change, and corresponding responses

Threat	Responses
Recession and/or degradation of coastal and marine ecosystems as a result of sea level rise	- Protection of additional areas to complement or replace the affected areas, including areas which are susceptible to future colonization by the ecosystems in question as conditions there become more favourable due to increases in humidity and salinity levels[11] - Protection of eroding edges from further erosion, assisting in leaf litter retention to enhance peat production and prohibitive management strategies, such as limiting the access of motor propellers to mangrove areas[12].
Coral mortality due to bleaching and swamping	- Intensification of controls on pollution and fishing in highest priority or most vulnerable sites in order to limit stress-related susceptibility to bleaching and protect populations of keystone functional groups [13] - Establishment of artificial reefs and coral nurseries[14]
Increase frequency of fires	- Introduction of integrated fire management practices (e.g. controlled burning, thinning and enrichment planting) in order to reduce risks of destructive fires[15] - Increased investment in fire control measures (equipment and early warning systems)
Increased frequency of pests and diseases (e.g. Southern Pine Beetle *Dendroctonus frontalis* in forests affected by storm events[16])	- Modification of forest management regimes (e.g. sanitary fellings, informed by early warning systems), to control outbreaks[17] - Increased emphasis on protecting centres of genetic diversity (species and populations) as a resource for adaptation capacity
Regression and fragmentation of mountain ecosystems	- Active management of areas affected by regression in order to maintain effective sizes of habitats and populations, for example by maintaining broadleaved understorey in pine forests adjoining cloud forest - Declaration and management of corridors in order to maximize connectivity[18]
Changes in productive dynamics of landscapes surrounding and linking PAs	- Support to the development of production practices that are resilient to climate change (e.g. agroforestry) and landscape restoration, in order to stabilize processes of land use change
Changing demographic pressures	- Declaration of new PAs in priority areas vulnerable to future demographic pressures - Support to local environmental governance structures

[11] Titus, J.G. and M.S. Greene. 1989. An overview of the nationwide impacts of sea level rise. In: J.B. Smith and D. A. Tirpak (eds.) The Potential Effects of Global Climate Change on the United States. Appendix B - Sea level rise. Washington D.C.: U.S. Environmental Protection Agency. pp. 5,1 - 5,54.

[12] Ellison, J.C. 1992. Effects of sea-level rise on island mangrove swamps. In: Coastal Resources and Systems of the Pacific Basin: Investigation and Step Toward Protective Management, UNEP Regional Seas Reports and Studies No. 147. pp. 21-29.

[13] Gabriel D. Grimsditch G.D and Salm R.V. 2006. Coral Reef Resilience and Resistance to Bleaching. IUCN, Gland, Switzerland. 52pp http://data.iucn.org/dbtw-wpd/edocs/2006-042.pdf

[14] Report Card for the Mesoamerican Reef. An evaluation of ecosystem health 2010. Healthy Reefs for Healthy People.

[15] Rodríguez Trejo D.A. 2008. Fire Regimes, Fire Ecology, and Fire Management in Mexico. AMBIO: A Journal of the Human Environment 37(7):548-556.

[16] Moore, B. and Allard, G. 2008. Climate change impacts on forest health. Forestry Department, Food and Agriculture Organization of the United Nations, Forest Health and Biosecurity Working Papers FBS/34E.

[17] http://www.barkbeetles.org/centralamerica/0605e.html#dir

[18] See e.g. "Nadkarni N. and Wheelwright N.T. (eds.) 1999. Monteverde: ecology and conservation of a tropical cloud forest" regarding corridors for neotropical cloud forest biota in Costa Rica, and how the management of ecosystems adjoining cloud forest in order.

17. The project will consist of the following components, which correspond to the barriers identified above.

18. *Component 1: National PA system readiness framework:* The project will support CONANP in implementing its National Strategy for addressing the impacts of climate change on PAs and their constituent biodiversity, enabling the ECCAP to be put into practice. In addition, national plans and priorities for PAs will be reviewed in order to ensure that overall coverage figures for priority ecosystems and species are maintained under different climate change scenarios; as will economic and spatial planning instruments and policies, in order to ensure that opportunities are provided for the required establishment or expansion of PAs and for addressing threats that may affect their viability (such as fishing and pollution, pressures from which are key determinants of the resilience of reefs to climate change).

19. In order to maximize the effectiveness and impact of these instruments, the project will ensure that they are based on sound science, and to this end will support detailed analyses of ecological, biophysical, social and economic implications under different predicted CC scenarios, by national and international experts in each field. These analyses will examine, for example, likely reductions in the areas of priority ecosystems and species, based on considerations of their tolerance limits to environmental parameters; the implications of the climate change-related modification or loss of forest habitats for water yields; the implications of climate change for livelihood sustainability and consequently for demographic pressures on protected areas; and the economic implications of the loss of environmental goods and services from PAs as a result of climate change, compared to the costs of adapting to this situation or preventing it by investing in promoting the capacity of PAs to generate them.

20. In order to ensure that the instruments mentioned are adopted and effectively applied, the project will support the raising of awareness among policy makers necessary to bring about such changes, regarding the nature, magnitude and implications of the impacts of climate change, and particularly regarding implications for human vulnerability to environmental extremes and climate change processes. Dissemination instruments to this end will include a specific PA atlas depicting these impacts in easily understandable terms, supported by smaller publications and maps suitable for mass distribution, conferences, media events, email postings and website(s), in accordance with a communication strategy to be developed during the implementation phase based on initial proposals to be developed during the PPG phase.

21. These instruments will be accompanied by a financial sustainability strategy which will define how to ensure the availability of the financial resources required for maintaining the conditions of resilience and adaptation capacity created by the project, under different scenarios of climate change and different assumptions regarding the time horizons and priorities of policy makers. Key elements of this strategy will include the generation of additional funds from Government and private sector sources in recognition of the economic costs that would result from failing to anticipate the impacts of climate change on the ability of PAs to provide environmental goods and services; and the improvements in the efficiency with which existing funds are used, for example through the allocation of funds to regional clusters of PAs, from where they can be redeployed to specific sites based on need. In addition, the project will support the development of specific programmes for promoting the resilience of the principal different ecosystems represented in the country that are likely to be at most risk from the effects of climate change, such as coral reefs, mangroves, cloud forest and pine forest.

22. Furthermore, the project will support the implementation of these strategies by assisting CONABIO in the development and adaptation of a national system for information, monitoring, evaluation, disseminating and responding to information on the impacts of climate change on PAs and on the effectiveness of resilience strategies, and early warning systems for detecting threats exacerbated by climate change. Such systems will play an essential role in allowing the application of an "adaptive management" approach to responding to climate change, which is particularly important given the levels of uncertainty that existing regarding the magnitude and nature of its impacts. This will build upon the considerable advances made by CONABIO to date in environmental monitoring and early warning of fires, and will focus in particular in developing mechanisms whereby the information generated is fed into decision making through links between CONABIO, CONANP, CONAFOR, SAGARPA and other institutions.

23. *Component 2: PA system expansion to protect important refugia.* The project will support the application of a landscape-wide approach to planning the expansion and establishment of conservation areas[19], and the modification of management regimes, in order to compensate the fragmentation of ecosystems that is expected to result from climate change and to anticipate the spatial migration of ecosystems that is expected to result from sea level rise, changes in moisture regimes and the upward movement of isotherms. The boundaries of key areas for PA expansion and landscape

[19] The term 'conservation area' reflects the landscape-level approach that the project will apply to biodiversity conservation and adaptation, which will go beyond protected areas in their strict sense to include areas of connectivity between them.

management will be defined, and gazetted accordingly, on the basis of GIS analyses overlaying the locations of priority species, ecosystems and areas of connectivity and management, and the implications on these of climate change.

24. Furthermore, it will support the introduction, into the landscape surrounding and linking the core zones of PAs, of production systems that are resilient to climate change and that restore the biological functioning of the landscapes and their capacity to provide biological and environmental services. This will serve to stabilize processes of land use change, thereby reducing the risk that climate change will oblige farmers to expand their areas under cultivation or to migrate into PAs. Given that the primary focus of this project is on the PAs themselves, investments of GEF funds in these issues will be limited, focusing on those areas that are identified as being of particular importance for connectivity, or particularly vulnerable to productive collapse, and on the provision of advice to Government institutions and farmers in the development of resilient practices for production and restoration, for example through applied research and experimentation, rather than on major investments at field level. The project will build on ten years of experience of the Meso-American Biological Corridor implemented in the four southernmost states of Mexico (Campeche, Chiapas, Quintana Roo y Yucatan). Attention will in addition be paid to analysing the financial, policy and governance frameworks that determine land use in these areas, in order to ensure that enabling conditions exist for the scaling-up and sustainability of these practices in the longer term, for example through the application of systems of payment for environment services (this is an area in which CONAFOR is currently investing heavily).

25. *Component 3: PA site management effectiveness in mitigating specific climate related threats to biodiversity.*. The project will also carry out field level actions in protected areas which are identified, through the national level processes of analysis proposed under Component 1, as being particularly critical in terms of the potential impacts of climate change on globally important biodiversity and on flows of ecosystem goods and services. The project's actions under this component will mirror those proposed at national level under Component 1, but will be specific to individual PAs. The process will start with analyses of the impacts and threats of climate change on each PA, including maps indicating probable changes in ecosystem boundaries and conditions. On the basis of this information, it will support the development or modification, as appropriate, of management plans for existing, new or expanded conservation areas, reflecting the changed conditions expected as a result of climate change and including provisions for resilience and adaptation. The specific management strategies to be applied will be developed in more detail during the PPG phase and validated during the implementation phase: initial indications, with corresponding references, are provided in Table 2.

26. The national level systems for M&E and early warning proposed under Component 1 will also be mirrored at local level: PA staff will be provided with the training, equipment and systems required to allow them detect signs of the impacts of climate change, to monitor these impacts, and the effectiveness of strategies for resilience and adaptation, over time, and to respond to the results of monitoring through the definition and application of corresponding management strategies. These decision-support systems will be backed up by concrete investments needed for the management strategies to be put into practice, such as fire control equipment; in addition, the project will fund specific management actions in a limited number of conservation areas selected as being of particularly high priority (in terms of their vulnerability and the significance of their biodiversity or the ecosystem services which they provide), or as having particularly high potential to act as pilots.

27. Participation of local stakeholders will be a key determinant of the effectiveness of the proposed PA management strategies. This is particularly the case in Mexico where local stakeholders are represented by both municipal and agrarian authorities, and where there are widespread and promising models of community-based environmental governance, within the framework of the *ejidos* and agrarian communities established under agrarian law. In priority protected areas, the project will support the development of the capacities among local institutions, including municipal and state governments, for monitoring and regulating natural resource use in PAs and their buffer zones, and will also assist agrarian authorities in selected communities in adapting their capacities and regulations to the changing demographic and environmental conditions resulting from climate change.

28. The actions set out above will have incremental benefits in terms of improved conservation of globally important biodiversity in this megadiverse country and reductions in rates of carbon emissions resulting from the loss and degradation of terrestrial and coastal carbon sinks. The principal value added of GEF support, in relation to the baseline project, will be the introduction of climate change considerations into the planning and management of PAs.

29. Subject to confirmation during the PPG phase, it is proposed that the project will focus in particular on conservation areas in terrestrial and coastal ecosystems, especially cloud forests, the Chihuahua Desert and Baja California, which have been identified as being particularly susceptible to the effects of climate change. These correspond to the following

regional administrative units of CONANP: Península of Baja California and North Pacific, Northwest, Upper Gulf of California, Southern Frontier, Isthmus and South Pacific, West, Centre and Northeast Pacific and Eastern Sierra Madre.

B.3. SOCIOECONOMIC BENEFITS TO BE DELIVERED BY THE PROJECT INCLUDING GENDER DIMENSIONS:

30. The project will generate major socioeconomic benefits by helping to ensure the continued ability of PAs to generate environmental goods and services of importance to livelihoods, in the face of changing climatic conditions. Improved management and protection of the pine forests in the centre of the country, for example, will reduce their vulnerability to fire under expected conditions of increasing dryness; these forests are vital for the recharge of the aquifers on which major urban centres such as Mexico City depend, while wildfires typically generate in major collateral impacts on local communities in the form of destroyed crops and other property. Similarly the introduction of integrated fire management and training of local communities in practices such as controlled burning, thinning and enrichment planting associated to increased investments in fire control measures (equipment and early warning systems) will reduce the risk for increased frequency of destructive fires. Major storm events in recent years on both the Pacific and Atlantic drainages have illustrated the vulnerability of large numbers of the rural population to associated flash floods and landslides, and the project will contribute to the maintenance of forests which help to protect watersheds against such phenomena. Similarly, the maintenance of mangroves in coastal PAs will help to maintain their role in protecting coastal settlements against wave impacts during increasingly frequent or intense hurricanes. Much of the agriculture in the drier parts of the country is dependent on irrigation, and the project will help to ensure the continued role of PA forests in generating the dry-season flows on which this depends, even under conditions of increased climatic variability. These benefits will be felt across a wide range of social and economic strata, by men and by women, and by both rural and urban populations.

31. These national benefits will in turn have indirect global benefits as they will help to stabilize the processes of internal and external migration which are motivated by climate change-induced collapse of rural livelihoods, and which act as drivers for ecosystem degradation in both expulsion and reception areas.

32. The establishment or expansion of PAs proposed by the project in order to improve the resilience of biodiversity to climate change has the potential to generate negative livelihood impacts in the short term, due to possible limitations on livelihood support activities. These impacts will be kept to the minimum necessary by carrying out detailed participatory negotiation of the proposed establishments or expansions with local communities and, where possible, by using local models of conservation as alternatives to exogenous models. The negotiation and design of PA establishment and expansions will include analysis of gender dimensions in order to minimize the risk of disproportionate negative impacts on the economic and social status of women.

Sustainability

33. Specific provision is being made by the project to ensure the financial sustainability of its investments in the PA system, under Output 1.4. The project will develop a financial sustainability strategy for maintaining PA resilience to climate change impacts in the long term, under different scenarios, emphasizing cost-effectiveness through the informed targeting of interventions, and the generation of funds from public and private sources in recognition of the potential economic impacts of non-action (in terms of foregone PA goods and services as a result of climate change). This will build upon and complement the mechanisms for financial sustainability developed through previous GEF-funded projects in Mexico implemented by the World Bank. Institutional and social sustainability will be ensured by working through institutions that currently exist at central, regional, local, PA and community levels in support of PA management, land use planning and regulation; these include environmental and productive sector ministries and their dependencies and municipal governments, in addition to well-established and respected national and international NGOs.

B.4. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS AND MEASURES THAT ADDRESS THESE RISKS:

Risk	Rating	Risk Mitigation Strategy
Institutional rigidity and resistance to inter-institutional collaboration	M	Within the context of the ECCAP, The project will support CONANP in raising awareness among diverse institutional stakeholders, of the implications that the impacts of climate change on biodiversity and PAs will have for their institutional goals, and will actively promote and facilitate inter-institutional analyses of needs and mechanisms for cooperation.
Weak enforcement of land use stipulations in the landscape		The project will build on the considerable advances made to date by previous GEF projects in Mexico with the strengthening and financing of PA management (including enforcement). This project will seek to ensure that financial sustainability strategies take into account the additional requirements arising from issues and threats related to climate change, with

		the result that enforcement capacities will develop in parallel with the magnitude of threats.
Uncertainty in anticipated threat profiles: strengthening of the resilience of PAs and BD is the central focus of the project, however the risk exists that rates of climate change, and associated pressures on PAs and BD, will exceed the levels anticipated and the rates of adaptation achievable through the strategies proposed by the project.	L	The project will apply principles of adaptive management, updating its assumptions and strategies regularly on the basis of the most recent models of climate change that are available, keeping abreast of the latest advances with scientific knowledge and experiences regarding best practices for adaptation and resilience, and supporting the development of systems for monitoring and evaluation of the effectiveness of its strategies under evolving conditions of climate change (Component 1).

B.5. KEY STAKEHOLDERS INVOLVED IN THE PROJECT:

Stakeholders	Project Implementation Role
CONANP	The Government agency with lead responsibility for the management of natural protected areas, and therefore most directly responsible for ensuring that appropriate strategies for adapting the management of PAs to the effects of climate change are applied in an effective manner. It will be the executing agency of the project, in close coordination with CONABIO and CONAFOR.
CONABIO	Responsible for the promotion, coordination, support and realization of activities aimed at increasing knowledge of biological diversity and its conservation and sustainable use: the national institution with greatest capacities for the generation, management, analysis and communication of information on the magnitude, nature and implications of climate change for PA management. CONABIO is also responsible for promoting the implementation of biological corridors in the six southern states of Mexico: Campeche, Chiapas. Oaxaca, Quintana Roo, Tabasco and Yucatan.
CONAFOR	Responsible for the promotion of forest management, forest conservation and restoration, and the formulation of plans and programs for sustainable forest management. In the context of the project, responsible for developing strategies for the adjustment of forest management in conservation areas to climate change.
SAGARPA	Lead institution of the agricultural, livestock and fisheries sectors: will participate in the development and promotion of strategies for adjusting management activities in these sectors, in or adjoining conservation areas, to the effects of climate change.
Municipal governments	Responsible for overseeing natural resource management at local level, within their areas of jurisdiction, for ensuring that management strategies are appropriate to local needs and for ensuring that the needs of local stakeholders are taken into account in the definition of management strategies.
NGOs	Civil society organizations make an important contribution to the management of protected areas and to obtaining resources. In addition, they will be involved in providing technical assistance for the implementation of the project. They include The Nature Conservancy (TNC), the Mexican Fund for Nature Conservation (FMCN), the World Wildlife Fund (WWF), the AMBIO Cooperative and Mexican Fauna Protection (PROFAUNA).

B.6. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:

34. This project will build on the considerable advances achieved by GEF investments in Mexican protected areas to date. Foremost among these have been the four success national projects implemented by the IBRD, aimed at consolidating the national protected areas system through the establishment and strengthening of tools for planning, management and financial sustainability. The bases established by those projects will be fundamental to the success of the current project, as they will provide the framework into which the current project will insert strategies for taking into account the implications of climate change on biodiversity and protected areas and providing for their financial sustainability. During the PPG phase, lessons on practical aspects of PA management learnt from site-specific projects such as "El Triunfo Biosphere Reserve: Habitat Enhancement in Productive Landscapes" and "Biodiversity Conservation in the Sierra Gorda Biosphere Reserve" will be incorporated into project design, when these are relevant to climate change-related threats.

35. The project will take lessons on coastal zone management in relation to climate change, generated through pilots established by the SCCF/World Bank/INE project "Adaptation to Climate Change Impacts on the Coastal Wetlands in the Gulf of Mexico" (GEF ID 3159), and by the GEF/UNIDO/SEMARNAT regional project "Integrated Assessment and Management of the Gulf of Mexico Large Marine Ecosystem" (GEF ID 1346) and scale them up. The project will also coordinate with the World Bank Mexico Mesoamerican Biological Corridor project, which is now being implemented by the Biological Corridors and Resources Coordination Unit (CCRB) at CONABIO. The CCRB is now working on the conservation and sustainable use of eight corridors in the south-east of the country, in Campeche, Chiapas, Quintana Roo,

Tabasco and Yucatan, and is currently expanding to the state of Oaxaca, ensuring that this project takes into account the objectives and principles of the MMBC project, while at the same time learning from and building upon its achievements in relation to the establishment and management of biological corridors and local participation. It will also build on the advances of the UNDP Adaptation Programme project in establishing a platform for the strengthening of institutional capacities and the promotion of the articulation and systematization of actions for adapting to climate change. In addition this project will coordinate with an ongoing initiative with IUCN for "Assessing and Capitalizing on the Potential to Enhance Forest Carbon Sinks through Forest Landscape Restoration while Benefiting Biodiversity". CONANP is signing an MoU with CONABIO, CONAFOR and IUCN for the implementation of this project.

C. DESCRIBE THE GEF AGENCY'S COMPARATIVE ADVANTAGE TO IMPLEMENT THIS PROJECT:

36. UNDP has major experience with the management of protected areas in Latin America, the Caribbean and worldwide. The project also corresponds closely with UNDP's institutional comparative comparative advantage in the area of institutional strengthening, technical assistance, financing mechanisms and adaptation to climate change.

C.1. INDICATE THE CO-FINANCING AMOUNT THE GEF AGENCY IS BRINGING TO THE PROJECT:

37. The UNDP CO will provide $800,000 of co-financing support to this initiative.

C.2. HOW DOES THE PROJECT FIT INTO THE GEF AGENCY'S PROGRAM AND STAFF CAPACITY IN THE COUNTRY TO FOLLOW UP PROJECT IMPLEMENTATION:

38. The 2008-2012 United Nations Development Assistance Framework in Mexico includes as a priority the following: "institutional and individual capacities strengthened to stop and /or reverse environmental degradation, support natural resources conservation, encourage participatory management, natural resources governance and promote human development through policies and programmes for sustainable development". In particular, this project corresponds to Outcome 3.1 of the UNDAF, "Principles of sustainable development incorporated in national and regional programmes, including the promotion of equity in the use of natural resources and the distribution of environmental costs and benefits". It also specifically prioritizes the development of projects that link population, environment and sustainable development in priority regions including protected areas, and the development of capacities for adaptation to climate change.

39. In addition to the worldwide experience of UNDP as a whole with the management of protected areas, the Mexico Country Office has extensive experience in supporting the implementation of projects in relation to sustainable natural resource management and the strengthening of protected area management, for example project 887 on Biodiversity Conservation in the Sierra Gorda Biosphere Reserve, project 3637 on Transforming Management of Biodiversity-rich Community Production Forests and project 839 on Integrated Ecosystem Management in 3 Priority Ecoregions, and the regional projects 1032 on Sustainable Management of the Shared Marine Resources of the Caribbean Large Marine Ecosystem (CLME) and Adjacent Regions and 243 on Establishment of a Programme for the Consolidation of the Meso-American Biological Corridor. The project is highly compatible with the areas of speciality and experience of UNDP in relation to governance, area-based management. Decentralization, risk and disaster management and poverty reduction.

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(s) with this template).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
	Minister	Environment and Natural Resources	

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF policies and procedures and meets the GEF/LDCF/SCCF criteria for project identification and preparation.

Agency Coordinator, Agency name	Signature	Date *(MM/dd/yyyy)*	Project Contact Person	Telephone	Email Address
Yannick Glemarec, UNDP/GEF Executive Coordinator		November 30, 2011	Lyes Ferroukhi, Regional Technical Advisor, EBD	+507 302-4510	Lyes. ferroukhi@undp.org