Document of
The World Bank

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Report No: 81857-MX

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

FROM THE GLOBAL ENVIRONMENT FACILITY TRUST FUND

IN THE AMOUNT OF US$39.52 MILLION

TO THE

UNITED MEXICAN STATES, NACIONAL FINANCIERA, S.N.C., COMISION NACIONAL FORESTAL AND FONDO MEXICANO PARA LA CONSERVACION DE LA NATURALEZA, A.C.

FOR THE

COASTAL WATERSHEDS CONSERVATION IN THE CONTEXT OF CLIMATE CHANGE PROJECT

October 21, 2013

Environment Unit
Sustainable Development Department

Currency Equivalents
(Exchange Rate Effective October 2013)

Currency Unit	=	Mexican peso
$12.76 pesos	=	US$1.00
US$0.078	=	$1.00 peso

FISCAL YEAR
January 1 – December 31

Abbreviations and Acronyms

CDI	National Commission for the Development of Indigenous Peoples (*Comisión Nacional para el Desarrollo de los Pueblos Indígenas*)
CONABIO	National Commission on the Knowledge and Use of Biodiversity (*Comisión Nacional para el Conocimiento y Uso de la Biodiversidad*)
CONAFOR	National Forestry Commission (*Comisión Nacional Forestal*)
CONAGUA	National Water Commission (*Comisión Nacional del Agua*)
CONANP	National Commission of Protected Areas (*Comisión Nacional de Áreas Naturales Protegidas*)
FANP	Fund for Protected Areas (*Fondo para Áreas Naturales Protegidas*)
FCC	Fund for Coastal Watersheds (*Fondo para Cuencas Costeras*)
FGM	Fund for the Gulf of Mexico (*Fondo para el Golfo de México*)
FMCN	Mexican Fund for the Conservation of Nature (*Fondo Mexicano para la Conservación de la Naturaleza*)
FONNOR	Fund for the Northwest (*Fondo para el Noroeste*)
GEF	Global Environment Facility
ICB	International competitive bidding
INECC	National Institute of Ecology and Climate Change (*Instituto Nacional de Ecología y Cambio Climático*)
INEGI	National Institute of Statistics, Geography, and Informatics (*Instituto Nacional de Estadística, Geografía e Informática*)
IPPF	Indigenous Peoples Planning Framework
IT	Information Technology
IUCN	International Union for Conservation of Nature

IWAP	Integrated Watershed Action Plan
MRV	Monitoring, Reporting, and Verification
$MtCO_2e$	Million Tonnes Carbon Dioxide Equivalent
NAFIN	Nacional Financiera, S.N.C.
NCB	National Competitive Bidding
NGO	Nongovernmental Organization
PCU	Project Coordination Unit
PES	Payment for Ecosystem Services
RCU	Regional Coordination Unit
REDD	Reducing Emissions from Deforestation and Forest Degradation
REDD+	Enhanced Version of REDD
SAGARPA	Secretariat for Agriculture, Husbandry, Rural Development, Fisheries, and Food Supply (*Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación*)
SEDESOL	Secretariat for Social Development (*Secretaría de Desarrollo Social*)
SEMARNAT	Ministry of Environment and Natural Resources (*Secretaría de Medio Ambiente y Recursos Naturales*)
SEPA	Procurement Plan Execution System (*Sistema de Ejecución de Planes de Adquisiciones*)
SFP	Secretariat of Public Administration (*Secretaría de la Función Pública*)
SIIF	Integrated Financial Information System (*Sistema Integral de Información Financiera*)
SIMEC	Information, Monitoring, and Evaluation System for Conservation (*Sistema de Información, Monitoreo y Evaluación para la Conservación*)
SINAP	National Protected Areas System (*Sistema Nacional de Áreas Protegidas*)
SISEP	Information System for Project Follow-up (*Sistema de Información y Seguimiento de Proyectos*)
TPC	Technical Project Committee

Regional Vice President:	Hasan A. Tuluy
Country Director:	Gloria M. Grandolini
Sector Director:	Ede Jorge Ijjasz-Vasquez
Acting Sector Manager:	Emilia Battaglini
Task Team Leader:	Adriana Moreira

MEXICO
Coastal Watersheds Conservation in the Context of Climate Change Project (P131709)

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LATIN AMERICA AND CARIBBEAN

Environment Unit (LCSEN)

Report No.: PAD556

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Basic Information			
Project ID	EA Category	Team Leader	
P131709	B - Partial Assessment	Adriana Moreira	
Lending Instrument	Fragile and/or Capacity Constraints [ ]		
Investment Project Financing	Financial Intermediaries [ ]		
	Series of Projects [ ]		
Project Implementation Start Date	Project Implementation End Date		
03-Mar-2014	28-Jun-2019		
Expected Effectiveness Date	Expected Closing Date		
03-Mar-2014	28-Jun-2019		
Joint IFC			GEF Focal Area
No			Multi-focal area
Sector Manager	Sector Director	Country Director	Regional Vice President
Emilia Battaglini	Ede Jorge Ijjasz-Vasquez	Gloria M. Grandolini	Hasan A. Tuluy

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Borrower: United Mexican States, Nacional Financiera S.N.C, Comisión Nacional Forestal (CONAFOR), Fondo Mexicano para la Conservación de la Naturaleza (FMCN)
Responsible Agency: Comisión Nacional de Áreas Naturales Protegidas (CONANP)
Contact: Mariana Bellot Title: Directora General de Desarrollo

Institucional	
Telephone No.: + 52 (55) 5449 7033	Email: mariana.bellot@conanp.gob.mx
Responsible Agency: Instituto Nacional de Ecologia (INE)	
Contact: Helena Cotler	Title: Directora de Manejo Integral de Cuencas Hídricas
Telephone No.: + 52 (55) 5424 6449	Email: hcotler@ine.gob.mx

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Project Financing Data(in USD Million)

[ ]	Loan	[X]	Grant	[ ]	Guarantee
[ ]	Credit	[ ]	IDA Grant	[ ]	Other

Total Project Cost:	267.80	Total Bank Financing:	0.00
Financing Gap:	0.00		

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Financing Source	**Amount**
Borrower	228.28
Global Environment Facility (GEF)	39.52
Total	267.80

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Expected Disbursements (in USD Million)

Fiscal Year	2014	2015	2016	2017	2018	2019	0000	0000	0000
Annual	5.70	13.20	6.10	6.00	6.10	2.42	0.00	0.00	0.00
Cumulative	5.70	18.90	25.00	31.00	37.10	39.52	0.00	0.00	0.00

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Global Environment Objective(s)

The Project’s Global Environmental Objective (GEO) is the same as the Project Development Objective (PDO): To promote integrated environmental management of selected coastal watersheds as a means to conserve biodiversity, contribute to climate change mitigation, and enhance sustainable land use.

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Components (Part)

Component Name	**Cost (USD Millions)**
Component (Part) 1: Creation and	20.35

Consolidation of Protected Areas	
Component (Part) 2: Promoting Sustainability within Watersheds	17.10
Component (Part) 3: Enabling Adaptive Management by Strengthening Monitoring Capacities	0.44
Component (Part) 4: Innovative Mechanisms for Inter-institutional Collaboration and Promoting Social Participation	0.98
Part (Part) 5: Project Management	0.66

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Institutional Data

Sector Board

Environment

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Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Agriculture, fishing, and forestry	Forestry	40	80	20
Agriculture, fishing, and forestry	General agriculture, fishing and forestry sector	40	80	20
Public Administration, Law, and Justice	Public administration-Agriculture, fishing and forestry	20	80	20
Total		100		

☐ I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

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Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Environment and natural resources management	Biodiversity	30

Environment and natural resources management	Climate change	30
Environment and natural resources management	Other environment and natural resources management	20
Social dev/gender/inclusion	Participation and civic engagement	10
Rural development	Other rural development	10
Total		100

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Compliance

Policy

Does the project depart from the CAS in content or in other significant respects?	Yes [ ] No [X]

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Does the project require any waivers of Bank policies?	Yes [ ] No [X]
Have these been approved by Bank management?	Yes [ ] No [ ]
Is approval for any policy waiver sought from the Board?	Yes [ ] No [X]
Does the project meet the Regional criteria for readiness for implementation?	Yes [X] No [ ]

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Safeguard Policies Triggered by the Project	**Yes**	**No**
Environmental Assessment OP/BP 4.01	**X**	
Natural Habitats OP/BP 4.04	**X**	
Forests OP/BP 4.36	**X**	
Pest Management OP 4.09	**X**	
Physical Cultural Resources OP/BP 4.11	**X**	
Indigenous Peoples OP/BP 4.10	**X**	
Involuntary Resettlement OP/BP 4.12	**X**	
Safety of Dams OP/BP 4.37		**X**
Projects on International Waterways OP/BP 7.50		**X**
Projects in Disputed Areas OP/BP 7.60		**X**

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Legal Covenants

Name	**Recurrent**	**Due Date**	**Frequency**
Section I.A.1 of Schedule 2	**X**	Throughout the implementation of	CONTINUOUS

		the Project	
Description of Covenant			
FMCN and CONAFOR shall operate and maintain, during the implementation of the Project, a Technical Project Committee which shall be responsible for, inter alia, the overall oversight and supervision of the Project and shall be assigned with members, functions and responsibilities satisfactory to the World Bank; all as set forth in the Operational Manual.			
Name	**Recurrent**	**Due Date**	**Frequency**
Section I.B.1. of Schedule 2	**X**	Throughout the implementation of the Project	CONTINUOUS
Description of Covenant			
For purposes of carrying out the Project (except for Part 2.1 of the Project), FMCN shall enter into an agreement with CONANP, CONAFOR and INECC ("Inter-institutional Agreement"), satisfactory to the World Bank.			
Name	**Recurrent**	**Due Date**	**Frequency**
Section I.B.2(a) and (b) of Schedule 2	X	Throughout the implementation of the Project	CONTINUOUS
Description of Covenant			
FMCN shall enter into, and thereafter maintain, a separate collaboration agreement, satisfactory to the World Bank: (a) with FGM ("FMCN-FGM Agreement"); and (b) with FONNOR ("FMCN-FONNOR Agreement").			
Name	**Recurrent**	**Due Date**	**Frequency**
Section I.E.1 of Schedule 2	X	Throughout the implementation of the Project	CONTINUOUS
Description of Covenant			
FMCN and CONAFOR shall carry out, or cause to be carried out, the Project in accordance with a manual ("Operational Manual"), satisfactory to the World Bank.			
Name	**Recurrent**	**Due Date**	**Frequency**
Section I.G.1(a) and (b) of Schedule 2	X	Throughout the implementation of the Project	CONTINUOUS
Description of Covenant			
(a) FMCN shall carry out, or cause to be carried out, the Project (except for Part 2.1 of the Project), in accordance with the Environmental Management and Social Framework, the Indigenous Peoples Planning Framework and the Process Framework. (b) FMCN shall ensure, or cause to be ensured, that the Environmental Management and Social			

Framework, the Indigenous Peoples Planning Framework, and the Process Framework, or any provision thereof, shall not be amended, suspended, abrogated, terminated or waived, except with the prior written consent of the World Bank

Name	Recurrent	Due Date	Frequency
Section I.G.2(a) and (b) of Schedule 2	X	Throughout the implementation of the Project	CONTINUOUS

Description of Covenant

(a) CONAFOR shall carry out or cause to be carried out, Part 2.1 of the Project in accordance with the Environmental Management and Social Framework and the Indigenous Peoples Planning Framework For Part 2.1 of the Project.
(b) CONAFOR shall ensure or cause to be ensured, that the Environmental Management and Social Framework and the Indigenous Peoples Planning Framework for Part 2.1 of the Project or any provision thereof, shall not be amended, suspended, abrogated, terminated or waived, except with the prior written consent of the World Ban

Conditions

Name	Type
Section 5.01 of Article 5	Effectiveness

The Grant Agreement shall not become effective until evidence satisfactory to the World Bank has been furnished that the conditions specified below have been satisfied: (a) the execution and delivery of this Agreement, on behalf of the Recipients, NAFIN and CONAFOR, has been duly authorized or ratified by all necessary governmental and corporate actions; (b) the *Mandato* Agreement has been duly executed by the parties thereto; and (c) the Inter-institutional Agreement has been duly executed by the parties thereto.

Name	Type
Section 5.02 of Article 5	Effectiveness

As part of the evidence to be furnished pursuant to Section 5.01 (a) of the Grant Agreement, there shall be furnished to the World Bank: (a) an opinion or opinions satisfactory to the World Bank of counsel acceptable to the World Bank, showing that, on behalf of each of the Recipients, NAFIN and CONAFOR, that this Agreement has been duly authorized or ratified by, and executed and delivered on behalf of each of the Recipients, NAFIN and CONAFOR and is legally binding upon each such party in accordance with its terms; (b) an opinion or opinions satisfactory to the World Bank of counsel acceptable to the World Bank, showing that, on behalf of UMS, NAFIN and CONAFOR, that the *Mandato* Agreement has been duly authorized or ratified by, and executed and delivered on behalf of UMS, NAFIN and CONAFOR and is legally binding upon each such party in accordance with its terms; and (c) an opinion or opinions satisfactory to the World Bank of counsel, acceptable to the World Bank, showing that, on behalf of FMCN, CONANP, CONAFOR, and INECC, that the Inter-institutional Agreement has been duly authorized or ratified on behalf of each of FMCN, CONANP, CONAFOR, and INECC and is legally binding upon each such party in accordance with its terms.

Name	Type
Section IV.B.1(a) of Schedule 2	Disbursement
Description of Condition	
Notwithstanding the provisions of Part A of this Section no withdrawal shall be made for payments: (a) made prior to the date of this Agreement, except that withdrawals up to an aggregate amount not to exceed USD 2,000,000 equivalent may be made for payments made prior to this date but on or after June 14, 2013 but in no case made more than twelve (12) months prior to the date of this Agreement, for Eligible Expenditures.	

Name	Type
Section IV.B.1(b) of Schedule 2	Disbursement
Description of Condition	
Notwithstanding the provisions of Part A of this Section no withdrawal shall be made for payments: (b) under Category (1)(a) unless FMCN has provided evidence satisfactory to the World Bank showing that matching funds have been deposited into the FCC in a ratio 1:1 up to an amount of USD19,518,000 equivalent (as counter-part funds) and in accordance with the additional instructions referred to in Section IV.A.1(c) of this Schedule.	

Name	Type
Section IV.B.1(c) of Schedule 2	Disbursement
Description of Condition	
Notwithstanding the provisions of Part A of this Section no withdrawal shall be made for payments: (c) under Category (1)(b) unless: (i) CONAFOR has provided evidence satisfactory to the World Bank showing that matching funds have been deposited into the Biodiversity Fund in a ratio 1:1 up to an amount of USD9,091,000 equivalent (as counter-part funds) and in accordance with the additional instructions referred to in Section IV.A.1(c) of this Schedule; and (ii) BANORTE has furnished evidence, satisfactory to the World Bank, indicating its commitment to comply with the Anti-corruption Guidelines in a manner satisfactory to the World Bank.	

Name	Type
Section IV.B.1(d) of Schedule 2	Disbursement
Description of Condition	
Notwithstanding the provisions of Part A of this Section no withdrawal shall be made for payments: (d) under Category (4) unless: (i) a technical/fiduciary assessment of FGM and FONNOR has been carried out in a manner acceptable to the World Bank which shall certify, inter alia, that FGM and FONNOR have the capacity to exercise satisfactory control over the use of funds administrated by them; and (ii) FMCN has provided evidence satisfactory to the World Bank showing that (A) FONNOR has been duly established, (B) the FMCN-FGM Agreement has been duly executed, and (C) the FMCN-FONNOR Agreement has been duly executed.	

Team Composition			
Bank Staff			
Name	**Title**	**Specialization**	**Unit**
Xiomara A. Morel	Sr Financial Management Specialist	Sr Financial Management Specialist	LCSFM
Tanya Lisa Yudelman	Consultant	Consultant	AFTN3
Adriana Goncalves Moreira	Sr Environmental Specialist	Team Lead	LCSEN
Kristyna Bishop	Sr Social Development Specialist	Social Safeguards	LCSSO
Barbara Brakarz	Consultant	Consultant	LCSEN
Guadalupe Romero Silva	Consultant	Consultant	LCSEN
Gabriel Penaloza	Procurement Specialist	Procurement Specialist	LCSPT
Dmitri Gourfinkel	Financial Management Specialist	Financial Management Specialist	LCSFM
Marcelo Hector Acerbi	Sr Environmental Specialist	Co-TTL	LCSEN
Jorge Luis Alva-Luperdi	Counsel	Counsel	LEGES
Diana Gabriela Jimenez Cruz	Team Assistant	Team Assistant	LCC1C
Jose Carlos Fernandez Ugalde	Consultant	Consultant	CPFCI
Beatriz Eugenia Gomez Villasenor	E T Temporary	E T Temporary	LCSSD
Katharina Siegmann	E T Consultant	E T Consultant	LCSEN
Non Bank Staff			
Name	**Title**	**Office Phone**	**City**
Ruth Norris	Consultant		

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Locations					
Country	**First Administrative Division**	**Location**	**Planned**	**Actual**	**Comments**
Mexico	Veracruz-Llave	Estado de Veracruz-Llave	**X**		
Mexico	Nayarit	Estado de Nayarit	**X**		
Mexico	Jalisco	Estado de Jalisco	**X**		

I. STRATEGIC CONTEXT

A. Country Context

1. The economy of Mexico, the second largest in Latin America, expanded at a strong pace for most of the past year but has started to show signs of slowly decelerating. The economy is exposed to fluctuations in the United States economy, global financial markets, and commodity prices. However, Mexico is well positioned to respond to a global slowdown, particularly on the external and monetary fronts. According to the National Council on Evaluation of Social Development Policy, around 46.2% of Mexico's total population lives in poverty, mainly in urban areas. Extreme poverty (defined as living with a monthly income of less than US$76 in urban areas and US$53 in rural areas) has declined slightly in recent years, to 10.4%, which can be attributed to a large extent to well-targeted social protection programs.

2. In 2012, Mexicans elected a new President for 2012 - 2018, and renewed both houses of Congress. A National Development Plan focuses on five national pillars: (a) achieve peace, (b) make Mexico more inclusive, (c) improve the quality of the education system, (d) promote prosperity, and (e) consolidate Mexico as a responsible international player. The National Development Plan also adopts three cross-cutting strategies: democratize productivity to integrate Mexicans into the formal economy; modernize government by simplifying procedures and regulations; and adopt a gender perspective to ensure the rights of women and prevent gender differences from becoming a source of inequality.

B. Sectoral and Institutional Context

3. Mexico ranks fourth among the world's 15 mega-biodiverse countries, representing 10–12% of global biodiversity. Mexico's biological wealth supports the health and livelihoods of 112 million people. But these ecosystem goods and services are at risk. Mexico's deforestation rate is still high in many regions. Soil erosion affects almost half its territory. The National Water Commission (*Comisión Nacional del Agua*, CONAGUA) considers 38% of Mexico's rivers highly polluted.

4. Compounding these challenges, Mexico is expected to be disproportionately affected by climate change. Various models predict that hurricanes will intensify, and drought and forest fires will increase. Coastal communities will be more vulnerable to flooding, and communities in the mountains will suffer increasingly from landslides, drought, and fires. The impacts of climate change will be most evident in the coastal watersheds of the Gulf of Mexico and the Gulf of California, where deforestation and depletion of carbon stocks are driven by demographic growth, urban expansion, and lack of enforcement of environmental regulations. Forests are cleared or burned for ranching, sugar cane, and illegal extraction of natural resources. If no action is taken, an additional 35% loss of rain forests and 18% loss of temperate forests will occur by 2050 in these two regions, further increasing greenhouse gas emissions. The proposed Coastal Watersheds Conservation in the Context of Climate Change Project (the Project) is designed to address these issues.[1]

[1] This Project will exchange knowledge and information with the Adaptation to Climate Change Impacts on the Coastal Wetlands in the Gulf of Mexico Project (P100438). In geographic terms, this wetlands project is focused on different watersheds with similar wetlands, since they are along the Gulf of Mexico. Coordination will be sought in

5. Mexico's strategy to address these challenges builds on existing initiatives to comply with international conventions and promote sustainable development. The institutions that will implement the Project, the Mexican Fund for the Conservation of Nature (*Fondo Mexicano para la Conservación de la Naturaleza*, FMCN) and the National Forestry Commission (*Comisión Nacional Forestal*, CONAFOR) as well as other important stakeholders such as the National Commission of Protected Areas (*Comisión Nacional de Áreas Naturales Protegidas*, CONANP) and the National Institute of Ecology and Climate Change (*Instituto Nacional de Ecología y Cambio Climático*, INECC) have worked with the support of the Mexican federal and state governments, and with the World Bank and other donors, to conserve biodiversity, promote sustainability, reduce deforestation, and monitor ecosystems.

6. The Government of Mexico (the Government) and the World Bank have a long, deep engagement on biodiversity and forests, building each stage on previous actions and encompassing the full range of Bank instruments, including knowledge, financial, convening, and coordination services. A summary of World Bank engagement with Mexico in the area of climate change is presented in Annex 8. Results include a 90-fold increase in investments in protected areas since 1995; establishment of the Mexican Forest Fund (the largest Payment for Ecosystem Services, or PES, fund in Latin America, which has supported more than 1 million hectares along the Gulf of California and Gulf of Mexico); and monitoring initiatives such as the National Forest and Soil Inventory, and a watershed monitoring system that integrates community monitoring data. These advances form a solid basis for inter-institutional coordination for a landscape approach model.[2]

7. The Project will contribute to the Mexico REDD Vision, which lays out Mexico's long-term aspirations and commitment to the consolidation of a future National REDD Strategy.[3] This vision emphasizes the contribution of forests to adaptation by reducing the vulnerability of local communities to natural disasters and economic downturns. Deforestation and land use change are Mexico's third largest source of greenhouse gas emissions, and are second to the transport sector

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order to ensure the pilot measures will provide information about the costs and benefits of alternative approaches to reduce the vulnerability of those coasts to climate change.

[2] Mexico has adopted a "landscape approach" as part of the strategy to address most of the environmental challenges described. The landscape approach is a framework for making landscape-level conservation decisions. It contributes to broad-scale approaches to conservation. International agreements such as the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and the Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention) also recommend landscape-scale actions. The landscape approach helps to reach decisions about the advisability of particular interventions (such as a new road or plantation) and to facilitate the planning, negotiation, and implementation of activities across a whole landscape. It integrates top-down planning with bottom-up, participatory approaches.

[3] REDD = reducing emissions from deforestation and forest degradation. Within the present REDD Vision, three early REDD+ (enhanced version of REDD) actions have been determined by CONAFOR in response to the high deforestation and degradation risk. One of them focuses on the coastal watersheds in Jalisco (considered in this Project). In this site the following actions are being pursued: (a) institutional arrangements aimed at promoting governance through new inter-municipal agencies and support to an already existing one; (b) integrated policies focused under a landscape perspective and planned financing applied to the territory: (c) The Special Program on Coastal Watersheds, which supports forest owners with different parts in community forestry, PES, forest management, soil conservation, and reforestation, within defined polygons; (d) local mechanisms for ecosystem payments through concurrent funds with a biological corridor or watershed vision; and (e) biodiversity funding applied to a biological corridor in the region. Hence, all parts proposed for the Project are well aligned with the REDD+ early action vision and allow further expansion of this important strategy to halt deforestation and degradation.

in potential to reduce emissions. The leading institution for REDD in Mexico is CONAFOR, proposed as co-executant for the proposed Grant. The Project will support dissemination and capacity building on forests and climate change and enhancement of carbon stocks, and represents a platform to receive feedback from expert institutions and civil society.

C. Higher Level Objectives to Which the Project Contributes

8. The proposed Project contributes to Mexico's national green growth agenda, and its commitment, under the Climate Change Law of 2012, to reduce greenhouse gas emissions by 30% by 2020. The Project contributes to global climate change mitigation and adaptation under the United Nations Framework Convention on Climate Change through reforestation and reduction of deforestation and forest degradation. Project activities encompass those identified by the National Special Climate Change Program 2009–2012 and are aligned with Mexico's REDD+ Readiness Preparation Plan and the derived strategy for early actions recognized by CONAFOR. The Project contributes to Mexico's commitments under the Convention on Biological Diversity by including strategies defined by the National Strategy for Biodiversity. Field activities will be designed within the framework of the state biodiversity strategies. The protected areas part is aligned with the National Work Program for Protected Areas and the Climate Change Strategy for Protected Areas. Project watersheds were selected using the *Gap and Omission Analysis of the Terrestrial Biodiversity of Mexico* of the National Commission on the Knowledge and Use of Biodiversity (*Comisión Nacional para el Conocimiento y Uso de la Biodiversidad*, CONABIO) and CONANP. The Project is in line with the National Forestry Program and is also aligned with the objectives of the Forestry Investment Plan. The Project contributes to the 2004 National Action Plan to Combat Desertification, the National Strategy for the Sustainable Management of Lands, and the objectives of the United Nations Convention to Combat Desertification, through the development and implementation of integrated watershed action plans (IWAPs) to reduce degradation in agro-ecosystems and forests.

9. The World Bank Group's Country Partnership Strategy for Mexico FY08-13, Report No. 42846-MX discussed at the Board on April 8, 2008 provides the framework for a strong partnership, offering tailored development solutions through a suite of financial, knowledge and convening services. One of the pillars of the Country Partnership Strategy is "Developing Infrastructure and Assuring Energy and Environmental Sustainability". The proposed FY14-19 Country Partnership Strategy includes the "Green and Inclusive Growth" to help Mexico assure environmental sustainability by integrating the principles of sustainable development into national policies and programs, and promoting sustainable natural resource management. Promotion of green and inclusive growth is a key element of this Project where a central aspect is the optimal management of natural assets (such as forests, biodiversity, and water) at the federal, subnational, and global levels.[4] The proposed Project is aligned with the recently

[4] The proposed project will achieve results across four Global Environment Facility (GEF) focal areas – Biodiversity, Climate Change Mitigation, Sustainable Forest Management, and Land Degradation. Strengthened management of Protected Areas will enhance biodiversity protection. To address Sustainable Forest Management, the project will provide PES in areas within the watershed threatened by deforestation. Complementary capacity building and support to local communities to improve management of degraded agro-ecosystems are consistent with the goals of the Land Degradation focal area. For Climate Change Mitigation, the project will assist stakeholders to improve forest management and reduce pressure on forest resources. Activities under Biodiversity, Land Degradation, and Sustainable Forest Management will mitigate carbon emissions consistent with the *GEF-5 Focal Area Strategies* document. Synergies of Climate Change Mitigation with Sustainable Forest Management,

launched Global Partnership for Oceans, which seeks to address threats to the health, productivity, and resilience of oceans, promoting a landscape approach to integrate conservation and sustainable natural resource management of watersheds draining to the ocean.

10. The proposed Project is consistent with the diagnostic and strategic sections presented in the Mexico's National Development Plan (*Plan Nacional de Desarrollo*) 2013–2018. Specifically, the Plan seeks to promote and guide inclusive green growth as a facilitator to preserve Mexico's natural heritage while generating wealth, employment competitiveness, and efficiency. In particular, the plan emphasizes the promotion of policies for the sustainable use and management of natural resources in indigenous areas and the preservation of the environment and biodiversity, including through use of traditional knowledge.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

11. The Project's Global Environmental Objective is the same as the Project Development Objective: to promote integrated environmental management of selected coastal watersheds as a means to conserve biodiversity, contribute to climate change mitigation, and enhance sustainable land use.

Project Beneficiaries

12. The Project's key direct beneficiaries will be local communities in the watersheds, including *ejidos* and communities, indigenous peoples and individual residents and landowners, as well as those organizations working with them to provide technical assistance, training, and funding. In the Gulf of Mexico, the project area (six watersheds and sub-watersheds) has 2.7 million inhabitants (51% women) in 4,771 localities in the states of Veracruz, Tabasco, Chiapas, Hidalgo, Puebla, and Campeche, of which approximately 10% are indigenous peoples. About 100,000 people will benefit directly from project payments and services, with another 800,000 benefiting as members of families receiving PES or residents of communities adjacent to and benefiting economically from two marine protected areas. In the Gulf of California (candidate project areas in the states of Sinaloa, Nayarit, and Jalisco), the Project will be supported mainly by counterpart funds and endowment matching contributions. The specific watersheds and beneficiary populations will be selected in accordance with criteria to be agreed with donors and following the Grant's standards. In both regions, activities to promote knowledge sharing and participatory monitoring and evaluation will empower community organizations to actively participate in decision-making and improved governance. Annex 2 summarizes these and other activities to be supported by the Project.

13. By supporting enhanced corridor integrity and connectivity, the Project will support resilience of regional ecosystems to climatic and other external pressures, and protect species of conservation concern. All residents of the watersheds will benefit from reduction of risk of economic and human losses due to floods. The Project will also generate local and global benefits by conserving forests and reducing carbon emissions. *Local* social and economic value will be created by engaging communities in establishing priorities, implementing practices to

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Biodiversity, and Land Degradation will generate multiple global environmental benefits, and social and economic benefits.

enhance productivity of farm and forest plots, and monitoring results. *Global* benefits will be generated by reductions in carbon emissions, and by conservation practices in regions of global biodiversity importance, where current deforestation rates (1993–2007) are 3.68% per year in the selected watersheds in the Gulf of Mexico (2.11% per year in protected areas) and 0.35% per year in the selected watersheds in the Gulf of California (0.21% in the corresponding protected areas).

PDO Level Results Indicators

14. The Project will address the causes for carbon depletion and is expected to reduce deforestation and avoid degradation in the Gulf of Mexico protected areas. Additionally, the Project will promote the maintenance of forest cover in 1.0 million hectares in areas surrounding the protected areas.

15. The results indicators at the Project Development Objective level and respective targets are: (a) consolidation of at least 1.1 million hectares in protected areas, including at least two new protected areas of an estimated 0.5 million hectares[5]; (b) improved land and forest management and reduced carbon emissions in selected sites in six watersheds (1.0 million hectares); and (c) watershed and sub-watershed land management action plans (IWAPs) including municipal, regional, and federal levels (six watersheds). The Project's intermediate results indicators are presented in Annex 1.

III. PROJECT DESCRIPTION

A. Project Components

16. Activities are organized in five Parts. Part 1, Creation and consolidation of Protected Areas, will be implemented by CONANP and FMCN, following the model developed in earlier GEF-funded projects (SINAP I and II).[6] Part 2, Promoting sustainability within watersheds, will support PES through CONAFOR, and forestry and agricultural subprojects for sustainable land and forest management, with GEF funds administered by FMCN and counterpart funds by CONAFOR. INECC will lead Part 3, Enabling adaptive management by strengthening monitoring capacities, determining priority sites for project intervention, engaging local communities, and coordinating with national and state agencies to collect and manage watershed health data. Part 4, Innovative mechanisms for inter-institutional collaboration and promoting social participation, will focus on mechanisms for inter-institutional collaboration, promoting social participation, and strengthening channels for coordination and learning. Carbon stocks enhancement is a crosscutting benefit across the four parts. Part 5 relates to Project management. Requested GEF funds include endowment funds, to be invested in the existing Biodiversity Fund (*Fondo Patrimonial de Biodiversidad*) at CONAFOR, and in an FMCN investment account, the Fund for Coastal Watersheds (*Fondo para Cuencas Costeras*, FCC). Non-endowment funds will be administered by FMCN for activities that require immediate attention and can leverage additional short-term investments.

[5] Core sector indicator.

[6] The National Protected Areas Project (P052209) approved on June 4, 1997 (SINAP I) and the Consolidation of the Protected Areas System Project (P065988) approved on February 7, 2002 (SINAP II).

17. Project activities will be coordinated through watershed-level planning in regions expected to be highly affected by climate change, with high biodiversity and opportunities to leverage existing institutional presence and programs to address climate change, land degradation, and sustainable forest management. Since the watersheds (selected as described in Annex 2) are large areas, activities will concentrate in protected areas and surrounding areas where carbon stock depletion is highest, biological connectivity is essential, and institutional capacities are in place for implementation, dissemination, and replication. Activities include: (a) conserving sites of high priority for biodiversity in protected areas; (b) implementing PES to support conservation of forests at high risk of fragmentation and degradation; (c) supporting communities and individual landowners to implement biodiversity- and forest-friendly practices in plots essential for connectivity and forest conservation; (d) collecting and managing data related to ecosystem health through processes that engage and develop the capacities of local communities to implement IWAPs; and (e) testing and mainstreaming innovative approaches to inter-institutional collaboration and learning. This Project design, including social participation and mainstreaming investments, is expected to act on drivers of carbon and biodiversity depletion while providing improved livelihoods. IWAPs will also serve to monitor carbon- and biodiversity-depleting activities, assuring that they are not merely displaced within the watersheds.

18. **Part 1: Creation and consolidation of Protected Areas[7].** GEF: US$20.349 million (US$19.518 million in endowment and US$0.831 million in non-endowment funds) (including US$16.364 million from Biodiversity and US$0.831 million from Climate Change Mitigation; US$3.154 million from Land Degradation;); Counterpart: US$54.669 million.

19. Part 1.1: Carrying out the capitalization of the FCC.

20. Part 1.2: Supporting the creation of new Protected Areas and strengthening management effectiveness of new and existing Protected Areas through the financing of biodiversity conservation activities included in the Annual Operating Plans.

21. Part 1.3: Carrying out fundraising activities to obtain additional non-GEF funding for FCC to finance biodiversity conservation activities in selected protected areas and watersheds.

22. **Part 2: Promoting sustainability within watersheds.** GEF: US$17.096 million (US$9.091 in endowment and US$ 8.005 million in non-endowment funds) (US$8.005 million from Climate Change Mitigation, and US$9.091 million from Sustainable Forest Management); Counterpart: US$136.834 million.

23. Part 2.1: Carrying out the capitalization of the Biodiversity Fund as to generate sufficient income to finance the provision of PES.

24. Part 2.2: Carrying out of Agro-ecosystem subprojects.

25. Part 2.3: Carrying out of Sustainable Forestry Management Subprojects.

[7] Protected Areas means the following national areas with protection due to the recognized natural, ecological and cultural values under CONANP's administration and any other area or areas agreed between the recipients of the Grant and the Bank" (a) *Bosque Mesófilo;* (b) *Sistema Arrecifal Lobos-Tuxpan*; (c) *Pico de Orizaba;* (d) *Cofre de Perote;* (e) *Sistema Arrecifal Veracruzano;* (f) *Los Tuxtlas*; (g) *Arrecifes de Los Tuxtlas;* (g) *Pantanos de Centla;* and (h) *Cañón de Usumacinta.*

26. **Part 3: Enabling adaptive management by strengthening monitoring capacities.** GEF: US$0.439 million in non-endowment funds (US$0.439 million from Climate Change Mitigation); Counterpart: US$10.750 million.

27. Strengthening of monitoring systems in selected watersheds including, inter alia: (i) the development of models of watersheds and their ecosystems services with the aim of establishing priority sites for Project implementation and producing integrated watersheds and/or sub-watersheds land management actions plans; and (ii) the carrying out, within selected Protected Areas and priority sites within the watersheds, of (a) deforestation and ecosystem degradation monitoring, (b) community hydrological monitoring, (c) biodiversity monitoring, (d) carbon monitoring, and (e) watershed-level workshops to analyze findings, data and share experiences.

28. **Part 4: Innovative mechanisms for inter-institutional collaboration and promoting social participation.** GEF: US$0.979 million in non-endowment funds (US$0.979 million from Climate Change Mitigation); Counterpart: US$15.913 million.

29. Carrying out of inter-institutional coordination and synergy activities (including networks, forums, and learning communities) at the regional and local levels, involving state and municipal governments, civil society, and academic institutions, to promote cross-sectorial coordination, participation in, and oversight of integrated watersheds and/or sub-watersheds land management actions plans.

30. **Part 5: Project management.** GEF: US$0.655 million in non-endowment funds (US$0.655 million from Climate Change Mitigation,); Counterpart: US$10.113 million.

31. Providing support to FMCN and CONAFOR, the Technical Project Committee, the Fund for the Gulf of Mexico (*Fondo para el Golfo de* México, FGM) and the Fund for the Northwest (*Fondo para el Noroeste*, FONNOR) for the implementation and supervision of the Project including, *inter alia*, the acquisitions of goods and the provision of technical assistance and training required.

B. Project Financing

32. **Grant instrument.** The agreed instrument is investment project financing, financed through a GEF Trust Fund grant in the amount of US$39.518 million. The Project, with a total project cost of US$267.797 million will also be financed by counterpart contributions of US$228.279 million.

Project Cost and Financing

33. **Project cost and financing plan**. The financing plan is summarized in Table III.1. A more detailed table showing endowment and non-endowment contributions from GEF and each of the executing agencies, by Part, is presented in Annex 2.

Table III.1 Project Financing Table

Project Components	Project Cost (US$ million)	GEF (US$ million)	% Financing
1. Creation and consolidation of Protected Areas	75.018	20.349	0.271

Project Components	Project Cost (US$ million)	GEF (US$ million)	% Financing
2. Promoting sustainability within watersheds	153.930	17.096	0.111
3. Enabling adaptive management by strengthening monitoring capacities	11.189	0.439	0.039
4. Innovative mechanisms for inter-institutional collaboration and promoting social participation	16.892	0.979	0.579
5. Project management	10.768	0.655	0.061
Total Costs (Front end Fee)	**267.797**	**39.518**	**0.148**

C. Lessons Learned and Reflected in the Project Design

34. The Project will apply multiple lessons from projects in Mexico and elsewhere.[8] The agencies involved in the Project have accumulated experience presenting an unprecedented opportunity for efficient and effective coordination. Institutional arrangements in place through the SINAP I and II projects will be continued and adapted for the proposed Project. Five independent evaluations[9] have recognized the CONANP-FMCN partnership as a key to the success of prior GEF-supported grants. Similarly, arrangements for successful implementation of PES have been established in the Mexico Forest and Climate Change Project (Specific Investment Loan to CONAFOR)[10]. These arrangements, described in SINAP II's legal and subsidiary agreements and operational manual, will be the model for agreements between CONANP, CONAFOR, INECC and FMCN. FMCN's experience comprises more than 1,000 subprojects, channeling more than US$60 million to the field through 274 organizations. FMCN has also successfully designed and launched regional funds, which serve as effective financial mechanisms to address regional needs, strengthening local capacities and complementing local public investments. Key institutional arrangements and operating features, such as public-private partnerships, transparent management of funds, and guidelines accepted by all participating institutions (the SINAP II operational manual was used as a reference for other environmental funds worldwide), support effective collaboration toward environmental, social, and economic objectives. Continuity of established partnerships into the Project is an important factor mitigating the risk of complex institutional arrangements.

[8] Space limitations constrain detailed description of the rich sources of learning from protected areas, sustainable forest and land management, and inter-institutional coordination projects worldwide. One notable compilation of these lessons is the evaluation report *Managing Forest Resources for Sustainable Development*, available at http://ieg.worldbankgroup.org/Data/reports/forest_eval.pdf.

[9] SINAP I was assessed by independent evaluators at midterm and final reviews, while GEF commissioned an evaluation in 1998 on environmental funds. The Mexican case was published in 1999 as a model (GEF Lessons Notes No. 7). SINAP II had independent midterm and final evaluations. All evaluations were conducted by a mix of international and national experts and showed positive results.

[10] Mexico Forests and Climate Change Project (P123760), approved January 31, 2012.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

35. The Recipients of the Grant will be the United Mexican States (represented by the Secretariat of Finance and Public Credit) and FMCN. CONAFOR will execute Part 2.1, supported by its Biodiversity Fund. FMCN will administer the rest of the GEF funds with the technical assistance of two regional funds: the FGM and the FONNOR.[11] FMCN will sign an inter-institutional agreement with CONANP, CONAFOR, and INECC, as well as with the regional funds, for the execution of Parts 1, 2, 3 and 4. An operational manual describes the rules and procedures governing the Project. Annex 3 includes a table presenting responsibilities to be assumed by each institution.

36. The Project will have a project coordination unit (PCU) run by FMCN and a regional coordination unit (RCU) for each regional fund (FGM and FONNOR) in each of the two regions, both overseen by a Technical Project Committee (TPC). Annex 3 describes these arrangements in detail. The TPC has been created and has approved its by-laws. It is composed of representatives of CONANP, CONAFOR, INECC, and FMCN and will approve operational procedures, provide policy guidance, and supervise and support the implementing agencies. The RCUs will work with the partner agencies to assure that appropriate local and regional bodies are engaged, or launched where needed, and have necessary technical and logistical support, as part of their responsibility to ensure project governance, regional coordination, compliance with safeguards, and local participation. In an advisory capacity, regional committees including representatives of stakeholders and key local and regional entities will help coordinate with state and federal agencies at the regional level. Local networks or forums that are currently in place, or that develop through coordination of project activities, will provide another important channel for sharing information.

B. Results Monitoring and Evaluation

37. **Outcome monitoring.** Technical reports will be prepared by the RCUs under the oversight of the PCU and presented to the TPC and to the World Bank every six months. Parts administered by FMCN will rely on its Information System for Project Follow-up (*Sistema de Información y Seguimiento de Proyectos,* SISEP) developed for the SINAP II Project. Reports will be submitted on February 15 and August 15 on a yearly basis, accompanied by reports on the use of endowment funds. Reports on the use of non-endowment funds will be submitted quarterly. Annual investment reports on endowment funds managed by FMCN will be submitted to the TPC and then to the World Bank. FMCN will inform the World Bank of any changes to the investment policy. Minutes of quarterly FMCN Investment Committee meetings and monthly

[11] FGM was created in January 2013. It is legally constituted, with by-laws and a board. Staff will be hired under grant proceeds. FONNOR has been created in October 2013. These regional funds will serve as local financial mechanisms that can provide on-site technical oversight, strengthen local organizations, coordinate with local governments, channel funds to local communities, and hire personnel in the Protected Areas complying with Mexican labor law. In FMCN`s experience, regional funds serve to attract sources of funding usually unavailable to national funds. FMCN's most recent experience establishing the Mesoamerican Reef Fund (with the participation of Belize, Guatemala, Honduras, and Mexico), capitalized with US$30 million, shows the great potential for regional funds and the experience of FMCN in creating them.

investment reports will also be available to the World Bank upon request. CONAFOR will report on the Biodiversity Fund following guidelines agreed with the World Bank.

38. The PCU will conduct midterm and final evaluations, including quantitative assessment of outcomes and analysis of achievements and difficulties encountered, compliance with safeguards, and lessons learned.

C. Sustainability

39. The Project's financial sustainability relies on its combination of endowment and non-endowment funds, triggering contributions of funds from additional donors, including funds designated for endowment, and aligning investments from stakeholders in each watershed. Sources of funding for US$16.441 million of the endowment match have been identified, including US$5.2 million that have been deposited, US$9.091 that CONAFOR will match after the grant agreement is signed, and US$2.15 million from the German government (KfW). Endowments provide a core of funding for each watershed, essential to trigger additional funding and allow for coordinated application of investments from other sources. This has been demonstrated by earlier experience. For example, the Fund for Protected Areas (*Fondo para Áreas Naturales Protegidas*, FANP) at FMCN (funded by SINAP I and II and matching funds) provided more than 33% of funding for the protected areas supported at its onset and today, with the same level of funding per protected area, it represents less than 5% of their budgets. The Project will support best practices to create incentives for other agencies to invest with the same perspective. As an example, the State Government of Veracruz has already established the Environmental Fund for Veracruz (*Fondo Ambiental Veracruzano*), which is modeled based on this Project and can potentially duplicate the investment in integrated watershed management in selected watersheds in Veracruz.

V. KEY RISKS AND MITIGATION MEASURES

A. Risk Ratings Summary Table

Table V.1 Risk Ratings Summary

Risk Category	**Rating**
Stakeholder risks	Moderate
Implementing Agency Risks	
Capacity	Moderate
Governance	High
Project risk	
Design	Moderate
Social and environmental	Moderate
Program and donor	Low
Delivery monitoring and sustainability	Low
Overall Implementation Risk	High

B. Overall Risk Rating Explanation

40. The overall implementation risk is High (see detailed analysis in Annex 4). The number of institutions involved in the Project could present coordination challenges affecting project implementation. The TPC will be key to achieve inter-institutional coordination. States and municipalities in several cases have limited capacity for enforcement of environmental regulations, and there are few strong civil society organizations in the project region. Mitigation measures include focusing on areas with high potential for community organization, and an emphasis on developing capacity for environmental management and monitoring. Governance risk will be addressed through close monitoring to ensure transparent allocation of resources and accountability through social participation. The environmental sector has a strong track record. Co-financing is secure.

41. The country's economy is stable. A downturn in financial markets would impact endowments. FMCN's core business is the management of endowments with the advice of financial experts on its Investment Committee, which follows guidelines approved by the Board (see Annex 3). The present investment strategy keeps 70% of endowment funds in fixed income assets. The primary goal is to produce stable funds for expenditures in support of the protected areas and ensuring operations support; the secondary goal is to ensure that the value of the endowment is maintained above the cost of inflation. This approach provides a regular projection of approximately 6% per year for projects. The professional management of the FMCN capital has served as a model for other environmental funds worldwide and has allowed an average annual return of 7.84% in US$ in the past 16 years, which include two recessions.

42. The Project's design may not be implemented simultaneously in all the parts along the Gulf of California and the Gulf of Mexico (see Annex 2 for details); this also poses risks. The main parts, PES and protected areas management, have funding and institutional arrangements in place to begin in both regions. But endowment funds must still be raised to match the grant contribution along the Gulf of Mexico. Disbursement of matching funds by the World Bank will thus be contingent upon proof that the match has been deposited in the FCC investment account at FMCN. SINAP II used this model with great success.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

43. While a full cost-benefit analysis was not possible given the limited information available, particularly regarding the valuation of environmental services, information from various sources and similar regions was used to assess cost-effectiveness and to establish under which conditions the project is most likely to have positive net benefits. There is evidence that the benefits of the Project will outweigh costs. These findings depend significantly on actual performance during implementation, including targeting of the instruments, design of alternative sustainable projects, and co-financing. The economic analysis is presented in Annex 6.

44. Creation and management of federally administered natural protected areas has been demonstrated to be the most effective conservation strategy in Mexico and institutional arrangements and financial resources are already in place and are expected to lead to substantial effectiveness benefits and reduced costs that endure beyond the Project's lifetime. The

incremental cost analysis (Annex 7) shows that the GEF contribution will leverage both current counterpart contributions and endowment contributions from donors.

45. The Project's direct beneficiaries will be communities in the selected watersheds who adopt forest conservation programs and biodiversity-friendly production practices in the context of IWAPs, yielding payments for ecosystem services and enhanced agro-ecological production, along with broader social and environmental benefits.

B. Technical

46. Technically, the Project applies a strategic suite of instruments: (a) protected areas; (b) payment for ecosystem services (PES) in important forest fragments; (c) subprojects establishing and disseminating improved forest and agricultural management practices within the watersheds; (d) community-based assessment, planning, and monitoring at the watershed level; and (e) mechanisms for coordination, information sharing, and replication in a broader landscape.

47. Protected areas represent one of the most effective instruments for in situ conservation of species, ecosystems, and environmental services. Figueroa and Sánchez-Cordero (2008)[12] documented the federal effectiveness of protected areas in Mexico, while Honey-Rosés et al.[13] showed how the combination of financial instruments (protected area management and PES) in one of the SINAP II protected areas avoids forest loss without any leakages into the surrounding landscape. The national system of protected areas is a primary strategy to address problems including deforestation, management of water quality and quantity, regulation of land use, coordination among the three levels of government, and participation of the social and private sectors. Resources for long-term monitoring and management effectiveness are still insufficient. This project provides resources both directly and indirectly by creating incentives for investment from the private sector (philanthropic and business). SINAP I and II showed that the public-private partnership between CONANP and FMCN, as well as coordination with other public agencies, results in a very attractive investment for donors at the local, national, and international scale.

48. There is evidence that management of forests by local or indigenous communities for the production of goods and services can be as effective in maintaining forest cover as management under solely protection objectives. A study by Porter-Bolland et al.[14] compared forest cover loss in protected areas and community-managed forested areas, looking at the underlying causes of deforestation. The findings support a conclusion that local autonomy and decision making positively influence forest conservation outcomes. Other supporting conditions include the presence of conservation policies and institutions, and communal ownership of land.

49. Mexico's PES program has demonstrated small but significant effects in reducing deforestation, indicating that PES is an important element in a suite of instruments to prevent

[12] Figueroa, F., and V. Sánchez-Cordero. 2008. "Effectiveness of Natural Protected Areas to Prevent Land Use and Land Cover Change in Mexico." *Biodiversity and Conservation* 17: 3223–40.

[13] Honey-Rosés, J., et al. 2011. "A Spatially Explicit Estimate of Avoided Forest Loss." *Conservation Biology* 25 (5): 1032–43.

[14] Porter-Bolland, L., et al. 2011. "Community-Managed Forests and Forest Protected Areas: An Assessment of Their Conservation Effectiveness across the Tropics." *Forest Ecology and Management* doi:10.1016/j.foreco.2011.05.034.

environmental degradation.[15] In 2008, the World Bank's Forest Carbon Partnership Facility cited the success of Mexico's PES program as an important factor for selecting Mexico for support to develop national REDD schemes. CONAFOR and the Biodiversity Fund's Technical Committee will assure that PES funds flow to high-priority areas, while responding to community applications to assure local ownership and commitment to results. Community monitoring will increase local knowledge about impacts of land use changes and means to protect local resources, and will facilitate development of IWAPs.

50. A key element to leverage PES impact is combining PES with subprojects focused on improving natural resource management, linking active management with improved livelihoods. The combination allows communities to work with NGOs that can serve as a bridge to access technical advice on resource management, as well as tools for planning, reporting, solving internal conflicts, improving governance, and accessing markets. CONAFOR and FMCN have successfully combined these approaches in 10 sites in Mexico, which are showing positive results after only four years of support. Annex 3 describes how community monitoring adds to the positive results.

C. Financial Management

51. The flow and management of funds will be conducted by FMCN and CONAFOR. FMCN will work with FGM and FONNOR for certain project activities (operational costs). The Project's five parts will finance: (a) non-endowment expenses totaling US$10.909 million, including goods, services of consultants and non-consultants, training, operating costs, and subprojects; (b) endowment funds for FCC of US$19.518 million to be administered by FMCN as to generate sufficient income for purposes of financing, if applicable, additional activities similar to those set forth under Parts 1.2, 1.3, 2.2, 2.3, 3, 4 and 5 of the Project, and (c) US$9.091 million for the Biodiversity Fund to support PES. Even though the Biodiversity Fund will be administered by BANORTE, in its capacity of trustee, CONAFOR will have the overall responsibility for the resources deposited into the Biodiversity Fund, while *Nacional Financiera S.N.C.* (NAFIN) will be a financial agency for the Part 2.1 of the Project.

52. Both FMCN and CONAFOR have adequate financial management capacity, with long-standing experience executing Bank projects, and sound internal control environments. Most project payments, including support for subprojects, will be made centrally by FMCN. Both FMCN and CONAFOR have revised manuals of policies and procedures, including operational rules applicable to the payments of the subprojects. Selection of subprojects is competitive and subject to a solid evaluation, monitoring, and reporting framework. FMCN and CONAFOR have well-integrated information technology (IT) platforms to manage budgeting, accounting, and other financial management functions of the project. FMCN and CONAFOR have suitable organizational structures allowing proper segregation of financial management-related functions. The main disbursement method will be advances to the project designated account, to be administered by FMCN, for non-endowment expenditures, and direct payment for the transfer to the endowment funds, which, in turn, will be subject to contribution of matching funds (1:1). FMCN will prepare and submit to the Bank semi-annual non-audited interim financial reports. Project financial statements and statements of expenditure, as well as operation of both

[15] Alix-Garcia, J.M., E. Shapiro, and K. Sims. 2010. *The Impacts of Payments for Ecosystem Services on Deforestation in Mexico: Preliminary Lessons for REDD.* Conference paper, Fourth World Congress of Environmental and Resource Economists, 2010.

endowment funds will be subject to annual external audits based on terms of reference acceptable to the Bank. FMCN's financial statements corresponding to FY11 were audited by a private firm, which issued an unqualified (clean) opinion. NAFIN, as a financial agency, will provide support to CONAFOR on main fiduciary-related issues. Therefore, the overall financial management risk is Moderate.

53. The main agreed financial management-related pending actions are that: (a) a technical/fiduciary assessment of FGM and FONNOR has been carried out in a manner acceptable to the World Bank which shall certify, *inter alia*, that FGM and FONNOR have the capacity to exercise satisfactory control over the use of funds administrated by them; and (b) FMCN has provided evidence satisfactory to the World Bank showing that: (i) FONNOR has been duly established, (ii) the FMCN-FGM Agre ement has been duly executed, and (iii) the FMCN-FONNOR Agreement has been duly executed.

D. Procurement

54. Procurement will be carried out in accordance with the World Bank's *Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers*, dated January 2011; and *Guidelines: Selection and Employment of Consultants by World Bank Borrowers*, dated January 2011, and the provisions stipulated in the legal agreement. A full assessment of FMCN capacity to implement procurement under the World Bank's procurement guidelines has been completed. The major risk identified is the participation of FGM, which has been legally created but still does not have structure or staff, with experience in implementing Bank-financed projects; in order to mitigate the risk, FGM will only be responsible for operating costs in the zone of the Gulf of Mexico, and FMCN will closely supervise these activities. Regarding the subprojects, FMCN will be directly responsible for the supervision of the procurement activities. Considering the fact that FMCN has implemented other Bank-financed projects, and is familiar with the World Bank's procurement procedures, including using bidding documents, requesting prior and post reviews, and preparing procurement plans, the risk has been rated as Moderate. Because it is a private institution, FMCN is not considered under the agreements between the Secretariat of Public Administration (*Secretaría de la Función Pública*, SFP) and the World Bank, so it will apply the World Bank's guidelines and adapted standard bidding documents as required. Procurement above threshold amounts for goods (US$500,000), works (US$5,000,000), and consulting services (US$300,000) will be subject to prior review by the Bank.

E. Social

55. The Project is expected to have a positive social impact by promoting participation of local communities and ensuring an inclusive distribution of benefits. The social strategy developed for the Project includes targeted outreach and consultation with local communities, women, and indigenous groups. It is described in Annex 3. Benefits include sustainable economic activities that also contribute to community wellbeing; strengthening of community organizations to facilitate access to public programs; participatory monitoring to empower community organizations to participate in decision making and improve governance; and better understanding of climate change and means available to mitigate its impacts. Safeguard policies triggered are Indigenous Peoples (OP 4.10) (because there are indigenous peoples in four watersheds in the Gulf of Mexico and in two watersheds in the Gulf of California that may be

chosen by donors) and Involuntary Resettlement (OP 4.12) (to address possible impacts from restrictions on access to and use of natural resources in protected areas supported in Part1).

56. A social assessment and consultation process was undertaken in the Gulf of Mexico region to gather information and inputs for the preparation of an Indigenous Peoples Planning Framework. An Environmental and Social Management Framework, two Indigenous Peoples Planning Frameworks, and a Process Framework were prepared and disclosed prior to appraisal. The Environmental and Social Management Framework, Indigenous Peoples Planning Frameworks, and Process Framework prepared for the Project were shared during a consultation meeting in April 2013 with representative groups of stakeholders and indigenous leaders from the Gulf of Mexico. Their concerns and inputs were incorporated into the final versions, which were disclosed on the websites of the four executing agencies (April 1, 2013, on the FMCN website, and May 22, 2013, on the CONANP, CONAFOR, INECC, and FMCN websites) and in the World Bank's Infoshop on May 8, 2013. The Indigenous Peoples Planning Framework prepared for the Forests and Climate Change Project will be used for part 2.1 for the Biodiversity Fund and indigenous peoples plans prepared for those activities as agreed with CONAFOR. The Indigenous Peoples Planning Framework prepared by CONAFOR was disclosed prior to the approval of the Forests and Climate Change Project in November 2011 and it was re-disclosed on May 22, 2013, on the CONANP, CONAFOR, INECC, and FMCN websites and in the World Bank's Infoshop in July 2013. The Process Framework was prepared, disclosed, and reviewed during the same process. There are indigenous peoples in two of the 10 watersheds that may be selected in the Gulf of California and if these watersheds are selected, a social assessment will be undertaken within the context of the Indigenous Peoples Planning Framework developed for Part 1 of the Project and indigenous peoples plans developed as necessary.

F. Environment

57. The Project has been classified as Category B. It is expected to have an overall positive impact on the environment, by strengthening protected areas, enhancing local communities' capacity to monitor and understand forest and watershed ecosystem services, and enhancing the effectiveness and synergy of the main institutions responsible for natural resource management. The sustainable management practices supported in Part 2 are expected to reduce deforestation pressure in fragmented landscapes currently at high risk of conversion; however, some subproject activities could have negative impacts if not carefully designed, selected, and monitored. Safeguards triggered are Environmental Assessment (OP/BP 4.01), Natural Habitats (OP 4.04), Forests (OP/BP 4.36), Pest Management (OP/BP 4.09), and Physical Cultural Resources (OP/BP 4.11). Criteria for screening subprojects and applying mitigation measures have been prepared, reviewed with stakeholders, and disclosed in accordance with World Bank guidelines as part of the Environmental and Social Management Framework. Such criteria include mitigation measures to reduce the possibility that sustainable activities displace pressure to forests elsewhere, which will be closely monitored. Input for the Environmental and Social Management Framework and the related safeguard instruments were gathered at workshops during project preparation, with participation from 27 organizations, 37 communities, 10 indigenous groups, and the three government levels. The draft Environmental and Social Management Framework was reviewed at a validation meeting with representatives of stakeholder groups, and the final version disclosed on executing agency websites (April 1, 2013, on the FMCN website and May 22, 2013, on the CONANP, CONAFOR, INECC, and FMCN websites) and through the World Bank's Infoshop on May 8, 2013. Consultations on the

Environmental and Social Management Framework took place on April 10, 2013. Safeguard instruments were disclosed on the FMCN website on April 1, 2013.

Annex 1. Results Framework and Monitoring

Mexico
Coastal Watershed Conservation in Response to Climate Change (P131709)
Results Framework

Project development objective. The project development objective is to promote integrated environmental management of selected coastal watersheds as a means to conserve biodiversity, contribute to climate change mitigation, and enhance sustainable land use.

Project development objective-level results indicators	Core	Unit of measure	Baseline	Cumulative target values					Frequency	Data source/ methodology	Responsible for data collection	Description (indicator definition etc.)
				YR 1	YR 2	YR 3	YR 4	YR 5				
Indicator 1 Consolidation of at least 1.1 million hectares of protected areas, including at least 2 new protected areas of an estimated 500,000 hectares	X	Hectares of protected areas improving management through the project	0 ha		270,000	400,0000	700,0000	1,100,000	Annual	CONANP reports	PCU and CONANP	Performance will be measured using CONANP's and FANP's methodology that describes national standards (see Annex 2).
Indicator 2 Improved land and forest management with reduced carbon emissions in selected sites in 6 watersheds	☐	Area (ha) of sustainable use projects implemented	1,008,858 ha (PSA counterpart funds) (see indicator 2.2 for carbon monitoring)	1,021,536	1,022,130	1,022,724	1,026,960	1,027,554	Annual	PCU reports and CONAFOR published data on supported PES	PCU and CONAFOR	Area directly supported through PES, agro-ecosystems and sustainable forest management (18,700 ha)
Indicator 3 Integrated watershed/ subwatershed action plans (IWAPs) including municipal, regional, and federal levels (6 watersheds)	☐	Number of watersheds/ subwatersheds where collaboration is included	0 watersheds	2	3	4	5	6	Annual	Aides-mémoires of annual monitoring workshops	PCU and INECC	IWAPs documenting coordination of different government levels and sectors

Intermediate results												
				Cumulative target values								
Intermediate result indicator	**Core**	**Unit of measure**	**Baseline**	**YR 1**	**YR 2**	**YR 3**	**YR 4**	**YR 5**	**Frequency**	**Data source/ methodology**	**Responsible for data collection**	**Description (indicator definition etc.)**
Intermediate result (Part 1). Creation and consolidation of Protected Areas												
Indicator 1.1 Protected areas meeting their management effectiveness target Target: 9 protected areas Gulf of Mexico Target: 3 protected areas Gulf of California[16]	☐	Number of protected areas	0	0	2	4	8	12	Annually	Semester reports to World Bank	CONANP and FMCN	Effectiveness has to be comparable to the average of those protected areas currently under FANP support using CONANP evaluation methodology
Indicator 1.2 Capitalization of permanent funding sources	☐	US$ million raised	5.2	5.2	16.4	20.5	24.5	28.6	Annually	Bank account showing deposits	CONANP and FMCN	Endowment funds will be considered a match if interests are directed to project watersheds in the Gulf of California or Gulf of Mexico
Intermediate result (Part 2). Promoting sustainability within watersheds												
Indicator 2.1 PES, agro-ecosystem and sustainable forest management subprojects implemented in accordance with IWAPs Target: 8,442 ha in PES, 2,971 ha (agro-ecosystems) and 7,283 ha (sustainable forest management)	☐	Area (ha) with subprojects in watersheds	0	12,678	13,272	13,866	18,102	18,696	Annually	Results from project annual monitoring workshops	CONAFOR, INECC and FMCN	IWAPs will allow for strategic investments from the projects and counterpart funds
Indicator 2.2 CO_2 avoided and sequestered in the targeted watersheds/subwatersheds Target: 4.015 $MtCO_2$ in 5 years, estimate to be confirmed between year 1 and year 2	☐	% of $MtCO_2e$ target	0	0		50%		100%	After 1st, 3rd and 5th years	Semester reports to World Bank	CONAFOR and FMCN	Target verified in year 1 with monitoring, reporting, and verification (MRV) methods, advances will be measured after year 3 and year 5 (remote sensing and ground-truthing)

[16] The three protected areas in the Gulf of California will be subject to donor preferences.

Indicator 2.3 At least one functioning monitoring system per watershed Target: 6 monitoring systems		Number of monitoring systems per watershed	0	0	6	6	6	6	After 1st, 3rd and 5th years	Semester reports to World Bank	CONAFOR, INECC and FMCN	Target will be verified in year 1 with MRV methods currently being defined; advances will be measured after year 3 and year 5
Intermediate result (Part 3). Enabling adaptive management by strengthening monitoring capacities												
Indicator 3.1 Number of watersheds/ subwatersheds with priority sites being monitored with remote sensing and local data gathering techniques Target: 6 watersheds/ subwatersheds	☐	Number of watersheds/ subwatersheds	2	4	6	6	6	6	Water quality (bimonthly), land use change (annually), carbon (mid- and end of project)	Results from project annual monitoring workshops	CONAFOR, INECC and FMCN	Data collected will include land use change, water quality and carbon
Intermediate result (Part 4). Innovative mechanisms for inter-institutional collaboration and promoting social participation												
Indicator 4.1 Number of local partners that have incorporated best land management practices Target: 6 partners	☐	Number of local partners (state and municipal governments, academic institutions, NGOs)	0	1	2	3	4	6	Annually	Semester reports to World Bank	CONANP, CONAFOR, INECC and FMCN	Incorporation will be considered when partners' activities reflect the best practices derived from the project

Annex 1 (continuation): Results Framework and Monitoring
Mexico
Coastal Watershed Conservation in the Context of Climate Change (P131709)
Results Framework

Project Development Objective Indicators	
Indicator Name	Description (indicator definition etc.)
Indicator 1 Consolidation of at least 1.1 million hectares of protected areas, including at least 2 new protected areas of an estimated 500,000 hectares	Performance will be measured using CONANP's and FANP's methodology that describes national standards (see Annex 2).
Indicator 2 Improved land and forest management with reduced carbon emissions in selected sites in 6 watersheds	Area directly supported through PES, agro-ecosystems and sustainable forest management (18,700 ha)
Indicator 3 Integrated watershed/ subwatershed action plans (IWAPs) including municipal, regional, and federal levels (6 watersheds	IWAPs documenting coordination of different government levels and sectors
Intermediate Results Indicators	
Intermediate result (Part 1). Creation and consolidation of Protected Areas	
Indicator 1.1 Protected areas meeting their management effectiveness target Target: 9 protected areas Gulf of Mexico Target: 3 protected areas Gulf of California	Effectiveness has to be comparable to the average of those protected areas currently under FANP support using CONANP evaluation methodology
Indicator 1.2 Capitalization of permanent funding sources	Endowment funds will be considered a match if interests are directed to project watersheds in the Gulf of California or Gulf of Mexico
Intermediate result (Part 2). Promoting sustainability within watersheds	
Indicator 2.1 PES, agro-ecosystem and sustainable forest management subprojects implemented in accordance with IWAPs Target: 8,442 ha in PES, 2,971 ha (agro-ecosystems) and 7,283 ha (sustainable forest management)	IWAPs will allow for strategic investments from the projects and counterpart funds
Indicator 2.2 CO_2 avoided and sequestered in the targeted watersheds/subwatersheds Target: 4.015 $MtCO_2$ in 5 years, estimate to be confirmed between year 1 and year 2	Target will be verified in year 1 with monitoring, reporting, and verification (MRV) methods currently being defined, advances will be measured after year 3 (only with remote sensing) and year 5 (remote sensing and ground-truthing)
Indicator 2.3 At least one functioning monitoring system per watershed Target: 6 monitoring systems	Target will be verified in year 1 with MRV methods currently being defined; advances will be measured after year 3 and year 5
Intermediate result (Part 3). Enabling adaptive management by strengthening monitoring capacities	

Indicator 3.1 Number of watersheds/ subwatersheds with priority sites being monitored with remote sensing and local data gathering techniques Target: 6 watersheds/ subwatersheds	Data collected will include land use change, water quality and carbon
Intermediate result (Part 4). Innovative mechanisms for inter-institutional collaboration and promoting social participation	
Indicator 4.1 Number of local partners that have incorporated best land management practices Target: 6 partners	Incorporation will be considered when partners' activities reflect the best practices derived from the project

Annex 2. Detailed Project Description

MEXICO
Coastal Watershed Conservation in Response to Climate Change (P131709)

A. Project Scope

1. The Project will operate in two regions highly affected by climate change: the Gulf of Mexico and the Gulf of California. Six watersheds along the Gulf of Mexico (list and maps in Annex 8) were selected for biodiversity values, presence of protected areas, importance for the implementing institutions, local capacities, matching fund potential, and inter-institutional collaboration, taking into account opportunities to leverage programs to address climate change, land degradation, and sustainable forest management. These areas, which require immediate attention, will be supported by GEF funds, counterpart funds, and matching endowment resources. Ten watersheds along the Gulf of California were selected using the same criteria as candidates to receive counterpart funds and matching endowment resources.[17]

2. The selected watersheds show high variability, with degradation more prevalent along the Gulf of Mexico. Within the transformed landscape, 59.9% is devoted to cattle ranching, 39.2% to agriculture, and 1% is urban. Increasingly, natural ecosystems in these watersheds yield to competing land uses – cattle ranching, slash-and-burn agriculture, sugar cane cultivation, and hydroelectric dams – and coastal development, causing carbon emissions, loss of biodiversity, erosion and land degradation, and unsustainable livelihoods. To reverse these trends, a multi-institutional effort is urgently required.

3. The project area in the Gulf of Mexico has 2.7 million inhabitants (51% women) distributed in 4,771 localities in 112 municipalities of the states of Veracruz, Tabasco, Chiapas, Hidalgo, Puebla, and Campeche. The majority of this population (85.37%) is located in Veracruz. Around 10% is indigenous population, including Tzeltal, Chol, Chontal, Nahuatl, Popoluca, Totonaca, Otomí, and Tepehua. In the Gulf of Mexico the expected direct beneficiaries in five years include 99,000 inhabitants of the protected areas and 1,000 beneficiaries of PES, and 800,000 additional beneficiaries, including family members of those receiving PES and residents of the cities around two marine protected areas.

[17] Project sites were selected in an interactive process including the four implementing institutions. INECC identified watersheds (17 along the continental coast of the Gulf of California and 15 along the Gulf of Mexico) that (a) had federal protected areas; (b) showed high and very high biological diversity according to the *Gap and Omission Analysis of the Terrestrial and Epicontinental Biodiversity of Mexico*; and (c) presented opportunities to enhance carbon stocks. Then, representatives of the implementing institutions graded each of the 32 watersheds for institutional importance, local capacity, availability of counterpart and matching endowment funds, and potential for inter-institutional collaboration. This resulted in the identification of ten coastal watersheds on the continental side of the Gulf of California, and six coastal watersheds along the Gulf of Mexico. In the case of very large watersheds, the selection was further refined to key sub-watersheds.

B. Project Parts (Components)

4. Activities are organized in five parts Part 1, Creation and consolidation of Protected Areas, will be implemented by CONANP and FMCN, following the model developed in earlier GEF-funded projects (SINAP I and II). Part 2, Promoting sustainability within watersheds, will support PES through CONAFOR, and forestry and agricultural subprojects for sustainable land and forest management, with GEF funds administered by FMCN and counterpart funds by CONAFOR. INECC will lead Part 3, Enabling adaptive management by strengthening monitoring capacities, engaging local communities, and coordinating with national and state agencies to collect and manage watershed health data. Part 4, Innovative mechanisms for inter-institutional collaboration and promoting social participation, will focus on mechanisms for inter-institutional collaboration, promoting social participation, monitoring and evaluation, and strengthening channels for coordination and learning. Together these four parts address carbon stock enhancement as a crosscutting issue. Part 5 includes project management and operation costs. Requested GEF funds include endowment funds, to be invested in the existing Biodiversity Fund at CONAFOR with BANORTE as the trustee, and in an FMCN investment account, the Fund for Coastal Watersheds (FCC). FMCN will administer non-endowment GEF funds for parts 1, 2, 3, 4, and 5, with support from two regional funds. The two regional funds will also provide technical and administrative oversight of the application of the interest of the endowment funds.

5. Project activities will be coordinated through watershed-level planning. Activities include: (a) conserving sites of high priority for biodiversity in Protected Areas; (b) implementing PES to support the conservation of forests at high risk of fragmentation and degradation; (c) supporting communities and individual landowners to implement biodiversity and forest-friendly practices in plots essential for connectivity and forest conservation; (d) collection and management of data related to ecosystem health, through processes that engage and develop the capacities of local communities to implement integrated watershed and sub-watershed action plans (IWAPs); and (e) testing and mainstreaming innovative approaches to inter-institutional collaboration and learning.

6. Traditional watershed management programs tend to take long to elaborate and are usually hard to implement, thus resulting in documents that are not used. The Project therefore proposes a dynamic and participatory approach to plan actions in the watershed combining basic scientific data and strong participation from the main players. IWAPs are plans that will be the result of dynamic models with environmental and socioeconomic data for each watershed, which will help define the areas of strategic investment of project and counterpart funds and leverage additional investments through participatory processes. These IWAPs will be updated annually to add data from official sources and derived from local monitoring. This approach, including social participation and efforts directly aimed at mainstreaming investments, will act on drivers of carbon and biodiversity depletion while providing improved livelihoods. IWAPs will also serve as vehicles to monitor whether carbon- and biodiversity-depleting activities are not merely displaced to other sites. If leakage is detected, inter-institutional coordination (Part 4) will serve to analyze its causes and address the matter through various measures, including enforcement.

7. Table 2.1 shows the allocation of endowment and non-endowment funds from GEF and other sources to each part.

Table 2.1 Detailed Project Costs by Part and Type of Funding

#	Part	Grant funds in US$ million			Co-financing
		Endowment funds	Non-endowment funds	Total funds	
1	**Creation and consolidation of protected areas**	**19.518**	**0.831**	**20.349**	**54.669**
1.1	FCC Capitalization	19.518			
1.2	Annual operating plans	-	–	-	
1.3	Fundraising	-	0.831	0.831	
2	**Promoting sustainability within watersheds**	**9.091**	**8.005**	**17.096**	**136.834**
2.1	FB Capitalization – PES	9.091	–	9.091	
2.2	Agro-ecosystem subprojects	-	–	-	
2.3	Sustainable forestry management subprojects	-	8.005	8.005	
3	**Enabling adaptive management by strengthening monitoring capacities**	**-**	**0.439**	**0.439**	**10.750**
4	**Innovative mechanisms for inter-institutional collaboration & promoting social participation**	**-**	**0.979**	**0.979**	**15.913**
5	**Project management**	**-**	**0.655**	**0.655**	**10.113**
	Total	**28.609**	**10.909**	**39.518**	**228.279**

8. **Part 1: Creation and consolidation of Protected Areas.** GEF: US$20.349 million; Counterpart: US$54.669 million. Consolidation of Protected Areas refers to achievement of national standards for management effectiveness. The objective of this part is to enhance biodiversity conservation in Protected Areas.

9. **Part 1.1.** *Carrying out of the capitalization of the FCC.*

10. The FCC will be managed by FMCN as to generate sufficient income for purposes of financing, if applicable, additional activities similar to those set forth under Parts 1.2, 1.3, 2.2, 2.3, 3, 4 and 5 of the Project.

11. **Part 1.2:** *Supporting the creation of new Protected Areas and strengthening management effectiveness of new and existing Protected Areas through financing of biodiversity conservation activities included in the annual operating plans.*

12. This subpart will apply counterpart funds to create two new Protected Areas and interest from FCC to strengthen management in seven existing Protected Areas, as well as in the new areas. Use of FCC interest will follow procedures established in SINAP II to implement protected area annual operating plans. Eligible activities include hiring of personnel and equipment; conservation, community, and capacity-building activities; activities to address natural contingencies; and staff training.

13. Seven existing Protected Areas in selected watersheds in the Gulf of Mexico region will increase management effectiveness from 30% to at least 80% (based on national standards). Protected Areas will be considered consolidated if they have: (a) a published management program or a clear strategic plan (logical framework or similar) that defines results, activities, and indicators for decision making with a clear alignment with CONANP's plans, including the Climate Change Strategy for Protected Areas; (b) core and complementary personnel that can implement the main activities identified in the strategic plan; (c) a financial plan including financial gap analysis and implementation of strategies to reduce gaps (described below); (d) essential infrastructure, equipment, and recurrent funds for basic operation, including those to address natural contingencies; and (e) a diversified budget with investment from national and international sources.[18]

14. The Project will also support three Protected Areas along the Gulf of California, determined by donor commitments of funds to candidate sites qualified through the selection process.

15. Endowment contributions are considered strategic and catalytic investments in protected area financial sustainability. In Protected Areas supported by SINAP I and II, FANP funds are a relatively small portion of the funding picture. Even when constant in absolute amounts, they have historically represented a decreasing percentage of the resources available to the supported Protected Areas. They are used not simply to fill gaps but to generate additional revenue streams, as in programs implemented in Protected Areas by NGOs that bring additional matching funds to the table. Indicators for financial sustainability and gap analysis are linked to CONANP's comprehensive financial gap analysis and sustainability strategy for the protected area system. The analysis projects a need to nearly triple Mexico's annual investment of about US$90 million in Protected Areas, through increased direct appropriations and strategic integration of programs. This public funding would cover about 70% of the system's resource needs, with the remaining 30% to be filled from other sources, including entry and concession fees and external investments. Presently different scenarios are being explored for eliminating the gap over a period of up to 10 years. The interests provided by the Project are expected to be an important lever of funds to reduce the financial gap.

16. **Part 1.3:** *Carrying out fundraising activities to obtain additional non-GEF funding for FCC to finance biodiversity conservation activities in Protected Areas and selected watersheds.*

17. Capitalization of permanent funding sources will be increased by US$28.6 million. Activities eligible for funding will be FMCN's consulting and operating costs of raising matching endowment funds that will generate interest to be directed to protected areas or other eligible activities in the selected watersheds.

18. The fundraising strategy will follow the experience under SINAP II. Matching endowment contributions include US$9.091 million that CONAFOR will deposit as an allocation from its Mexican Forest Fund upon grant approval by the World Bank. CONANP expects that the German government (KfW) will deposit US$2.15 million into FANP in 2014. FMCN has

[18] Consolidation parameters depend on the peculiarities of each protected area (see Bezaury-Creel, J.E, S. Rojas-González de Castilla, and M.J. Makepeace. 2011. *Financial Gap in the Federal Protected Areas of Mexico: Phases I and II.* CONANP, The Nature Conservancy, FMCN).

already raised US$5.2 million in endowment funds for the Protected Areas along the Gulf of California. The remaining US$12.168 million will be raised in the next five years.[19] These matching endowment funds will cover project activities in any of the 16 selected watersheds in the two regions, taking into account the areas where donors choose to direct resources. FMCN's fundraising strategy includes an international fundraising campaign building on the Baja Marine Initiative (a collaboration with The Nature Conservancy's Mexico Program), and a separate request in process for a US$1 million PES endowment for the *Marismas Nacionales* watersheds on the Gulf of California coast. FMCN will hire the staff to implement a donor prospecting, information management, and stewardship system.

19. Fundraising activities eligible for support include enhancement of the fundraising team, travel for outreach to prospective donors, visits to partners and donors, events, and communication tools and materials. Consultancies may include market studies, prospect research, studies required to prepare proposals, and preparation and presentation of proposals. FMCN expects to spend US$311,625 on consultancies and US$519,375 for operations.

20. **Part 2: Promoting sustainability within watersheds.** GEF: US$17.096 million; Counterpart: US$136.834 million.

21. This part aims to contribute to climate change resilience and enhance sustainable land use by improving forest and land management and reducing carbon emissions in project watersheds.[20] Activities include PES to landowners through resources administered by the Biodiversity Fund and subprojects awarded through competitive calls for proposals. These activities will be coordinated in a landscape approach, accumulating benefits of enhanced forest and land management practices across watersheds, and engaging diverse stakeholders in collaborative planning, monitoring, and learning, such that improved practices will succeed rather than displace competing activities. Within each watershed, forest fragments under high deforestation pressure and with high climate mitigation potential will be conserved through PES. Around these fragments, subprojects to improve management of agro-ecosystems will target areas subject to degradation but essential to reduce pressure on forest fragments. Communities and civil society organizations working with them will be eligible to request funding for subprojects to reduce land use change pressures and greenhouse gas emissions through forest conservation, restoration, and sustainable forest management. Activities in this part pertain to the Climate Change Mitigation, Land Degradation, and Sustainable Forest Management focal areas. As noted above, investments in sustainable management will contribute in turn to maintaining habitat connectivity and corridors around protected areas.

22. At least 200,000 hectares are expected to incorporate lessons learned from the Project in additional watersheds, as best practices are developed and disseminated through the Project's social strategy and by local organizations providing technical assistance. Within the project

[19] The campaign strategy projects 36% from foundations, 29% from corporations, 19% from individual donors, and 16% from bilateral agencies.

[20] The Project will engage diverse stakeholders in collaborative planning, monitoring, and learning to address the enhancement of carbon assets. This will create incentives, skills, and support systems that together with the funds allocated to the physical intervention though PES and best management practices will make the project highly cost-effective. The package of PES and agro-ecological practices will include a soft part to create capacity among the targeted beneficiaries. The economic analysis in Annex 9 provides more rationale.

watersheds, capacities for improved use of natural resources will be developed in local communities to ensure sustainability in landscape management of 1,027,554 hectares. PES and subprojects are necessarily resource-intensive activities in high-poverty areas, where land degradation and historical poor management of natural resources prevail. NGOs, communities, and forest owners will be supported to ensure the transition to sustainability.

23. Climate change mitigation targets for these activities (reduction in carbon emissions) were derived comparing land use and vegetation changes between 1993 and 2007 (series II and IV from INEGI) by CONAFOR. Comparisons were conducted for each watershed and protected area included in the Project. Within Protected Areas, the estimate was based on avoided deforestation in new Protected Areas and reduced degradation in existing areas. Carbon estimates were based on the carbon stock per vegetation type in each watershed. A detailed description of the methodology followed and the derived calculations is included with the Climate Change Mitigation tracking tool and was independently reviewed by a scientist from the United States Forest Service. Preliminary estimates indicate that 4.015 million tons carbon dioxide equivalent ($MtCO_2e$) will be avoided in five years. Considering the long-term project strategy and indirect carbon benefits for a total of 20 years, the total mitigation figure could reach 16.060 $MtCO_2e$. These estimates will vary according to the ecosystem type of areas benefited under part 2, resulting from the selection of PES sites and subprojects through calls for proposals. When PES and subproject sites are identified, target data will be verified between the first and second year of project implementation. MRV methodologies, currently being developed by CONAFOR, will then be adopted.

24. **Part 2.1:** *Carrying out of the capitalization of the Biodiversity Fund as to generate sufficient income to finance the provision of PES.* These PES will conserve the forest remnants within the watersheds.

25. CONAFOR will support PES with counterpart funds in eligible sites according to criteria published yearly. In addition, CONAFOR will identify two of the project watersheds as priorities for project investments based on Biodiversity Fund criteria, including presence of biodiversity of global importance; gaps in conservation strategies; local capacities and leadership sufficient to assure long-term conservation; function as a biological corridor; and watershed vision. Within watersheds, high climate change potential and deforestation will be used as criteria for funding priority sites. Upon endorsement of the Biodiversity Fund Committee, CONAFOR will channel PES to these areas. Endowment funds provided by GEF to the Biodiversity Fund (US$9.091 million) will be matched with a 1:1 additional endowment contribution from CONAFOR.

26. Threats to PES effectiveness identified by GEF's Scientific and Technical Advisory Panel document *Payments for Environmental Services and the Global Environment Facility* (revised March 2010) will be avoided. The Project's approach follows the Scientific and Technical Advisory Panel recommendation to co-finance PES for multiple services (for example above- and below-ground carbon, biodiversity, water) in order to make conservation economically viable. Endowment support will ensure that payments are long term. CONAFOR will also explore the possibility of including the project watersheds as a focus area of the national surveys on PES beneficiaries to assess the impact of the PES in the income of the recipients.[21]

[21] CONAFOR also receives support for REDD+ initiatives from the Spanish, United States, French, and Norwegian governments and the European Community. This project will draw on CONAFOR's advances to align national

27. **Part 2.2:** *Carrying out agro-ecosystem subprojects.*

28. These subprojects will reduce pressure on forest remnants through improved land use practices, reducing erosion and promoting sustainability. This subpart will ensure the permanence of multiple ecosystem services in forests receiving PES by reducing pressure for land use change and degradation in the surrounding landscape. Land Degradation GEF funds will be deposited into FCC to generate interest to support subprojects to improve practices in agro-ecosystems. Subprojects implemented by local groups might support, for example, land suitability analysis, promotion and adoption of good land management practices such as diversified cropping with fruit trees and perennial crops, and soil conservation techniques (soil erosion is one of the main causes of environmental degradation in the country). To promote replication and sustainability of improved practices, subprojects may also focus on developing organizational skills, developing business plans, and accessing markets for sustainable products. The Project will directly support approximately 3,000 hectares in agro-ecosystem subprojects and elicit further investments from other actors in the watersheds, including the Secretariat for Agriculture, Husbandry, Rural Development, Fisheries, and Food Supply (*Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación*, SAGARPA), the National Commission for the Development of Indigenous Peoples (*Comisión Nacional para el Desarrollo de los Pueblos Indígenas*, CDI), basin authorities and the National Water Commission (*Comisión Nacional del Agua*, CONAGUA). Integrated management of these wider landscapes includes adoption of the landscape management practices by the local communities and increased investments in such management[22].

29. FMCN will publish calls for proposals for subprojects. The RCUs will ensure that the organizations and communities in the selected areas within the watersheds know about the call for proposals, and organize workshops to support proposal preparation. External experts, including technical staff from CONANP, CONAFOR, and INECC, will review the proposals to support selection by the TPC.

30. Successful subprojects will be showcased to access support from SAGARPA and *Financiera Rural* in much larger areas in a long-term initiative to trigger agricultural policies recognizing the ecosystem services provided by agro-ecosystems.

31. **Part 2.3:** *Carrying out sustainable forestry management subprojects.*

32. These subprojects will improve local capacity for sustainable forest management around forest fragments, and support implementation of practices that will contribute to reduced deforestation. FMCN will channel non-endowment GEF funds to finance subprojects by qualifying local organizations that provide on-site technical support, capacity building, and investment in sustainable forest management. Subproject selection will be the responsibility of

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policies with local needs, and a project led by CONAFOR, CONABIO, and CONANP, coordinated by FMCN, and financed by the Moore Foundation to establish national methodologies to measure forest deforestation and degradation in protected areas and watersheds.

[22] Mexico is implementing the Bank-financed Sustainable Rural Development Project (P106261). During this project, implementation exchanges could occur to promote the adoption of environmentally sustainable technologies in agri-business, if this is needed in the selected watershed by this project.

the TPC supported by external experts, following the same procedures as in subpart 2.2. CONAFOR will provide technical support and channel counterpart funds to additional projects.

33. **Part 3: Enabling adaptive management by strengthening monitoring capacities.** GEF: US$0.439 million; Counterpart: US$10.750 million.

34. This part aims to strengthen community monitoring systems in selected watersheds including, inter alia: (i) the development of models of watersheds and their ecosystems services with the aim of establishing priority sites for Project implementation and producing integrated watersheds and/or sub-watersheds land management actions plans; and (ii) the carrying out, within selected Protected Areas and priority sites within the watersheds, of (a) deforestation and ecosystem degradation monitoring; (b) community hydrological monitoring; (c) biodiversity monitoring; (d) carbon monitoring; and (e) watershed-level workshops to analyze findings, data and share experiences.

35. **Watershed modeling and integrated watershed action plans (IWAPs).** The analysis of each watershed will be based on models including socioeconomic and environmental data, as well as mapping of local capacities. Models will be key to establishing priority sites for project interventions, taking into account data on biological connectivity and mitigation of greenhouse gases, as well as existing local capacities. These priority sites will be the focus of promotion for PES and subprojects (part 2) in accordance with the social safeguards and considerations of cost-effectiveness described in Annex 9.

36. Once the implementation sites are determined, the models will support the development of IWAPs. Developed with the participation of stakeholders in each watershed at annual workshops, IWAPs will describe where and why investments are made by the Project and by other participating agencies each year. Monitoring results from the project sites and other data will be fed into the models to document changes over time and update IWAPs. Management of the watershed will become strategic, since decisions will be based on recent data from different fields (social, economic, and environmental). The Project will develop efficient intervention strategies, adapting activities as models are updated. Models will start with basic assumptions based on scientific literature, and evolve to show complex interactions parameterized with data specific to each watershed. Models will incorporate the variables most sensitive to climate change, allowing for projections to diminish vulnerability.

37. **Deforestation and ecosystem degradation monitoring.** Within the Protected Areas and in priority sites within each watershed, changes in land use will be verified yearly using methods including satellite images (Landsat, SPOT, Rapid Eye) and accessible software, followed by ground-truthing. Communities and civil organizations participating in monitoring will receive training in the methodologies. Results are very visual and have allowed communities in other places (for example, the Amazon) to participate effectively in decisions on the use of their territory, identifying areas with the highest risks in the near future. Additionally, CONABIO is developing accessible methodologies to measure terrestrial ecosystem degradation, which will also be tested in the Project. Project resources will help train stakeholders to apply these methods. CONABIO will establish a central database, publicly accessible and fed by local actors. The analysis by INECC will allow monitoring of project-supported sites and verifying that no carbon leakage is caused by displacement of unsustainable activities.

38. **Hydrological monitoring.** INECC will determine representative sites where participating communities and civil organizations will monitor water quality (monthly during year one and every two months thereafter). The Global Water Watch methodology to be used has been applied successfully in 10 states in Mexico, including two of the project watersheds. Mexico has certified trainers to build capacities, certify and re-certify communities to conduct monitoring, and ensure quality control when entering data. Community monitoring has proven to be a very effective tool for environmental education.

39. **Biodiversity monitoring.** CONANP has developed the Information, Monitoring, and Evaluation System for Conservation (*Sistema de Información, Monitoreo y Evaluación para la Conservación*, SIMEC), which contains data on key species in Protected Areas. The Project will explore synergies with CONABIO to determine ecosystem integrity along the watersheds. These data will complement information on invertebrates detected by communities applying the Global Water Watch methodology. SIMEC also includes ecological scorecards on marine protected areas using methods developed by the National Oceanic and Atmospheric Administration. These are also applicable for coastal environments, and will be applied by INECC in key sites.

40. **Carbon monitoring** (at midterm and end of project). In each watershed and in key sites defined by the IWAPs, the Project will establish carbon-monitoring plots, also used for monitoring deforestation and ecosystem degradation. Estimates of carbon stocks will determine avoided emissions and sequestered carbon in the different ecosystems (including soils) along the watersheds. CONAFOR will make sure that the methodologies applied by the communities are sound and that local measures are reliable, and will determine which data are publicly available.[23] Such monitoring activities are part of the REDD+ Vision for Mexico, which considers a nested approach from the local to the subnational and national level. Project monitoring will contribute to the local MRV systems being developed by CONAFOR.

41. **Workshops to analyze data and exchange experiences.** Information generated and analyzed will allow adjustments and redefinition of the IWAP for each watershed, strengthening local institutions and promoting adaptive management. INECC will organize annual workshops to analyze results, reflect on actions conducted, and foresee scenarios and adjustments in the implementation strategy. Initial workshops will include representatives of the communities and civil organizations trained in monitoring, as well as local researchers providing data; follow-on workshops will gather decision makers to explore results. In the initial workshops INECC, CONANP, and CONAFOR will review with the participants problems encountered in obtaining the data, adjustments to methodologies, results obtained, trends, projections, and considerations. These advances will be presented to decision makers for their consideration during the follow-up workshops. The RCUs will disseminate results in the project website. Workshops will detect capacity-building needs and opportunities to exchange experiences.

42. **Part 4: Innovative mechanisms for inter-institutional collaboration and promoting social participation.** GEF: US$0.979 million; Counterpart: US$15.913 million. This part involves carrying out inter-institutional coordination activities (including networks, forums, and learning communities) at the regional and local levels, involving state and municipal governments, civil society, and academic institutions, to promote cross-sectoral coordination,

[23] The project will be testing the MRV methodologies that CONAFOR is presently developing with the support of the Norwegian government.

participation in, and oversight integrated watersheds and/or sub-watersheds land management actions plans.

43. The objective of this part is to engage the implementing agencies and local partners (including state and municipal governments, academic institutions, and NGOs) in collaborations resulting in the development, implementation, and oversight of IWAPs, including best management practices and adaptive management. This coordination will be essential to manage risks associated with the engagement of many parties in the Project, and will begin with clear articulation of roles and responsibilities in inter-institutional agreements and in the operational manual.

44. A Technical Project Committee (TPC), modeled after the successful Technical Committee of FANP, will govern and supervise the Project. Regional committees will address coordination between regional and federal actors. Local forums will allow for social participation within the project watersheds. The PCU at FMCN and the RCUs in the regional funds under the supervision of FMCN (and accountable to the TPC) will liaise among the TPC, the regional committees, and the local forums. The RCUs will be responsible for continuous follow-up to local participatory forums, relying on them to detect public policies and investments, especially in the agricultural and livestock sectors, that hinder the project goals. They will then seek support from the regional committee or TPC in realigning those policies and investments to support project outcomes (see Annex 3 for details). Coordination with state governments through regional committees will be essential to align investments. The PCU and RCUs will also assist in fundraising and ensure that the project coordinates with other GEF and non-GEF projects.

45. Participatory networks or forums will be established in each watershed or sub-watershed to develop and oversee IWAPs. These could build on existing CONAGUA watershed councils, CONANP advisory councils, or planning committees for state development. Inter-municipal arrangements, such as the successful Inter-municipal Initiative for the Integrated Management of the Ayuquila River, will be explored as a means of coordinating activities of municipalities. This links to the Mexico Forests and Climate Change Project Specific Investment Loan focus on promoting cross-sectoral coordination.

46. GEF and counterpart funds will support establishment and operation of a learning community of organizations working to conserve watersheds. FMCN will draw on its experience supporting such communities in other projects. Learning communities shorten the learning curve and promote exchanging information and sharing contacts. Participatory forums in each watershed will define topics for learning and exchange. Advances under the Project and the learning community will be published and disseminated, so that actors in other watersheds can benefit from project advances. It is expected that additional watersheds (at least 200,000 hectares) will incorporate lessons learned from the Project. The PCU and RCUs will be responsible for the learning community.

47. Eligible activities will include costs of the RCUs, workshops, participatory forums, and learning communities along the Gulf of Mexico.

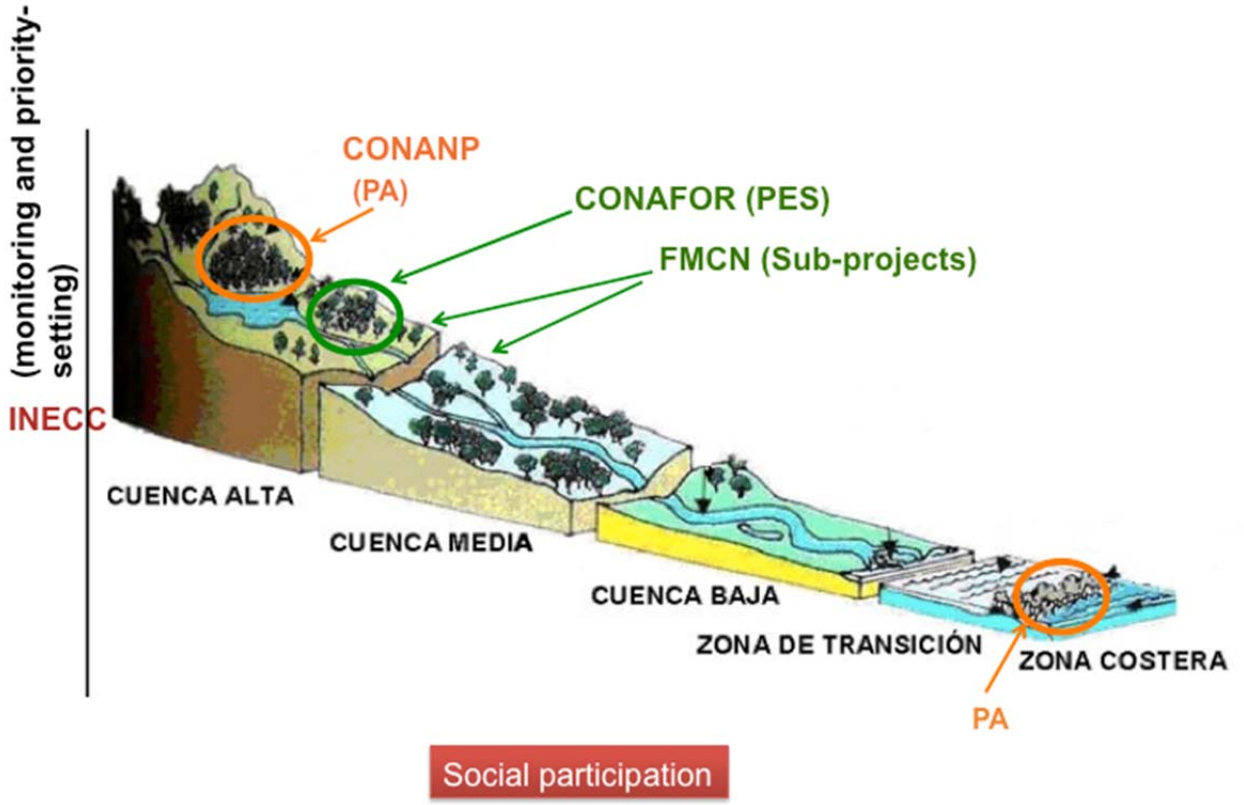
48. The concerted actions of the four institutions implementing the Project go beyond anything that has occurred to date in Mexico. Collaborating in specific sites will create opportunities for synergy and avoid duplication of efforts, localizing the three conventions (Convention on Biological Diversity, United Nations Framework Convention on Climate

Change, and United Nations Convention to Combat Desertification) into a single project with higher impact than isolated initiatives. Through an integrated landscape approach and effective coordination, costs for conservation of biological diversity and climate change mitigation will be reduced, minimizing negative externalities derived from uncoordinated and isolated actions, such as higher emissions. CONANP, CONAFOR, INECC, and FMCN have long track records in their areas of expertise, which will be leveraged with funds from traditional sources and others outside the environmental sector. Their united effort, which has been under way through the design phase, will set a precedent for aligning investments.

49. **Part 5: Project management.** GEF: US$0.655 million; Counterpart: US$10.113 million.

50. Providing support to FMCN and CONAFOR, the Technical Project Committee, FGM and FONNOR for the implementation and supervision of the Project including the acquisitions of goods and the provision of technical assistance and Training required.

Figure 2.1 Project Intervention along a Watershed



PA: protected areas; PES: payment for environmental services

Note: Part 1 will consolidate protected areas along the selected watersheds (CONANP); part 2 will support PES in forest fragments (CONAFOR) and sustainable use of natural resources through subprojects (FMCN); part 3 will establish and monitor investment priorities according to integrated watershed action plans (INECC); while part 4 will focus on social participation and coordination among institutions.

Annex 3. Implementation Arrangements

MEXICO
Coastal Watershed Conservation in Response to Climate Change (P131709)

A. Project Institutional and Implementation Arrangements

Project Administration Mechanisms

1. **Overall arrangements.** Project implementation will be based on the following arrangements. The Recipient will be the United Mexican States (represented by the Secretariat of Finance and Public Credit) and FMCN. CONAFOR will execute part 2.1 supported by its Biodiversity Fund. FMCN will administer the rest of the GEF funds with the technical assistance of two regional funds: the Fund for the Gulf of Mexico (FGM) and the FONNOR in the Gulf of California. FMCN will sign one agreement with CONANP, CONAFOR, and INECC, as well as an agreement with each of the regional funds, for the execution of parts 1, 2, 3 and 4. An operational manual, already finalized, describes the rules and procedures governing the Project. Table 3.1 shows the responsibilities to be assumed by each institution. A more detailed description of roles and activities for each institution has been included in the Project's operational manual and has been the basis for the development of the draft inter-institutional agreement to be signed by the four participating agencies.

Table 3.1 Institutional Responsibilities

Part	CONANP	CONAFOR	INECC	FMCN	BANORTE
1. Creation and consolidation of protected areas					
Carrying out of the capitalization of the FCC	Execution	Execution	Execution	Execution and administration	
Annual operating plans	Execution			Administration	
Fundraising				Execution and administration	
2. Promoting sustainability within watersheds					
PES		Execution			Administration
Subprojects (agro-ecological and sustainable forest management)		Execution		Execution and administration	
3. Enabling adaptive management by strengthening monitoring capacities					
Land use change		Execution	Execution	Administration	
Biodiversity	Execution		Execution	Administration	
Water quality			Execution	Administration	
Carbon monitoring	Execution	Execution	Execution	Administration	
4. Innovative mechanisms for inter-institutional collaboration and promoting social participation					
	Execution	Execution	Execution	Execution and	

				administration	
5. Project management					
				Execution and administration	

2. The legal requirements related to implementation arrangements are as follows: (a) an operational manual (including the TPC-approved by-laws, safeguards instruments, Biodiversity Fund operational manual, FMCN investment policy) has already been adopted; (b) an implementation agreement to be signed between INECC-FMCN-CONAFOR-CONANP will be a condition of effectiveness; (c) an agreement between FMCN and FGM will be a condition of disbursement; (d) an agreement between FMCN and FONNOR (California Gulf) will be a condition of disbursement; (e) a specific account for FCC (Fund for Coastal Watersheds) has already been created; and (f) the *Contrato de Mandato*, a contract between the United States of Mexico-CONAFOR-NAFIN, will be an effectiveness condition.

3. **National oversight.** A Technical Project Committee (TPC) composed of representatives of CONANP, INECC, CONAFOR, and FMCN will govern the Project, replicating the successful practices of the FANP Technical Committee. Its responsibilities will be:

- Supervision of project operation, including compliance with safeguards;[24]
- Review of the annual expenditure plan and corresponding reports;
- Definition of project strategies, policies, and procedures;
- Resolution of conflicts not defined in the operational manual (including complaints not solved by the PCU);
- Ensuring coordination of participating institutions and others related to the project;
- Fundraising support.

4. The four implementing institutions have agreed on general parameters of the TPC and nominated their representatives. A statutory framework has been agreed among the parties. Policies and guidelines are part of the operational manual. The TPC will also establish a link with other federal actors involved in rural development, such as the Secretariat for Social Development (*Secretaría de Desarrollo Social*, SEDESOL), CDI, CONAGUA, and SAGARPA.

5. **Operational level.** The project coordination unit (PCU) and two regional coordination units (RCUs) will have responsibility for project operation, including the provision of technical and logistical support to assure that the TPC can function effectively. FMCN will supervise the project operations through grant agreements with two regional funds (FGM and FONNOR)[25] and through direct administration of subproject finances. FMCN staff in charge of these responsibilities includes a director (part-time) and financial manager (part-time), plus a procurement specialist. Regional project coordinators and technical and accounting staff will be hired by each of the regional funds. The RCU for the Gulf of Mexico region, to be located in

[24] Responsibilities for assuring compliance with safeguards at various levels of the project are explained in detail with an accompanying diagram in the Environmental and Social Management Framework included in the operational manual. Specific responsibilities are also included in the operational manual.

[25] FGM has been created before the project's approval. It has a board and by-laws. Staff for this fund will be procured by the project to form the RCU. FONNOR is in the process of being created. Its legal constituency will be necessary to enter into an agreement with FMCN and to comply with the relevant disbursement conditions.

Xalapa, Veracruz, where CONANP, CONAFOR, and FMCN have regional offices, will include the regional project coordinator, a safeguard specialist, three technicians, and two accountants, responsible for day-to-day operation of the Project in the region. The technicians will liaise with CONANP, CONAFOR, and INECC, supporting CONANP staff to elaborate annual operating plans for protected areas, ensuring adequate outreach for PES and subprojects, organizing participatory forums and workshops, and helping to develop IWAPs. The accountants will track expenditures of FCC interest and prepare reports for FMCN. FMCN will train the PCU and supervise implementation of annual operating plans approved by the TPC.

6. The Project will seek funds from additional donors to establish equivalent RCU staff for the Gulf of California region, beginning with the hiring of the coordinator and a technician by FONNOR with project funds. The coordinator position will be filled immediately after effectiveness.

7. The Project's regional project coordinator in the Gulf of California is expected to be based in Guadalajara, where CONAFOR headquarters are located, or in another site in the region selected for effective administration. In addition to raising funds for this region, the regional project coordinator will participate in the meetings of the Technical Committee of the Biodiversity Fund and will support CONAFOR in the operation of this part. He or she will keep the regional project coordinator in the Gulf of Mexico informed and will help with linking the Project with other initiatives at CONAFOR. The regional project coordinator in the Gulf of California will report to the TPC, and be responsible to FMCN for activities governed by the grant agreement.

8. The responsibilities of the PCU and RCUs will be:

- Ensuring that project activities and spending meet objectives in a timely manner according to the project's operational manual;
- Reporting to the TPC and donors;
- Ensuring compliance with safeguards and providing technical support regarding safeguards to other actors involved in project execution;
- Identification of subsidies, activities, or investments in the watershed presenting obstacles or opportunities for synergies, with support from the TPC;
- Coordination of project activities with similar or complementary initiatives;
- Supporting and strengthening learning communities;
- Participation in fundraising activities.

9. **Advisory level.** Regional committees will support each RCU to align and coordinate project activities with other regional initiatives. They will include representatives from CONAGUA and the state environmental ministries, as well as institutions such as SAGARPA and CDI. The Gulf of Mexico Committee will be established immediately after effectiveness, while the Gulf of California Committee will be established as soon as funds have been raised. The regional committees will have advisory functions; liaise with similar or complementary regional initiatives; support mainstreaming investments in the watersheds; and support the RCU in fundraising. The RCU will be responsible for arranging meetings of the regional committee and providing follow-up. Each regional committee will have its own internal by-laws, establishing that the president will call meetings.

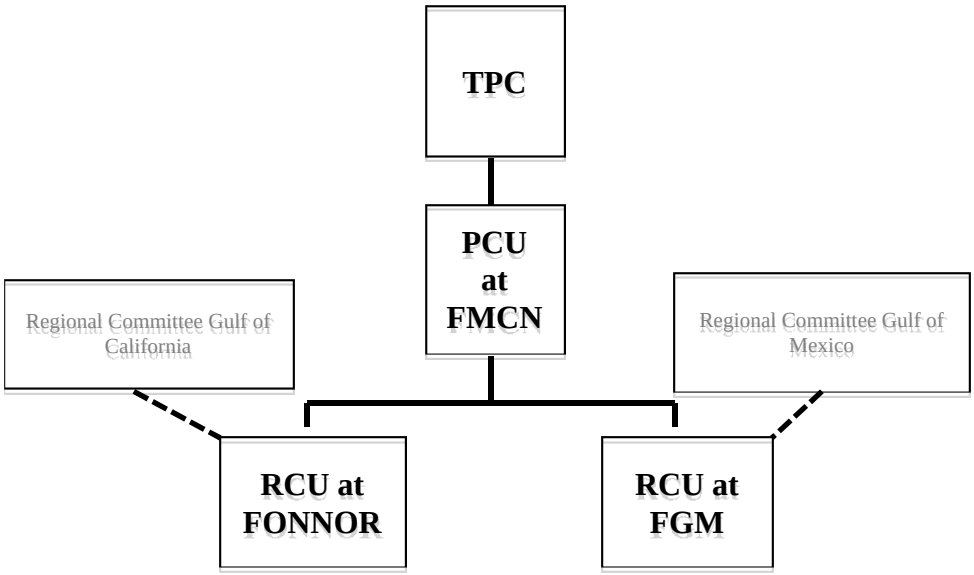
10. The Project will also establish or support already existing local participatory mechanisms, including networks of project-supported beneficiaries and more formal structures, such as existing advisory councils in protected areas, sub-watershed committees, micro-watershed committees, and inter-municipal agencies.

11. The local participatory mechanisms at the watershed or sub-watershed level will facilitate:

- Coordination among stakeholders to improve management and governance;
- Promotion of social participation and transparency in decision making;
- Integral planning and participatory development of IWAPs;
- Oversight of project-funded actions and coordination of other activities related to the IWAPs;
- Exchanges of experiences between watersheds and sub-watersheds;
- Identification of capacity-building needs and resources at the watershed level.

12. Figure 3.1 shows structures involved in project governance. The TPC directs the Project; a PCU within FMCN ensures project overall implementation and links the TPC with the RCU for FGM and FONNOR. The advisory regional committees in the Gulf of Mexico and the Gulf of California will ensure coordination with other organizations, while networks or local forums facilitate participation at the watershed and sub-watershed level. The RCU in each region reports to the PCU within FMCN, which will supervise project-supported activities as documented in grant agreements.

Figure 3.1 Structures Involved in Project Governance



B. Financial Management, Disbursements, and Procurement

Financial Management Arrangements

13. **Country issues relevant to the Project.** Overall public financial management of the Mexican federal administration relies on strong budgeting, treasury, accounting, and control systems. These financial management country systems will be partially applied to the Project. Moreover, specific harmonized financial reporting and auditing arrangements for projects financed by the multilateral financial institutions in Mexico, which also will be applied for the project, have been agreed with the government, through SFP.

14. **Project description and institutional arrangements from a financial management perspective.** The grant will have five parts, which will finance the following types of expenditures: (a) non-endowment expenses for a total of US$10.909 million, including financing of goods, consultant and non-consultant services, training, operating costs, and subprojects; and (b) creation of the Fund for Coastal Watersheds (FCC) of US$19.518 million, to be administered by FMCN, and the capital increase for the Biodiversity Fund by US$9.091 million, to be administered by BANORTE, as shown in Table 3.2.

Table 3.2 Project Funding by Part

#	Part	Implementing entity	Administrative entity	Grant funds in US$ million			Co-financing
				Endowment funds	Non-endowment funds	Total funds	
1	**Creation and consolidation of protected areas**	**FMCN/FONNOR/ CONANP**	**FMCN**	**19.518**	**0.831**	**20.349**	**54.669**
1.1	FCC Capitalization		FMCN	19.518			
1.2	Annual operating plans	CONANP	FMCN/FGM	-	–	-	
1.3	Fundraising	FMCN/FONNOR	FMCN	-	0.831	0.831	
2	**Promoting sustainability within watersheds**	**FMCN/FGM/FONNOR/ CONAFOR/**	**FMCN/ CONAFOR**	**9.091**	**8.005**	**17.096**	**136.834**
2.1	FB Capitalization - PES	CONAFOR	CONAFOR/ BANORTE	9.091	–	9.091	
2.2	Agro-ecosystem subprojects	FMCN/FGM	FMCN	-	–	-	
2.3	Sustainable forestry management subprojects	CONAFOR/FMCN/ FGM	FMCN/	-	8.005	8.005	
3	**Enabling adaptive management by strengthening monitoring capacities**	**FMCN/FGM/CONANP/ CONAFOR/INECC**	**FMCN/FGM**	**-**	**0.439**	**0.439**	**10.750**
4	**Innovative mechanisms for inter-institutional collaboration & promoting social participation**	**FMCN/FMG/CONANP/ CONAFOR/INECC**	**FMCN/FGM**	**-**	**0.979**	**0.979**	**15.913**
5	**Project management**	**FMCN**	**FMCN**	**-**	**0.655**	**0.655**	**10.113**
	Total			**28.609**	**10.909**	**39.518**	**228.279**

15. FMCN will be responsible for the project financial management of most of the endowment and all non-endowment funds. This will entail following the World Bank's procurement procedures and processing of payments to consultants and beneficiaries of the subprojects. The administration of the endowment funds will follow the investment strategy and practices agreed with the World Bank under the SINAP II Project (P065988).

16. Regarding the implementation of the subprojects, all payments to the beneficiaries will be centrally made by FMCN under defined operational guidelines, approved by the World Bank, which include, among other controls, three-level subprojects selection, as well as their online monitoring and evaluation through SISEP. SISEP is a suitable IT platform with the capacity to control all subproject-related processes, administered by FMCN, including payments to the beneficiaries, monitoring, and financial and technical reporting.

17. Based on the FMCN experience with FANP and other similar projects, upon the authorization of the TPC, FMCN will sign an agreement with two regional funds – FGM and FONNOR. In fiduciary terms, these regional funds will be only responsible for payments of the project operating costs, which would include hiring and payments of reasonable salary costs, insurance, rental, travel, room, board, maintenance of facilities, consumable materials, supplies and utilities, as well as payments for the travel and per diem expenditures of technical and administrative staff that will be part of the RCUs. These expenditures will be also subject to the following risk mitigation measures: (a) documentation to FMCN through preparation and submission of quarterly or semester financial and technical reports; (b) annual project audits in terms of the Grant Agreement; and (c) compliance with the World Bank's procurement guidelines.

18. CONAFOR, in turn, will be responsible for the technical implementation of several project parts, and, in particular, will receive part of the endowment funds (US$9.091 million), which will be administered by BANORTE, a well-known local commercial Bank, through the Biodiversity Fund. Hence, BANORTE will act as Biodiversity Fund trustee and financial advisor to CONAFOR in order to provide recommendations on investment strategy for the portfolio. The BANORTE is considered as a solid national wide financial institution, which has been also providing a set of financial services to the World Bank country office in Mexico for many years.

19. NAFIN will be the financial agency for part 2 of the Project to be implemented by CONAFOR. Among other functions, this entails managing the grant disbursement processes and providing implementation support and oversight to CONAFOR.

Staffing Arrangements

20. Both main implementing entities FMCN and CONAFOR have adequate capacity to carry out the tasks in terms of financial management, given their long-standing experience in executing projects financed with World Bank funds, and also have sound internal control environments and suitable organizational structure, which allow proper segregation of financial management-related functions.

21. FMCN will be responsible for most of the project financial management-related tasks, including budgeting, accounting, financial reporting, and disbursements. While these tasks will be managed from the regional FMCN's office based in Xalapa, Veracruz, all payments and overall financial control, including Bank reconciliation, will be carried out by FMCN's

headquarters, located in Mexico City, based on the information captured through the institutional enterprise resource planning system (DynaWare). Both offices have suitable organizational structure, with trained staff that possesses the required experience and credentials to ensure responsible project management. While FGM has already been created, FONNOR has not yet been formally established; however, this will be done before signing an agreement between FMCN and FONNOR.

22. CONAFOR, through its *Coordinación General de Producción y Productividad* with support from *Dirección de Financiamiento* mapped to the *Unidad de Asuntos Internacionales y Fomento Financiero and Gerencia de Recursos Financieros* mapped to the *Coordinación General de Administración*, will be responsible for both technical implementation and fiduciary control of the Bank's contribution to the Biodiversity Fund (part 2), including budgeting and accounting records, financial reporting, and disbursements. These tasks will be also supported by NAFIN, in its capacity as financial agency.

Budgeting Arrangements

23. Most of the project budget, excluding the contribution to the Biodiversity Fund (part 2), will be controlled and managed by FMCN through the DynaWare system, which is an integrated online financial management system that includes modules of budgeting, accounting, and treasury. The system is deemed strong and therefore it was considered acceptable to the Wrold Bank. In turn, CONAFOR will use its Integrated Financial Information System (*Sistema Integral de Información Financiera*, SIIF), which is also an integrated IT system (similar to SAP) used for budgeting, accounting, and payments.

24. **Accounting system.** FMCN will consolidate and maintain accounting records through the DynaWare system, which is suited to the task of reflecting project operations in compliance with the local financial reporting standards applicable to private and non-profit entities. CONAFOR will use the SIIF system, mentioned above.

25. **Internal control and internal auditing.** FMCN does not have an internal control unit. However, the entity has a solid operational set of guidelines, as well as a clear segregation of main financial management-related functions. The internal audit function of CONAFOR is, in turn, carried out by the Internal Control Unit, which follows the public audit standards and guidelines issued by SFP. Good systems are in place for timely follow-up to internal audit observations and implementation of recommendations.

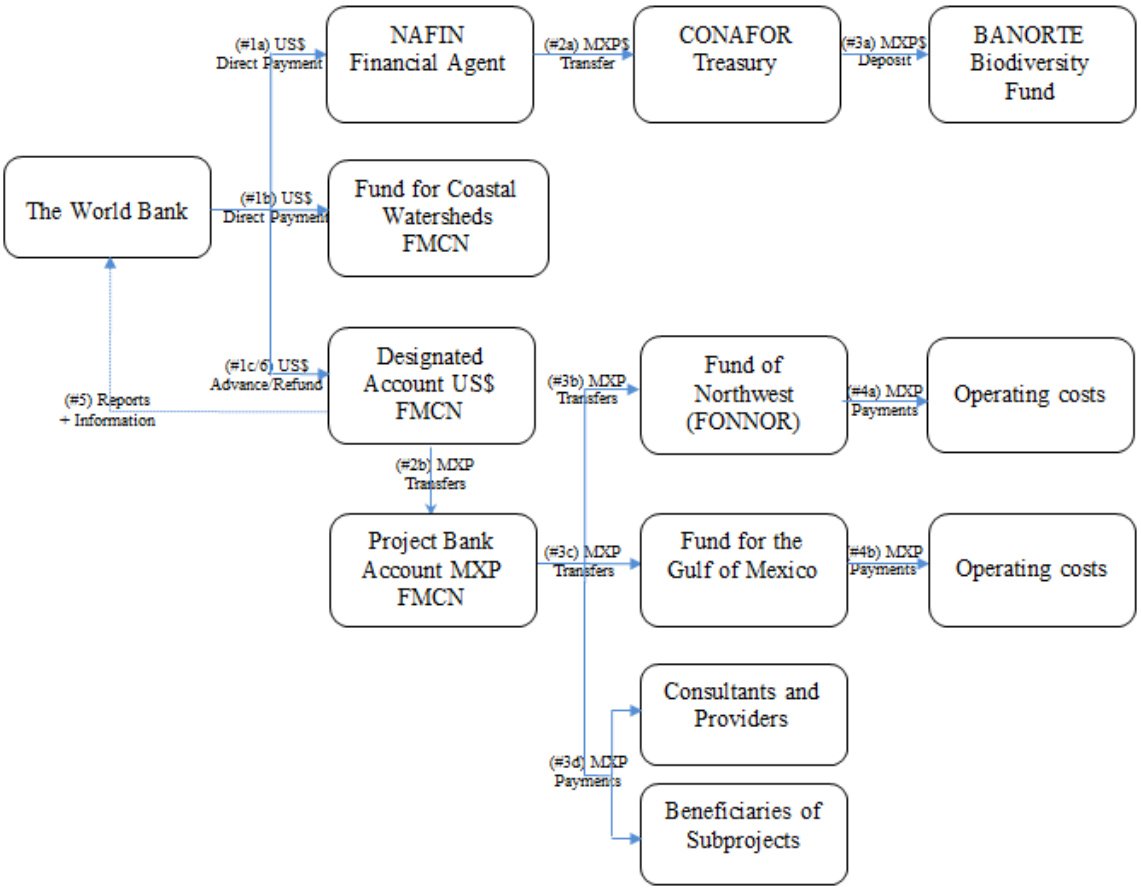
26. **General flow of funds and information.** The primary disbursement methods for this project will be: (a) advance to a pooled designated account in US$ for financing of non-endowment funds; and (b) direct payments of the World Bank's contributions to both endowment funds, subject to confirmation of transfers of respective matching funds (1:1) by FMCN and CONAFOR. The Project's funds will be administered in three ways:

- **Through FMCN** ($28.921 million). This will be administered through subsidiary agreements signed with all co-implementing entities, including FGM and FONNOR, for all parts, excluding the funds allocated to the Biodiversity Fund. Part of these funds will serve to create and manage FCC for a total of US$19.518 million, while the remaining amount (US$9.403 million) will finance non-endowment expenditures, such as consultant and non-consultant services, goods, training, operating costs, and subprojects.

- **Through CONAFOR**. This will correspond to the capital increase of the second endowment fund (Biodiversity Fund) of US$9.091 million. These funds will be administered by BANORTE, as trustee.
- **Through FGM and FONNOR**. This will finance the project operational costs of a total amount of US$1.506 million.

27. The flow of funds is presented in Figure 3.2. The solid lines represent the flow of money and the dotted lines represent the flow of information.

Figure 3.2 Flow of Funds



Key to figure:

1. The World Bank advances the authorized amount into the project-designated account, administered by FMCN, and processes direct payments to the project endowment funds, once the transfer of matching funds is confirmed. Interest from the Fund for Coastal Watersheds (FCC) will be channeled mainly to the Fund for the Gulf of Mexico after financial management.

2. As expenditures are incurred, FMCN will transfer required funds to a project account in Mexican pesos. NAFIN, as financial agency, will transfer the funds to CONAFOR's Treasury in accordance with the Federal Law on Budgeting and Fiscal Responsibility.

3. Immediately after this, FMCN will transfer part of the funds to the regional funds, while processing payments to the project consultants, non-consultant services, goods, training, operational costs and beneficiaries of the subprojects. In turn, CONAFOR will deposit the funds

into the Biodiversity Fund (BANORTE, as trustee) within five business days.

4. Both regional funds will be responsible for payments corresponding to project operation costs.

5. Those eligible expenditures will be aggregated and summarized by FMCN in statements of expenditure to be formally submitted, together with a grant withdrawal application, to the Bank in order to document the advance or to request the designated account's replenishment, whichever the case may be.

6. The World Bank will replenish the documented amount to the designated account.

Disbursement Arrangements

28. The grant disbursement arrangements,[26] which have already been discussed and agreed, are summarized in Tables 3.3 and 3.4.

Table 3.3 Grant Disbursement Arrangements

Disbursement method	1. Direct payments corresponding to the transfers to the project endowment funds. 2. Advance to a pooled designated account, to be administered by FMCN, in US$ in Bank of America, N.A. for financing of non-endowment funds.
Designated account and timing of documentation	The designated account ceiling is US$2.5 million. The funds advanced to the designated account would be documented on a quarterly basis.
Supporting documentation	1. Records evidencing eligible expenditures (e.g. confirmation of transfers of matching funds) for direct payments. 2. Traditional statements of expenditure[27] for all parts, with the exception of parts 2.3 and 3, which will require a customized statement of expenditure format, to be agreed prior to negotiations, due to the scope of such parts.
Limits	The recommended minimum value of applications for advances is US$400,000.
Retroactive expenditures	The retroactive financing would be up to US$2 million (20% of the total of non-endowment funds) and will fulfill the following conditions: 1. Made by FMCN on or after June 14, 2013 but in no case more than 12 months prior to the date of the agreement. 2. Be subject to the same systems, controls, and eligibility filters described in this annex. These expenditures will also be subject to the regular project external audit.

Table 3.4 Disbursement: Grant Allocation Amounts

Category	**Amount of the Grant Allocated (expressed in USD)**	**Percentage of Expenditures to be Financed (inclusive of taxes)**
(1) Capitalization of endowment funds		100%
(a) For deposit into FCC under Part 1.1 of the Project	19,518,000	100%

[26] For details, see the Disbursement Handbook for World Bank clients.

[27] All statement of expenditure supporting documentation would be available for review by external auditors and Bank staff at all times during project implementation, until at least the later of (a) one year after the Bank has received the audited financial statements covering the period during which the last withdrawal from the loan account was made; and (b) two years after the closing date. The borrower and the project implementing entity shall allow the Bank's representatives to examine these records.

(b) For deposit into the Biodiversity Fund under Part 2.1 of the Project	9,091,000	100%
(2) Goods, consultants' services, non-consulting services and Training under Parts 1.3, 3, 4 and 5 of the Project	863,000	100%
(3) Consultants' services, non-consulting services, goods, Small Works, Training and Operating Costs for Sustainable Forestry Management Subprojects under Part 2.3 of the Project	7,494,000	100%
(4) Operating Costs under Parts 1, 2, 4 and 5 of the Project	2,552,000	100%
TOTAL AMOUNT	39,518,000	

29. **Financial reporting and external audit.** FMCN (for parts 1, 2.2, 2.3, and 3 through 5) will prepare semi-annual unaudited project interim financial reports. These reports will be prepared on a cash basis, in local currency, using the standard formats agreed with SFP for the Bank's Mexico portfolio. The interim financial report will consolidate the information produced by each co-implementing entity, including FGM and FONNOR.

30. The general framework for the audit of all World Bank-financed projects implemented in Mexico is the technical memorandum of understanding and general terms of reference on auditing, which were agreed between the Government of Mexico (through SFP) and the World Bank. The annual audits of project financial statements and eligibility of expenditures incurred by FMCN will be conducted by an independent audit firm and based on the terms of reference acceptable to the World Bank. Moreover, FMCN audits its institutional financial statements on an annual basis, which include an opinion on the operation of FCC. CONAFOR, in turn, does not currently produce audited financial statements of the Biodiversity Fund. However, it was agreed that CONAFOR will ensure that the Biodiversity Fund's financial statements are prepared and audited by an independent firm on annual basis. The audit reports will be also subject to the World Bank policy on access to information. After grant effectiveness, the financial reports shown in Table 3.5 will be presented to the World Bank.

Table 3.5 Financial Reports

Report	Entity	Periodicity	Due date	Comments
Interim Financial unaudited Reports (IFRs)	FMCN	Semi-annual	February 15 and August 15	Mandatory
Audited financial statements	FMCN	Annual	June 30, or six month after the end of audit period	Mandatory
Audits of operation of endowment funds	FMCN/ CONAFOR	Annual	June 30, or six month after the end of audit period	By World Bank's request

31. **Written procedures.** FMCN and CONAFOR have completed a project operational manual, which includes the detailed description of the Project, as well as institutional, financial management, disbursement, and procurement arrangements, among others relevant sections.

32. **Supervision strategy.** The scope of project supervision will review the implementation of financial management arrangements and financial management performance, identify corrective actions if necessary, and monitor fiduciary risks. It will take place on a semi-annual basis and include: (a) desk review of project interim financial reports and audit reports, following

up on any issues raised by auditors, as appropriate; (b) participation in project supervisions at least twice a year, which will look into the operation of the control systems and arrangements described in this assessment; and (c) updating the financial management rating in the financial management implementation support and status report, as needed.

Procurement Arrangements

33. **General**. Procurement will be carried out in accordance with the World Bank's *Guidelines: Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers*, dated January 2011; and *Guidelines: Selection and Employment of Consultants by World Bank Borrowers*, dated January 2011, and the provisions stipulated in the legal agreement. The general description of various items under different expenditure categories is presented below. For each contract financed by the Grant, the procurement methods or consultant selection methods, the need for prequalification, estimated costs, prior review requirements, and time frame are agreed between the grant FMCN and the World Bank project team in the procurement plan. The procurement plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

34. **Procurement summary.** FMCN will be the sole responsible implementing agency for the Project regarding procurement; this agency will observe World Bank procurement procedures and Bank guidelines. Resources for the operating cost for the supervision of the Project in the zone of the Gulf of Mexico will be transferred to FGM and in the zone of the Gulf of California will be transferred to FONNOR; these activities will be closely supervised by FMCN.

35. Part 2.2 will finance transfers to FCC. These are not procurable transfers and therefore not further discussed in this section. Procurement activities under part 2.3 in a total amount of US$8.005 million will be directly implemented by duly legal established qualified organizations and communities and will consist of a diversity of small, simple activities (technical assistances, operational costs, training, goods, and other services) geographically dispersed within the zone of the Project. Therefore, procedures for these organizations shall be suitably adapted to reflect the nature of these activities, the environment where they will be implemented, and their capacity, providing that these procedures are efficient and acceptable to the World Bank. These procurement activities will be closely supervised by FMCN, who will also be responsible for procurement training of the beneficiaries. The procurement procedures are described below and further explained in the operational manual.

Procurement in Investment Subprojects

36. The beneficiary organizations will be selected by FMCN by well-defined, transparent, equitable, and clear processes observing technical criteria stated in the operational manual. These criteria have been set up by FMCN, and agreed with the World Bank. The associations would sign an agreement with FMCN. Under these agreements, the organizations could seek support to purchase equipment and for assistance, including for social organization strengthening activities such as drafting of community by-laws, participatory rural appraisal, community-to-community seminars, land use zoning, assessments of economic potential of natural resources, and design and implementation of productive activities.

37. **Procurement of works**. Small works will be procured by organizations under subprojects. Small works means any small civil work activity with no negative environmental and/or social impact aimed to support the achievement of the objectives of the Project; all such activities will be selected in accordance with the terms and conditions set forth in the Operational Manual. These works include the improvement of facilities, minor repairs, and maintenance works. The procurement will be done using agreed documents to request quotations from contractors, following shopping procedures.

38. **Procurement of goods and non-consulting services**. Goods procured under the Project would include vehicles, IT and electronic equipment, and office supplies. The procurement will be done using harmonized standard bidding documents for international competitive bidding (ICB) and national competitive bidding (NCB). It is expected that most of the goods will be of small value and could be procured by shopping using an agreed document. In addition, the Project will finance non-consulting services, such as training, communication, and outreach. The procurement will be carried out using standard bidding documents for NCB and ICB; ICB will be required for contracts equivalent to US$3,000,000 (which is not expected) or more. NCB will be used for activities less than US$3,000,000. Although organizations are from the private sector, when the need arises for NCB, the harmonized document agreed with the Mexican government will be adapted. Contracts for small purchases of goods and non-consulting services for individual contracts to cost less than US$100,000 could be procured by FMCN through shopping procedures. In the case of subprojects, comparison of two quotations is justified only when there is satisfactory evidence that there are only two reliable sources of supply. Finally, direct contract could be used under the circumstances explained in paragraph 3.7 of the procurement guidelines (for example, when the required good is obtainable only from one source).

39. **Selection of consultants**. Consulting services from firms and individuals procured under this project would include preparation of watershed and sub-watershed land management action plans, land tenure or other technical studies, works supervision, communication plans, asset management, conservation finance studies, development of conservation financing mechanisms, legal advice, and fundraising. Individual consultants would be selected following the procedures set forth in Section V of the Guidelines, including single source selection procedures, whereas consulting firms would be selected following quality and cost-based selection, least-cost selection, selection under a fixed budget, selection based on consultant's qualifications, or single source selection. Shortlists of consultants for services estimated to cost less than US$500,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultants' Guidelines. Universities, government research institutions, public training institutions, and NGOs in some specialized fields of expertise could participate in the provision of consulting services as per World Bank procurement guidelines and polices.

40. **Firms.** Most contracts for firms carried out by FMCN are expected to be selected using the quality and cost-based selection method. Consultant assignments of specific types as agreed previously with the World Bank in the procurement plan may be selected with the use of the following selection methods: (a) quality-based selection; (b) selection under a fixed budget, especially for works supervision contracts; (c) least-cost selection; (d) selection based on consultant's qualifications, for contracts estimated to cost below US$300,000 equivalent; and,

exceptionally, (e) single source selection, under the circumstances explained in paragraph 3.9 of the consultants' guidelines.

41. **Individuals.** Individual consultants will be hired to provide technical advisory and project support services and selected in accordance with Section V of the Consultants' Guidelines. All single source selection of consultants will be subject to prior review. Other specific procedures for the selection of these consultants will be described in the operational manual.

42. **Surveillance activities and training.** Costs for surveillance activities are costs associated with the creation and consolidation of protected areas, including: (a) travel and per diem payments for technical staff; (b) rental of vehicles; and (c) fuel and maintenance of vehicles, all for the carrying out supervisory and quality control activities in Protected Areas. Training costs refer to costs associated with the delivery of training and capacity-building activities under the Project, including: (a) logistics; (b) equipment rental; (c) training materials; (d) stationery for workshops and meetings; (e) lodging; (f) catering services; (g) rental of training facilities; and (h) reasonable fees, travel, transportation, and per diem payments for trainers and trainees.

43. **Operational costs**. These include reasonable incremental expenditures incurred in connection with the operation of FMCN (and FGM and FONNOR) including, *inter alia*: salaries, rental, travel, room, board and *per diem* expenditures, maintenance of facilities, consumable materials and supplies, insurance, utilities and incremental costs of staff of CONANP and FMCN which would have not been incurred absent the Project..

44. ***Assessment of the Agency's Capacity to Implement Procurement***

45. FMCN has previous experience implementing World Bank procurement policies and procedures and will be accountable for all the procurement activities, including subproject and operating cost to be conducted by FGM and FONNOR. The procurement team within FMCN has a sound knowledge of World Bank procurement policies.

46. FMCN has proposed a structure for the implementation of the Project, whereby the activities will be enhanced through the inclusion of staff in each of the technical units responsible for implementing the technical side of the Project, and will liaise with the PCU responsible for procurement and financial management activities. This structure has been functioning in the preparation of the Project and will be strengthened during the early stages of implementation of the Project. Procurement implementation could be carried out by FMCN staff familiar with Bank procurement rules. FMCN has developed a system to follow up subprojects, including procurement activities.

47. **Overall risk assessment**. The procurement activities to be carried out by FMCN are not complex, with a limited number of contracts. However, in view of: (a) the large number of activities to be carried out by beneficiaries in the project zone and distant places, and (b) FGM and FONNOR participation in operating costs, the overall procurement risk for this operation is Moderate implementation. Other specific mitigation measures, as needed, would be developed at later stages during the implementation of the Project.

48. **Frequency of procurement supervision**. In addition to the prior review supervision to be carried out from World Bank offices, the capacity assessment of the implementing agency has recommended yearly supervision missions to visit the field to carry out post review of procurement actions.

49. **Supervision of subprojects**. FMCN's operational procedures for the subprojects will establish internal instruments targeting 100% supervision of the beneficiaries.

Procurement Plan: Prior and Post Reviews

50. Contracts to be procured directly by FMCN were included in an initial procurement plan already discussed, covering the first 18 months of project implementation. Given the demand-driven nature of these projects, it was not practical to prepare detailed procurement plans for discussion at negotiations as traditionally is required, especially when the procurement of activities or the activities themselves are carried out directly by the organizations under subprojects. Simplified procurement plans may be prepared, if practical, based on an indicative list of eligible activities to be implemented. The procurement plan will be administrated in the Procurement Plan Execution System (Sistema de Ejecución de Planes de Adquisiciones, SEPA).

51. **Prior and post reviews**. No ICBs or consultant services above US$300,000 (which require international advertising) are expected under the Project. Goods, works, and non-consulting service contracts estimated to cost above US$500,000, US$3,000,000, and US$500,000, respectively, per contract, and all direct contracting, will be subject to prior review by the World Bank. Consultancy services estimated to cost above US$200,000 per contract, and single source selection of consulting firms and single source selection of individual consultants for assignments estimated to cost above US$100,000 and US$50,000, respectively, will be subject to prior review by the World Bank.

Table 3.6 Activities, Procurement Methods, Thresholds, and Special Provisions

Activity	Procurement method	Threshold (US$)	Special provisions
FMCN			
Goods	ICB	$3,000,000	Prior review (not expected)
Goods and non-consulting services	NCB	$500,000	Prior review
Goods and non-consultant services	Shopping	<$100,000	Prior review only for those contracts with an estimated cost of more than $100,000
Consultant services	All methods All single source	$200,000	Prior review
Individual consultants		$100,000	Prior review
Subprojects			
Technical assistance	Certified consultants will be recruited by FMCN. Single source as an exceptional method, for example when only one firm is qualified or has experience of exceptional worth for the assignment	Up to $40,000 per contract	Processes should be documented and kept (by the beneficiaries) for five years. Close supervision by FMCN. The World Bank's supervision of the Project may consist of reviewing reports of procurement post reviews carried out by FMCN according to procedures acceptable to the World Bank and should be done in addition to technical and financial reviews and audits

Goods, small works, non-consulting services	Simple shopping: three quotations. Comparison of two is justified only when there is satisfactory evidence. Direct contracts as an exceptional method, for example when the required good is obtainable only from one source	Up to $50,000 per contract	Processes should be documented and kept (by the associations) for five years. Close supervision by FMCN

C. Environmental and Social, Including Safeguards

Environmental and Social Risks

52. Environmental and social risk ratings are Moderate, and the Project is ranked as Category B. The chief environmental risks are likely to be in the form of actions by agencies not involved in implementing the Project, such as issuance of permits or changes in ordinances that would affect project outcomes. Many of the project areas face plans for expansion of tourism and hydroelectricity. Organizational capacity of environmental and civil society groups is low. Project activities other than subprojects in part 2 do not pose environmental risks. Criteria and procedures for screening subprojects have been put in place as part of the Environmental and Social Management Framework, to comply with the safeguards triggered.

53. It is expected that the Project will have an overall positive impact on the environment. Creation of new Protected Areas and strengthening the management of existing ones will conserve forest and watershed resources. The sustainable management practices supported in part 2 are expected to reduce deforestation pressure and contribute to carbon stock enhancement in fragmented landscapes by engaging local community members in forest conservation, reforestation, and sustainable forest management, reducing pressure for land use change and also reducing soil erosion. These lands are currently at high risk of conversion. Part 3 will enhance local communities' capacity to monitor and understand forest and watershed ecosystem services, and is expected to generate further opportunities for enhancing livelihoods through sustainable management and use of natural resources. Finally, the enhanced institutional collaboration supported by part 4 is expected to strengthen local governments' capacity to monitor and manage watershed resources, and create opportunities for synergy and enhanced application of practices to achieve the desired outcomes envisioned in the Conventions on Biological Diversity, Desertification, and Climate Change.

54. The Project's social strategy addresses socioeconomic issues and promotes social mobilization in relation to the Project's objectives. It incorporates activities to engage local populations and authorities, and activities and processes included in the Environmental and Social Management Framework, Indigenous Peoples Planning Frameworks, and Process Framework prepared for the project. Learning communities will help build consensus about climate change mitigation and other complex issues, and help to create a social network incorporating and strengthening community and civil society organizations and regional participation bodies. Information campaigns and participatory monitoring are also important to the social strategy.

55. Focused efforts will need to be undertaken to ensure that women and under resourced communities know about and can participate effectively in project activities and local governance. The Project is expected to have positive social outcomes in this regard,

strengthening local organizations and participation, and engaging communities in understanding, monitoring, and managing the health of the watersheds.

56. To provide guidance regarding how to manage environmental and social risks, an Environmental and Social Management Framework, which includes a stand-alone Indigenous Peoples Planning Framework and Process Framework, has been prepared for parts 1 and 2. For part 2.1, however, the Indigenous Peoples Planning Framework and Process Framework prepared by CONAFOR for the Forests and Climate Change Project will be used. The RCU in each region will be responsible for monitoring safeguards compliance and reporting progress each semester regarding the implementation of the instruments. The Environmental and Social Management Framework, Indigenous Peoples Planning Frameworks, and Process Framework were developed with input from extensive consultations and disclosed prior to appraisal on the websites of FMCN and its three learning communities and at the World Bank Infoshop. Comments from peer reviewers and experts on the World Bank team have also been incorporated to include explicit attention to issues such as land tenure in the affected areas and to ensure that specific families and communities potentially affected by Project activities will be identified and consulted before decisions resulting in restrictions on use are final. Prior to appraisal, the IPPF was reviewed and validated by the Consulting Board for Sustainable Development (*Consejo Consultivo de Desarrollo Sustentable*), which includes representatives of the federal, state, indigenous, women's, private, academic, youth, and non-profit agencies and organizations, during a meeting called for this purpose in Veracuz on April 10, 2013. The Environmental and Social Management Framework, IPPF and PF are available on the CONANP, CONAFOR, INECC, and FMCN websites. All safeguard instruments have been widely disclosed in the country (since April 1, 2013, on the FMCN website and from May 22 on the CONANP, CONAFOR, and INECC websites) and sent to the World Bank's Infoshop (May 8, 2013).

57. Reports available in the project files describe the social analysis and consultation conducted during preparation, and present detailed information about the demographics, socioeconomic trends, institutional framework, and opportunities for sustainable development in each of the project watersheds in the Gulf of Mexico. Information about watersheds in the Gulf of California currently exists in the form of technical studies prepared for the establishment of protected areas. These will be supplemented with additional consultation and planning as specific watersheds are added to the project.

Safeguards

58. **Indigenous Peoples (OP 4.10).** This policy is triggered because there are indigenous peoples that meet the four criteria in the watersheds in the Gulf of Mexico region. A social assessment and consultation process was undertaken during preparation in order to better understand their socioeconomic and demographic circumstances and to gather inputs, concerns, and suggestions for the preparation of an Indigenous Peoples Planning Framework. The Indigenous Peoples Planning Framework prepared for the Forests and Climate Change Project will be used for part 2.1 and Indigenous Peoples plans prepared for those activities as agreed with CONAFOR. Specific safeguard actions may include information campaigns in local languages; technical support to indigenous communities to prepare proposals (direct and through civil organizations); strengthening indigenous organizations; preparation and implementation of indigenous peoples plans; technical assistance to indigenous communities for participation in community monitoring; and continuous consultation regarding project implementation.

Indicators that will be used to monitor compliance with the safeguard instruments will include number of outreach campaigns that reached their objectives conducted during implementation; number of subprojects implemented by indigenous communities as a percentage of the total; number of indigenous landholders receiving PES as a percentage of the total (as an increase over previous years); number of indigenous organizations strengthened and evidence of this improved governance; satisfactory implementation of Indigenous Peoples Plans (progress meeting the indicators); number of Indigenous Peoples participating in community monitoring; and number of complaints fully addressed through the grievance mechanism.

59. The watersheds under consideration in the Gulf of California region do not include indigenous communities within the Protected Areas. Consultation will be conducted as needed and an indigenous peoples plan prepared if necessary during project implementation.

60. **Involuntary Resettlement (OP 4.12).** This policy has been triggered to address possible impacts from restrictions on access and use of natural resources in protected areas that will be supported in part 1. The rationale is that new regulations to protect fragile habitats or endangered species and better enforcement of existing procedures may result in some restrictions. As required by OP 4.12, a Process Framework was prepared to provide operational guidance regarding the screening mechanism and mitigation measures. As outlined in the Process Framework prepared for this Project, sustainable development action plans will be agreed with any affected populations to identify alternatives appropriate to communities' capacities and priorities, and financial and technical assistance needed. These activities will be included in the Protected Area's logical frameworks and annual operating plans, and support and guidance will be provided during execution. Indicators for monitoring compliance will include documentation of Protected Area management plans discussed and agreed with affected communities, action plans incorporated into the annual operating plans, number of beneficiaries of the action plans, and area under conservation through alternative activities financed by action plans.

61. **Gender Mainstreaming in Development (OP 4.20).** The Project will train staff in gender equity, disaggregate all data by gender, and ensure women's participation by promoting women's leadership in their communities, mechanisms to ensure women's participation in decision making, support to women's groups and civil society organizations to prepare proposals to receive funding, and strengthening of women's organizations. Indicators for monitoring compliance will include project staff training in gender equity (number), gender-disaggregated data, number of subprojects implemented by women's organizations (as percentage of the total), number of women and men receiving training in leadership using a gender perspective, number of leading women identified and active, and women's organizations participating in community monitoring and in the learning community.

62. **Environmental Assessment (OP/BP 4.01).** This policy has been triggered due to the potential minimal impact of subprojects to be financed, mainly under part 2. During preparation, a single, project-level Environmental and Social Management Framework was prepared for the Project. One of the functions of the Environmental and Social Management Framework is to define the screening procedures and criteria that FMCN, CONANP, and CONAFOR will use to determine what, if any, further environmental analysis and instruments will be required for all subproject activities, and to define the specific environmental assessment procedure during project implementation. Existing protocols for establishment of Protected Areas include studies of ecological and social conditions, opportunities, and risks, and measures for enhancing positive

outcomes and mitigating risks. Management plans and monitoring systems will provide the basis to detect and address environmental and other impacts in real time. CONAFOR's Forests and Climate Change Project, including systems for promoting best practices in sustainable forest management and PES to support those practices, includes a detailed environmental assessment conducted in 2011 (*Informe de Evaluación Ambiental, Proyecto Bosques y Cambio Climático Specific Investment Loan*, prepared for CONAFOR by Luis Miguel Casas de la Peña). The extension of this program to new watersheds is expected to bring similar outcomes, including learning about, incentives for, and adoption of best forest management practices; development and adoption of IWAPs; reforestation of degraded areas; institutional strengthening of the entities responsible for forest and water resource management and regulation; capacity for early detection and management of changes; and enhanced efficiency and synergies in the application of resources destined for natural resource management improvements. All project activities are subject to the environmental procedures defined in the Environmental and Social Management Framework and in compliance with the requirements of the General Law for Sustainable Forestry Development and its regulations; the General Law for Ecological Balance and Environmental Protection; the General Law for Wildlife; the Sustainable Rural Development Act; and the National Water Act. Indicators of compliance with this safeguard will include new Protected Areas established, effectiveness of protected area management, risk level determination in subprojects, forest management plans under operation, mitigation plans incorporated into subprojects as required, and record of environmental results.

63. **Natural Habitats (OP/BP 4.04).** The Project is expected to generate positive benefits to natural habitats, but given the richness of the project area there is also the possibility of minor, adverse impacts from activities to be developed under part 2. The screening processes in the Environmental and Social Management Framework will determine whether subproject activities may result in adverse impacts to natural habitats, and must be addressed with management measures. Indicators of compliance will include implementation of best practices for sustainable management in priority habitats, as well as the record of environmental results (according to GEF tracking tools).

64. **Forests (OP/BP 4.36).** This safeguard is triggered due to the potential for changes in forest management. The Environmental and Social Management Framework includes measures to address the eventual impacts related to forests. The PES and sustainable forest management parts will create incentives for community-based organizations and learning to support the implementation of agro-ecological practices that sustain livelihoods while minimizing loss of forest cover, and, in many cases, restoring and improving forest, soil, and watershed conditions. The institutional strengthening and coordination parts will enhance the ability of management agencies at many levels to detect changes, identify appropriate practices, and engage communities in valuing and enhancing forest and hydrological ecosystem services. Indicators of compliance will include implementation of practices for sustainable management in priority habitats, as well as the record of environmental results (according to GEF tracking tools).

65. **Physical Cultural Resources (OP 4.11).** The Environmental and Social Management Framework includes a safeguard provision for chance findings of "historical sites and/or archeological sites." These safeguard measures also cover other physical cultural resources such as sacred sites, burial sites, and other resources that are of significance to local communities. No physical cultural resources will be affected by the Project; the policy is triggered as a preventive measure to ensure that all participants respect the rich cultural heritage of the region. In the case

of chance findings, Mexico has a well-developed legislative and normative framework under the oversight of the National Institute for Anthropology and History, whose procedures are incorporated into the screening section of the Environmental and Social Management Framework.

66. **Pest Management (OP 4.09).** This safeguard is triggered as subproject-supported activities (such as forest management) could potentially involve the use or purchase of agricultural chemicals. The Environmental and Social Management Framework incorporates measures to ensure compliance with the policy.

D. Monitoring and Evaluation of Project Results

67. Project monitoring will be a multi-institutional and multidisciplinary effort following the determination of the baseline of the GEF tracking tools. The establishment of this baseline will be followed by data gathering at midterm and final reviews to assess impact. At the watershed level, IWAPs will be fed with information on deforestation and degradation of ecosystems, mapping of ecosystem services, scorecards on the ecological status of coastal wetlands, and available socioeconomic data. This information will be updated yearly, analyzed, and discussed with decision makers to serve for the coordination of activities and adaptive management. INECC will be responsible for designing the system, ensuring the feeding of the data, and updating the IWAPs.

68. CONANP will monitor advances in consolidation in the Protected Areas. Data on subprojects (agro-ecosystems and sustainable forest management) will be provided by FGM under the supervision of FMCN. CONAFOR will provide information on areas receiving PES. INECC will provide information on institutions collaborating within each watershed as part of the IWAPs.

69. Protected Area performance with reference to management effectiveness targets will be measured as a percentage of the indicators included in the annual operation plans met. FMCN will report advances in fundraising. Carbon estimates will be provided by CONAFOR according to advances in MRV methodologies, while carbon data from Protected Areas will be complemented with information from CONANP. INECC will report on the number of watersheds being monitored and number of local partners in each watershed incorporating best land management practices. The RCUs hired by FGM and FONNOR will be responsible for integrating data into reports presented to the TPC and then to the World Bank.

70. Reports will be prepared by the RCU in FGM every semester. The Coordinator in FONNOR will prepare the part corresponding to parts 1.2 and 2.1 and send it to the RCU in FGM with adequate anticipation. The annual reports will include the advances in the indicators of the Project (Annex 1). During the midterm and final review, GEF tracking tools will be reviewed by the PCU with the participation of all the institutions following the mechanism established for the baseline. GEF tracking tools were prepared with baseline data for the four focal areas of GEF: Biodiversity, Climate Change Mitigation, Land Degradation, and Sustainable Forest Management. The Biodiversity tracking tools have data for each of the seven Protected Areas along the Gulf of Mexico that will receive GEF funding, as well as general financial

information on the whole federal system of Protected Areas[28]. Data were provided by CONANP. The Climate Change Mitigation tracking tool was prepared by CONAFOR and FMCN. It contains data derived from the social assessment, as well as an estimate of avoided carbon emissions per project part based on deforestation and degradation rates in each watershed as registered between 1993 and 2007. These official data were provided by CONAFOR. The estimates were reviewed by independent experts from the United States Forest Service and improved. Annexes that describe the methodology followed and the corresponding calculations have been added to the tracking tools. The estimates will be reviewed during the first year of project implementation, since CONAFOR expects to have the national MRV methodologies and finer-scale images by that date. Two annexes that contain the socioeconomic data and corresponding calculations accompany the Land Degradation tracking tools. An annex has also been included to the Sustainable Forest Management tracking tool to identify the sources and data underlying the information provided. The social assessment consultants, CONANP, INECC, and CONAFOR, provided data for the Land Degradation and Sustainable Forest Management tracking tools, while compilation was conducted by FMCN.

[28] The tracking tools for the three protected areas to be selected along the Gulf of California will be finalized and submitted to the GEF Secretariat before approving the Annual Operational Plans to be financed under the project. The tracking tool on the whole federal system will be updated based on information from a study being undertaken by CONANP, and will be submitted to the GEF Secretariat prior to Bank Board approval.

Annex 4. Operational Risk Assessment Framework (ORAF)

MEXICO

Coastal Watersheds Conservation in the Context of Climate Change Project (P131709)

Risks

Project stakeholder risks						
Stakeholder risk	Rating	Moderate				
Risk description: Many stakeholders outside Protected Areas have low organizational capacity or are organized along local political interests. Insecurity associated with drug trafficking may affect organizational efforts in communities.	**Risk management:** To mitigate these risks, the Project will start in areas with high potential for community organization. It will rely on a strong emphasis on developing organizational capacities through participatory forums that address gender, ethnic, and social class justice. Advances within Protected Areas will serve as a model to inspire organizational work beyond Protected Areas.					
	Resp: Client	Status: Not yet due	Stage: Implementation	Recurrent:	Due date:	Frequency:
	Resp: Bank	Status: Not yet due	Stage: Implementation	Recurrent:	Due date:	Frequency:
Implementing agency risks (including fiduciary risks)						
Capacity	Rating	Moderate				
Risk description: CONANP, CONAFOR, NAFIN, and FMCN have proven capacities for management of successful World Bank-financed projects. Coordination between these institutions and with INECC within one project is new and will face the	**Risk management:** The Technical Project Committee will be key to allow for efficient coordination among the four institutions. It will build on the experience of the Technical Committees for FANP and it will require close supervision from the Bank.					
	Resp: Bank	Status: Not yet due	Stage: Implementation	Recurrent:	Due date:	Frequency:

<table>
<tr><td rowspan="2">challenge of the change in federal administration.

Both main implementing entities FMCN and CONAFOR have considerable experience implementing World Bank-financed projects, with satisfactory records of financial management performance, and solid internal control systems in place; however, some of the Project parts will be implemented by regional co-implementing entities, which may have limited capacity (regional funds such as FGM and FONNOR).</td><td colspan="6">Risk management:

Most of the Project payments, including related to subprojects, will be made centrally by FMCN. The regional funds will be mostly responsible for technical implementation of the Project and, in fiduciary terms, for payments of the project operating costs. These expenditures will be subject to the following risk mitigation measures: (a) documentation to FMCN through preparation and submission of quarterly financial and technical reports; (b) annual project audits in terms of the Grant Agreement; (c) procurement guidelines.</td></tr>
<tr><td>Resp: Bank</td><td>Status: Not yet due</td><td>Stage: Implementation</td><td>Recurrent:</td><td>Due date: Not yet due</td><td>Frequency: Permanent</td></tr>
<tr><td>Governance</td><td>Rating</td><td colspan="5">High</td></tr>
<tr><td rowspan="3">Risk description:

Changing Government priorities throughout project implementation may divert attention from project activities, especially considering the change in the federal administration. However, the Project will have a Technical Project Committee and a Statutory Framework to be followed among the entities part of the Technical Project Committee. This will include details on the decision-making process and accountability.</td><td colspan="6">Risk management:

Both CONANP and FMCN have already successfully launched a prior GEF-funded project through changes of federal administration. Due to the high international commitments acquired by CONAFOR through REDD+, and with private parties through PES, it is expected that changes from one to the next administration will not be substantial.</td></tr>
<tr><td>Resp: Bank</td><td>Status: Not yet due</td><td>Stage: Implemetation</td><td>Recurrent:</td><td>Due date:</td><td>Frequency:</td></tr>
<tr><td colspan="6">Risk management:

Close supervision will be undertaken, especially in the first year of project implementation.</td></tr>
<tr><td></td><td>Resp: Bank</td><td>Status: Not yet due</td><td>Stage: Implementation</td><td>Recurrent:</td><td>Due date:</td><td>Frequency:</td></tr>
<tr><td colspan="7">Project risks</td></tr>
<tr><td>Design</td><td>Rating</td><td colspan="5">Moderate</td></tr>
<tr><td>Risk description:</td><td colspan="6">Risk management:

The Project design builds on previous experience from FANP and the Fund for Biodiversity. In both</td></tr>
</table>

<table>
<tr><td rowspan="3">Successful project implementation will require close collaboration between CONANP, CONAFOR, INECC, and FMCN in a Technical Project Committee that will ensure the political buy-in and the technical soundness of project decisions.

From an operational perspective the Project is complex, mainly due to the existence of several co-implementing entities and the financing of subprojects through processing of payments to multiple beneficiaries. Nevertheless, both FMCN and CONAFOR have strong internal control systems in place, based on the segregation of financial management-related functions, and an integrated IT platform to perform all the budgeting, accounting, and payments functions related to the Project.</td><td colspan="6">cases social participation is ensured through national and local committees.</td></tr>
<tr><td>Resp: Bank</td><td>Status: In progress</td><td>Stage: Implementation</td><td>Recurrent:</td><td>Due date:</td><td>Frequency:</td></tr>
<tr><td colspan="6">Risk management:

Close supervision, including ensuring effectiveness of the financial management systems, will be undertaken, especially in the first year of project implementation. All payments to final beneficiaries of the subprojects will be processed directly by FMCN during the entire duration of the Project.</td></tr>
<tr><td></td><td>Resp:</td><td>Status: Not yet due</td><td>Stage: Implementation</td><td>Recurrent:</td><td>Due date: Not yet due</td><td>Frequency : Permanent</td></tr>
<tr><td>Social and environmental</td><td>Rating</td><td colspan="5">Moderate</td></tr>
<tr><td rowspan="2">Risk description:

Along the west coast the watersheds are facing high expansion of dams and tourism. Along the east coast the highest investment in oil production is found. While development pressure is high, there is low local organizational capacity to accompany these changes.</td><td colspan="6">Risk management:

The Project will incorporate processes to strengthen local participation to guide local and regional development in the selected watersheds. The World Bank has more than 14 years of experience in Mexico strengthening local participation for improved management of natural resources.</td></tr>
<tr><td>Resp: Bank</td><td>Status: In progress</td><td>Stage: Implementation</td><td>Recurrent:</td><td>Due date:</td><td>Frequency:</td></tr>
<tr><td>Program and donor</td><td>Rating</td><td colspan="5">Low</td></tr>
<tr><td>Risk description: Matching funds to be ensured by FMCN could not materialize as planned as the activities related to the Gulf</td><td colspan="6">Risk management:

The FMCN has already hired personnel to lead fundraising activities. The FMCN has experience in</td></tr>
</table>

of California could be delayed.	fundraising for conservation projects and has developed a wide portfolio with projects funded by different donors.					
	Resp: Client	Status: In progress	Stage: Implementation	Recurrent:	Due date:	Frequency:
Delivery monitoring and sustainability	Rating	Low				
Risk description: Monitoring arrangements could not be supported in a robust way by the participating agencies due to coordination issues, budget allocation, planning, etc.	**Risk management:** Close supervision of the incorporation of sound indicators and monitoring arrangements at the field level in the Project. In addition, project design seeks to strengthen monitoring capacities at different levels for parts 3 and 4.					
	Resp: Bank	Status: In progress	Stage: Preparation and Implementation	Recurrent:	Due date:	Frequency:
Other (optional)	Rating	Moderate				
Risk description: **Procurement** Description: Participation of beneficiaries under subprojects with no previous experience. Participation of FGM in project activities in the project area of the Gulf of Mexico.	**Risk management:** Close supervision by FMCN and strengthening of FGM.					
	Resp: Bank	Status: In progress	Stage: Implementation	Recurrent:	Due date:	Frequency:
	Resp:	Status:	Stage:	Recurrent:	Due date:	Frequency:
Overall risk						
Overall implementation risk:	**High**					

Annex 5. Implementation Support Plan

MEXICO
Coastal Watershed Conservation in Response to Climate Change (P131709)

Strategy and Approach for Implementation Support

1. The strategy and approach for implementation support will include formal supervision, including field visits to be carried out in the states where project activities will take place, and will focus on the following main areas:

2. **Implementation Support Plan**. Special attention will need to be paid to: (a) the supervision of a large number of annual operational plans of Protected Areas and proposals of subprojects across the biological corridors considered by the Project, especially in the context of promoting biodiversity-friendly practices and their monitoring; (b) the process and content of technical assistance to landowners and community organizations for implementation of biodiversity-friendly practices, including the effectiveness of technical service providers, and the implementation of the social strategy and Indigenous Peoples Planning Framework; (c) coordination across implementing agencies and geographic locations to identify early lessons learned from implementation; (d) implementation of proactive communication and consultation strategy, engaging a variety of stakeholders at local, regional, and national levels (across parts); (e) monitoring the key elements of project sustainability; and (f) monitoring of project implementation, including results indicators (as defined in Annex 1) and biodiversity monitoring (as defined in the GEF tracking tools).

3. **Fiduciary requirements and inputs.** The financial risk associated with the Project has been assessed as Moderate. FMCN has effectively managed endowment and non-endowment funds in two previous GEF grants (SINAP I and II). As noted above, the professional management of the FMCN capital has allowed an average annual return of 7.84% in US$ in the last 16 years. Similarly, CONAFOR has successfully participated in the implementation of the Biodiversity Fund to date. The financial risk of subprojects will be managed through careful screening of applicants and technical oversight by the PCU and RCUs. These arrangements have been defined and reflected as appropriate in the Project's operational manual and in the agreements signed between the implementing agencies.

4. Supervision will involve review of semi-annual unaudited project interim financial reports and yearly independent audit reports submitted by FMCN to the World Bank, and reports on the Biodiversity Fund submitted by CONAFOR following the guidelines agreed with the World Bank under the project that created the Biodiversity Fund. Key points of supervision of endowment fund management will involve review of annual investment reports submitted to the TPC and then to the World Bank; any reports of changes to the approved investment policy; and, if indicated, review of monthly reports on investments and minutes of quarterly FMCN Investment Committee meetings.

5. In addition, the scope of project supervision will review the implementation of financial management arrangements and financial management performance, identify corrective actions if

necessary, and monitor fiduciary risk. It will take place twice a year and include updating the financial management rating in the implementation status report.

6. **Environmental and social safeguards**. The RCU will need to strengthen its capacity to manage social and environmental issues, including through adequate staffing and field presence, due to the complexity of the project and the processes managed. The RCU in the Gulf of Mexico will thus hire a safeguard specialist. The PCU will need to effectively oversee the implementation of the recommendations derived from the social assessment, Environmental and Social Management Framework, Indigenous Peoples Planning Frameworks, and Process Framework, as defined in the operational manual. This will involve engagement with stakeholders, including producers, producer associations, and local communities; implementing measures based on consultations; and monitoring social and environmental safeguards.

Implementation Support Plan

7. Table 5.1 provides de main activities to be carried out and respective skills/resources required for the project implementation.

Table 5.1: Implementation Support Plan

Time	**Focus**	**Skills Needed**	**Resource Estimate**	**Partner Role**
First twelve months	Fundraising strategy development and implementation	Fundraising specialists	$57,000	FMCN to identify, host
	Environmental-Social Management Framework in place	Social/ indigenous peoples specialist; environmental impact evaluation experts	$23,000	FMCN to hire staff to monitor Indigenous Peoples Framework, overall ESMF
	Establishment of Committees (and *ad hoc* working groups as needed)	Organization of regular high level meetings	No cost to project	CONANP leadership
	Signature of FMCN-FONNOR agreement	Legal expertise to prepare the documentation	No cost to project	FMCN leadership
	Carry out prioritization and identification studies for activities proposed for the selected watershed.	Environment and social specialists.	$33,000	INECC leadership

Time	Focus	Skills Needed	Resource Estimate	Partner Role
12-48 months	Project's investments and bidding process adequately operating	Procurement and FM expertise.		FMCN leadership
	Environmental-Social Management Framework in place. Establish priority investments for existing PA consolidation.	Social, indigenous peoples' specialist; environmental impact mitigation experts.		FMCN, CONANP and CONAFOR leadership
	Capacity building and plans to implement SFM and agro ecological subprojects	Technical expertise in selected sectors.		FMCN and CONAFOR leadership
	Frequent update of the Project M&E system.	M&E specialists.		FMCN, CONANP, CONAFOR and INECC leadership
Project Completion	Impact evaluation and sustainability planning.	Impact evaluation experts		

Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Safeguards (social, indigenous peoples, and environment; other safeguards per project documents)	World Bank supervision will require 6 SWs per FY (mainly senior technical staff)	Two trips per fiscal year	
Institutional Capacity supervision (FM, procurement, disbursements)	14 SWs per FY (Mix of junior and senior technical staff)	One trip per fiscal year	
Technical Expertise Enhancement (PA, PES, SFM, environmental monitoring, M&E, Knowledge sharing, technical support)	5 SWs per FY (Mix of junior and senior technical staff)	Two trips per fiscal year	

Annex 6. Economic Analysis

MEXICO
Coastal Watershed Conservation in Response to Climate Change (P131709)

1. **Introduction.** The Project aims to generate local and global benefits by promoting integrated environmental management of selected coastal watersheds to achieve biodiversity conservation benefits, increase climate change resilience, enhance carbon stocks, and enhance sustainable use. The Project will operate in two sets of watersheds and sub-watersheds, ten in the Gulf of California and six in the Gulf of Mexico. GEF funding will be used only for the Gulf of Mexico, while watersheds in the Gulf of California will be gradually incorporated using co-financing. This economic evaluation concentrates on the six watersheds where GEF funding will be applied: *Tuxpan*, *Antigua*, *Jamapa*, *Coatzacoalcos*, *Río Temoloapa*, and *Grijalva-Usumacinta*. The first five watersheds are mostly in the state of Veracruz and the last one is in the state of Tabasco. Total population in the watersheds is 2.7 million people distributed in 4,771 settlements in 112 municipalities.

2. **Statement of the problem**. The environmental integrity of the watersheds is threatened through loss and degradation of natural habitats and land degradation. In some areas this is compounded with pollution. These changes create negative externalities at various levels, including carbon emissions, loss of biodiversity, erosion, and other land degradation effects. Many of these changes are unsustainable, ultimately reducing the productivity of production systems, hindering the livelihoods of communities within the watersheds, and in many cases encouraging migration and increasing vulnerability.

3. Some of the key drivers of change include:

- Slash-and-burn low-yield subsistence agriculture, often on steep slopes;
- Low-intensity grazing;
- Illegal logging;
- Unsustainable practices for some crops (sugar, coffee);
- Urban growth;
- Low economic opportunities leading to migration and unsustainable resource exploitation.

4. Low-intensity cattle ranching, subsistence agriculture, illegal logging, and limited economic opportunities are some of the most relevant drivers of change in the watersheds.

5. **Project approach**. The Project aims to implement a set of coordinated activities included in the project description. The Project contains several activities aimed at enhancing capacity and testing and mainstreaming innovative approaches that will promote replication. This is embedded in the project design, for example, with the treatment of the watersheds in the Gulf of California as replication areas. This is relevant for the economic analysis, since there are investments in enhancing capacity that increase the cost of individual activities but are intended to enable future actions beyond the project area. The significant diversity in population and economic dynamics across the selected watersheds can potentially generate relevant lessons for a broader set of watersheds elsewhere.

6. The key direct beneficiaries of the Project will be landowners and residents of communities participating in the Project, and local organizations working with them to secure technical assistance and training.

7. A full cost-benefit analysis of the Project was not possible as many benefits, including biodiversity and hydrological services, have not been quantified. While the opportunity costs of natural habitats in the project areas have also not been specifically assessed, estimates for similar areas in the country were used for this analysis. Information on these economic aspects is expected to be generated during project implementation as part of the monitoring systems under part 3, which will include socioeconomic aspects as part of the efforts to provide feedback during project implementation and enable adaptive management. As in the recent World Bank-financed project on Forests and Climate Change, which has a similar design, this analysis has been structured by estimating the level of benefits that would be needed in order for the Project to break even and be justified.

A. Project Benefits

8. Two main elements determine the overall benefits generated by the Project: (a) its effectiveness in actually halting habitat loss and engaging landowners in more sustainable practices; and (b) the economic value of the preserved and restored habitats. Based on existing trends, the Project estimates that, if no action is taken, there would be a 35% additional loss of rain forests and 18% additional loss of temperate forests by 2050 in these two regions.[29] These potential losses are significant and would be compounded by additional degradation of natural habitats through various existing disturbances. Expected degradation, however, has not been quantified. Selection criteria for the watersheds qualitatively secured that there are important co-benefits and environmental services that would be lost under current trends. In the following sections, the expected effectiveness of the project interventions is assessed and the cost of achieving them is considered.

B. Causal Framework

9. **Part 1: Creation and consolidation of protected areas.** *Part 1.2: Supporting the creation of new Protected Areas and strengthening management effectiveness of new and existing Protected Areas through financing of biodiversity conservation activities included in the annual operating plans.* The Project will support the consolidation of existing and new Protected Areas associated with the selected coastal watersheds. Availability of equipment and personnel, as well as the capacity to engage in community and capacity-building activities, are expected to result in more effective conservation.

10. Protected Areas in Mexico have generally been found to be an effective measure to reduce deforestation and promote conservation.[30] However, the Project aims to go beyond creating new Protected Areas by taking further action to consolidate them. Consolidation means ensuring capacity to draft and execute management plans by having sufficient staff and technical

[29] See Annex 7: Incremental Cost Analysis of the Project Appraisal Document.

[30] See for example, Figueroa, F., and V. Sánchez-Cordero. 2008. "Effectiveness of Natural Protected Areas to Prevent Land Use and Land Cover Change in Mexico." *Biodiversity and Conservation* 17: 3223–40; and Mas, J.F. 2004. "Assessing Protected Area Effectiveness Using Surrounding (Buffer) Areas Environmentally Similar to the Target Area." *Environmental Monitoring and Assessment* 105: 69–80.

resources and a diversified portfolio of income sources. This consolidation model has been applied in Mexico through the GEF-supported National System of Protected Areas (SINAP I and II). The evaluation of these projects offers relevant insights into the expected effectiveness of this part. According to the final report of SINAP II, "77% of the protected area analyzed through remote sensing between 2002 and 2009 had a reduction in rates of habitat transformation," and "78% of species being monitored increased or maintained their frequency within protected areas." These results are encouraging, though the evaluators also found significant variation in performance of individual protected areas and a need for closer examination of the variations in deforestation rates across time. The design of the intervention seems to be in line with best practice and experience and is expected to generate benefits.

11. The costs of consolidation of Protected Areas will include the actual cost of management and transaction costs of the Protected Area (not restricted to GEF funding), but also the opportunity costs of forgone land uses.

- **Management and transaction costs** included both GEF funding and CONANP's own costs. A study prepared by The Nature Conservancy in 2011 on the financial gap of protected areas estimated that, on average, protected areas cost between 80 and 100 Mexican pesos per hectare.[31] Considering the almost 2 million hectares of Protected Areas in the Project, this average cost would result in between US$12.6 million and US$15.7 million per year, for a total of between US$62.8 million and US$78.5 million for five years.[32]
- **Opportunity costs.** Most Protected Areas in the coastal watersheds are located in the most isolated and unsuitable land for other uses. For this reason, it would be expected that overall opportunity costs would be low for most activities. While some areas will have a positive opportunity cost that could translate into pressure to change land use, to the extent that project design allows for the combination of protected areas with other measures such as PES, it is likely that such encroachment inside Protected Areas could be avoided. This issue will be discussed in the next part.
- The **co-funding** (*part 1.3*), including additional endowment funding of US$17.4 million and US$4.691 million from other public and private sources that FMCN aims to obtain, will not alter the overall cost of the Project, but rather would distribute costs across donors. It will not significantly increase the overall cost of consolidating the Protected Area beyond the transaction costs of FMCN in managing such funds.

12. Given the total budget for this part of US$66.068 million, it would fall in the lower end of average costs for the National Protected Area System. Considering that the overall performance of these Protected Areas would be above the national average thanks to the dedicated efforts to consolidate them, it can be concluded that the conservation investments are likely to be more cost-effective than in other areas.

13. **Part 2. Promoting sustainability within watersheds.** This part aims to enhance resilience to climate change and the sustainability of land uses by improving land and forest

[31] Bezaury-Creel, J.E, S. Rojas-González de Castilla, and M.J. Makepeace. 2011. *Financial Gap in the Federal Protected Areas of Mexico: Phases I and II.* CONANP, The Nature Conservancy, FMCN.

[32] Additional costs are expected to exist beyond year 5; however, the longer into the future costs are projected, the greater the uncertainty.

management. It will use two distinct strategies: (a) PES; and (b) supporting improved practices in agro-ecosystem and sustainable management of forests.

14. *Part 2.1. Reducing deforestation and forest fragmentation through payments for ecosystem services by CONAFOR's Biodiversity Fund.* This program provides direct incentives for landowners to adopt sustainable management practices and ensure the provision of ecosystem services from those areas. Based on existing programs for hydrological and biodiversity services, the program aims to mobilize dedicated resources for these watersheds. Unlike the program for hydrological services, the biodiversity program is an endowment fund. To date, the hydrological program is the largest, with more than 2.2 million hectares covered under five-year contracts. The contracts are renewable but the program has become increasingly competitive, enabling CONAFOR to develop enhanced prioritization criteria as well as introducing the requirement for a best practices management plan.

15. In terms of the *effectiveness* of the program, there are several evaluations of the existing PES program for hydrological services. In one the most recent, Alix-Garcia, Shapiro, and Sims conclude that PES can be effective for reducing deforestation.[33] They estimated that the program reduced the probability of deforestation by 6–11 percentage points, which represents an approximately 22–44% reduction. They also conclude that improved targeting of the payments for ecosystem services can make a difference. The work done by Muñoz-Piña et al. has also shown that a simple rule that combines the value of the service and fundamental economic pressure on deforestation (the index of risk of deforestation) can make the same program have a threefold effect on actually reduced deforestation[34]. Such recommendations could in principle be better applied at the watershed level, where specific pressures and values could be better assessed.

16. The design of the biodiversity PES was informed by these experiences and appears to have improved features that could enhance the effectiveness even more, including:

- Focalization could be improved through better promotion and land planning information throughout the watershed.
- Enhanced monitoring capacity could provide a better deterrent to illegal land clearings, assist in the enforcement of PES rules, and help assessment of potential leakage or displacement of deforestation throughout the watershed.
- Combining programs to better match the aptitude of the land with support investments could avoid paying for PES in areas where the potential for sustainable use alternatives is higher.

17. Many of these enhancements in efficiency would depend on building technical capacity, effective monitoring, use of ecosystem value indicators for land planning, and good outreach and promotion with landowners. All of these activities are part of project design.

[33] Alix-Garcia, J.M., E. Shapiro, and K. Sims. 2010. *The Impacts of Payments for Ecosystem Services on Deforestation in Mexico: Preliminary Lessons for REDD.* Conference paper, Fourth World Congress of Environmental and Resource Economists, 2010.

[34] Muñoz Pina, C. *et al.* 2011. *Retos de la focalización del Programa de Pago por los Servicios Ambientales en México*. Revista Española de Estudios Agrosociales y Pesqueros, no. 228.

18. **Costs.** The costs of the PES include: (a) the opportunity costs of land uses in cases where such land use change would have occurred; (b) any management costs involved in complying with PES contracts; and (c) transaction costs of the program, including the National Forest Fund's administrative costs, and other costs incurred by program participants.

- **Opportunity costs.** The original design of the PES scheme was precisely based on opportunity costs of not deforesting areas with high hydrological value. At the time, the average profitability of rain-fed corn production was about US$40 per hectare, while for livestock production it was about US$70 per hectare.[35] Competition among potential beneficiaries is enabling CONAFOR to improve the alignment of areas actually paid with areas of high priority. However, as the target areas become more specific, the challenge is one of ensuring that areas paid are effectively areas that are under pressure and not areas with zero opportunity costs that would have been conserved anyway. The current payment scheme contains a greater range of payments that are linked also to greater management requirements. In the case of biodiversity payments, in 2012, they could range from $280 Mexican pesos per hectare to $550 Mexican pesos per hectare, while hydrological services would range from $382 per hectare to $1,100 per hectare.
- **Management costs.** As stated earlier, the program has become increasingly competitive, which would seem to indicate that opportunity costs and management costs for applicants are less than the value actually paid by the program. However, the challenge in terms of the project will be to ensure that valuable areas under threat are the ones actually submitted and approved for support.
- **Transaction costs.** CONAFOR's own costs would have to be incorporated; however, information on these does not exist. While the Mexican Forest Fund could in principle charge for operating costs, these have not entered into effect. Following the same assumptions as in the economic analysis of the project Forest and Climate Change, a cost of US$2 per hectare is assumed.

19. The average cost of PES payments estimated for the Project is US$53.85 per hectare; landowners with opportunity costs higher than that would not enter the program. This would allow for the incorporation of 16,883 hectares under the endowment fund from GEF and CONAFOR. Without the estimation of benefits from the program, it would be impossible to estimate the net benefits of this part. What would be essential is the targeting of the program to areas that would otherwise be deforested.

20. However, assuming various effectiveness rates for the program, the overall cost per hectare can be estimated (Tables 6.1 and 6.2).

[35] Jaramillo, L. 2002. *Estimación del Costo de Oportunidad del Uso de Suelo Forestal en Ejidos a Nivel Nacional.* DGIPEA Working Paper, vol. 0205. Instituto Nacional de Ecología, México e INE.

Table 6.1 Effect of Different Reductions in the Probability of Deforestation and Underlying Deforestation Rates on the Expected Avoided Deforestation as a Fraction of Total PES Area

		Reduction in deforestation probability		
		22%	**44%**	**66%**
Deforestation rates	**2.00%**	2%	4%	6%
	4.00%	4%	8%	12%
	6.00%	5%	11%	17%

21. The estimates in Table 6.1 imply the costs of avoided deforestation per hectare given in Table 6.2.

Table 6.2 Avoided Deforestation Costs per Hectare (US$) under Various Assumptions of Underlying Rate of Deforestation and Program Effectiveness

		Reduction in deforestation probability		
		22%	**44%**	**66%**
Deforestation rates	**2.00%**	2,630.32	1,303.40	861.17
	4.00%	1,414.93	694.62	454.67
	6.00%	1,016.21	494.04	320.24

22. The results presented stress the fact that allocation of PES in areas where there is high risk of deforestation and where there are other associated co-benefits (for example hydrologic, biodiversity) is critical to ensure costs per hectare are low and improve the likelihood of a positive benefit-cost ratio. By explicitly aiming to combine multiple co-benefits, the Pproject is well designed to ensure such a combination of values.

23. *Part 2.2: Carrying out agro-ecosystem subprojects*; and *Part 2.3: Carrying out sustainable forestry management subprojects*. These subparts aim to reduce pressure on remaining forests by assisting in the transition to sustainable production systems, hence reducing pressure for expansion of the frontier. As in the case of forests (see below), there is significant diversity in appropriate packages that could be included under this part. Landowners will not voluntarily transition into sustainable practices that eventually become more expensive for them than the alternative. Fortunately, evidence seems to suggest that there is such a set of economically profitable interventions, which are currently not occurring due to economic barriers. Guevara, Lara, and Estrada conducted a cost-benefit analysis of four productive alternatives in agroforestry and silvopastoral systems.[36] Their results show that:

[36] Guevara, A., J.A. Lara, and G. Estrada. 2012. *Financiamiento de Estrategias de Baja Intensidad de Carbono en Ambientes Forestales* [Financing low-carbon strategies in forest landscapes]. Reporte preparado en soporte del diseño de la línea de crédito de Financiera Rural dentro del Programa de Inversión forestal.

- Agroforestry systems are profitable in the long term (not less than 20 years). They have a benefit-cost ratio (BCR) of 0.78 and an internal rate of return (IRR) of 17%.
- Silvopastoral systems are profitable with a payback period between 2 and 8 years with a BCR of 1.44 and an IRR between 24% and 72%.

24. The silvopastoral systems that were analyzed varied in terms of the level of intervention, ranging from simple techniques to restore degraded pasture to increasing the intensity of trees in the grasslands. Average size of the analyzed plots was 10 hectares.

Table 6.3 Implementation Costs from a Silvopastoral System

System	Concept	Campeche	Jalisco	Oaxaca	Quintana Roo	Yucatán
High-density plantation (10,000 trees/ha)	NPV (pesos)[1]	186,697	–538,350	–248,072	294,562	1,040,965
	Initial investment[2]	189,319	189,319	189,319	189,319	189,319
	Technical assistance[3]	18,100	18,100	18,100	18,100	18,100
	Total investment[4]	207,419	207,419	207,419	207,419	207,419
	Years to recover investment[5]	6	> 50	> 50	5	2
	IRR (%)[6]	24%	< 0%	< 0%	30%	72%
	Cost-benefit index[7]	0.9	< 0	< 0	1.42	5.02
	Annual stock of carbon (tC)[8]	139.1	8.6	2.8	149	193.4
Native pastures without trees	NPV (pesos)[1]	52,823	16,943	27,395	55,320	100,100
	Initial investment[2]	17,415	10,343	18,741	22,115	17,816
	Technical assistance[3]	0	0	0	0	0
	Total investment[4]	17,415	10,343	18,741	22,115	17,816
	Years to recover investment[5]	2	4	4	3	1
	IRR (%)[6]	52%	35%	33%	46%	84%
	Cost-benefit index[7]	3.03	1.64	1.46	2.50	5.62
	Annual stock of carbon (tC)[8]	–21.5	–0.3	–0.7	–20.6	–16.6

Source: Reproduced from Guevara, Lara, and Estrada 2012.

Key:
1. Net present value for the entire evaluation period
2. Initial investment (year 0)
3. Technical assistance (year 0)
4. Total investment (2+3)
5. Years to break even
6. Internal rate of return
7. Cost-benefit index
8. Average carbon stock per year

25. Table 6.3 highlights two elements. First, the high diversity of conditions across states, and the likely diversity to be found between the plains along the Gulf coast and the upper watersheds. This dramatically affects the rates of return and the cost-benefit index. Second, while the investments may be profitable depending on the conditions, there are substantial differences in the initial investment of an order of magnitude (from US$80–176 per hectare for the pasture only intervention to over US$1,600 per hectare in the case of the model with tree cover). Clearly, the range of environmental benefits will also be different in the two systems. A critical question is how much of the model change would be financed by the Project and whether other sources of financing would be able to cover part of the investment. Beyond the question of whether the IRR is positive, additional resources will allow the Project to cover a greater area.

26. *Part 2.3: Carrying out sustainable forestry management subprojects.* This part will finance subprojects channeled by FMCN to qualifying organizations that provide on-site technical support, capacity building, and investment in sustainable forest management to local communities. As in other cases, the rationale for including this part in the Project is to reduce overall pressure on forests and promote compatible activities, thereby reducing deforestation and degradation. Several studies have identified that sustainably managed forests may be as effective as or more effective than protected areas in reducing deforestation at the regional level.[37] However, the possible packages of activities supported under Sustainable Forest Management may vary widely depending on the ecosystem and landowner capacities. As such, it is difficult to establish a unified cost per hectare. Some reference on this may be found in the economic analysis undertaken to assess the second phase of the Community Forestry Program (PROCYMAF). The average internal rate of return (IRR) for supported projects was 20.2% for forest products and 22.1% for non-timber products. These findings suggest that projects under this part will be economically viable. A more recent study by Guevara, Lara, and Estrada (see above) estimated various return rates for plantation forests and for management of standing forests. In both cases the rate of return was positive, with recovery periods of 1–10 years for sustainable forest management and 11 years for forest plantations. However, total project costs can vary significantly. For every 2,000 hectares, the study estimates a total cost of US$111,097, or US$55 per hectare, quite close to the average for protected areas. However, in areas with low or no tree cover, costs could be more similar to those of commercial plantations, reaching more than US$7,000 per hectare.

27. The forest management plans that Guevara, Lara, and Estrada analyzed are profitable over a period from 1 to 10 years (depending on the health of the forest) with a benefit-cost ratio of 0.87. Carbon capture amounts to 0.8 hectares of deforestation avoided for every 100 hectares under management. In carbon terms this means about 0.82 tonnes of reduced carbon per hectare under management (the states considered in the study were Campeche, Yucatán, Quintana Roo, Jalisco, and Oaxaca).

28. In this type of project, available support is unlikely to be sufficient for the scale of investment needed. The implication for the coastal watersheds project is that, although there are good economic prospects for these activities to be profitable, co-financing will be needed to avoid draining project resources in a limited amount of projects.

29. **Part 3: Enabling adaptive management by strengthening monitoring capacities.** This part aims to establish community monitoring systems in six watersheds and secure long-term monitoring. Monitoring would cover deforestation, ecosystem degradation, hydrological measurements, biodiversity, and carbon. As in other parts, the capacity to improve targeting and to follow projects throughout implementation is critical to enhance environmental benefits over multiple dimensions. Monitoring could also enable the credible implementation of PES payments in areas such as riparian areas, which are difficult to monitor for the national program. As an example of additional benefits of the monitoring system, the findings of Alix-Garcia, Shapiro, and Sims indicate that a landscape approach and enhanced monitoring could enable the management of leakage.

[37] Porter-Bolland, L., et al. 2011. "Community-Managed Forests and Forest Protected Areas: An Assessment of Their Conservation Effectiveness across the Tropics." *Forest Ecology and Management* doi:10.1016/j.foreco.2011.05.034.

30. **Part 4: Innovative mechanisms for inter-institutional collaboration and promoting social participation.** The proposed model of intervention requires targeted activities to enhance the capacities of involved institutions and activities to promote participatory networks and forums. Such actions contribute to enhancement of the Project's outcomes.

C. Conclusion

31. While a full cost-benefit analysis was not possible given the limited information available, particularly regarding the valuation of environmental services, it was possible to use information from various sources and similar regions to assess the cost-effectiveness and to establish under which conditions the Project is most likely to have positive net benefits. The Project appears to be cost-effective and there is evidence that benefits will outweigh the cost. However, these findings depend significantly on the actual performance in implementation, including targeting of the instruments, design of alternative sustainable projects, and enabling co-financing.

32. It is critical that the monitoring activities in the Project become a management tool from the beginning of the Project, minimizing the risk of poor investments at the local level.

33. It is suggested that monitoring be expanded to include social and economic variables that will enable a full economic assessment of the project during implementation. Limiting the monitoring to environmental aspects may hinder our ability to understand the causality of such changes. Relevant questions include assessing the overall effect of the intervention on poverty or the impact on economic development. Their gathering of frequent and methodologically solid household surveys can be used for this program. In this regard, eventual partnerships with CONEVAL could be useful.

Annex 7. Incremental Cost Analysis

MEXICO
Coastal Watershed Conservation in Response to Climate Change (P131709)

A. Baseline Scenario

1. If no action is taken, studies show a 35% additional loss of rain forests and 18% additional loss of temperate forests by 2050 in these two regions. Greenhouse gas emissions would increase, and biodiversity and ecosystem services would be lost.

2. Increasingly, natural ecosystems in these watersheds will yield to competing land uses: expansion of low-intensity cattle ranching, slash-and-burn agriculture, sugar cane cultivation, and hydroelectric dams, as well as coastal development. Negative externalities from these land use changes include carbon emissions, loss of biodiversity, erosion and other land degradation effects, and unsustainable livelihoods for communities within the watersheds. To reverse these trends, a multi-institutional effort as presented in this proposal is urgently required.

3. The Mexican Forest Fund and its subsidiary endowment Biodiversity Fund managed by CONAFOR, over the past eight years, with co-financing from local governments, NGOs, and private entities, has supported 1,008,858 hectares, harboring an estimated 28.5 million tonnes of accumulated carbon, with PES in the watersheds along the Gulf of Mexico and the Gulf of California. It is likely that such investment would continue, but in fewer highly biodiverse areas and uncoordinated with other initiatives within the watersheds. Additionally, without project support, CONAFOR would not be able to offer multiple-service strategies that have been shown to enhance the effectiveness of PES in maintaining forests and enhancing carbon stocks.

4. In the baseline scenario, investments occur without an integrated watershed vision and without knowledge on the environmental and social drivers of processes at the landscape level. Lack of synergies and antagonistic actions are often found due to uncoordinated activities funded by the different levels of government and private, academic, and social actors.

B. Global Environmental Benefits Generated by the Project

5. **Part 1.** The National Commission of Protected Areas (CONANP) will strengthen existing and create new Protected Areas, incorporating the Climate Change Strategy for Protected Areas. Protected Areas in the watersheds will step up from basic to effective management of this highly biodiverse ecosystem with global value for biodiversity and strong potential for enhancing carbon stocks.

6. **Part 2.** The National Forestry Commission (CONAFOR) will mitigate climate change through activities aimed at reducing deforestation and degradation beyond the usual level. Through well-targeted PES, forest remnants will be conserved and serve as connecting units within the watersheds. CONAFOR will match 1:1 the contributions by GEF to the Fund for Biodiversity. In addition, strategically situated projects will strengthen communities in sustainable forest management and in addressing land degradation. These projects will reduce pressure on forest fragments that will increasingly serve for biological connectivity within the watershed.

7. **Part 3.** INECC will join CONANP and CONAFOR to strengthen monitoring of land use change, biodiversity degradation, carbon stocks, and socioeconomic factors. Without GEF support, community monitoring would be limited to two watersheds and to the establishment of a baseline in forest degradation and deforestation. GEF support will allow integrating measures of three ecosystem services (biodiversity, carbon stocks, water quality and quantity) in six watersheds and relate these measures to land uses, livelihoods, and local capacities within each watershed. Combining community-based and national monitoring strategies will help ensure that the current piecemeal approach to monitoring is transformed into a comprehensive system that provides constant feedback for integrated watershed management, including early warning of instances where unsustainable uses are displaced to other areas, so that strategies can be put in place to avoid leakage.

8. **Part 4.** The support to the creation of social networks at the watershed level will feed the regional committees on the need to coordinate specific investments. This in turn will benefit from coordination at the national level through the Technical Project Committee. Effective social participation and plans based on solid data to manage the watersheds will support transparency and coordination of actions to improve the conservation of globally important biodiversity, mitigate climate change, and improve livelihoods. A learning community will ensure that lessons learned are shared between watersheds and documented, so that they can be incorporated in additional watersheds in the country. Coordination of four environmental organizations on the ground with a watershed perspective will effectively address challenges. Their united effort, which has been under way through the design phase, will set a precedent for aligning investments that could not occur without the proposed Project.

Results framework: see Annex 1

C. Discussion of the Reasoning for Incremental Benefits

9. The proposed Project will support an innovative, multi-institutional, collaborative framework to achieve results across four GEF focal areas (Biodiversity, Climate Change Mitigation, Sustainable Forest Management, and Land Degradation). Strengthened management of new (2) and existing (7) Protected Areas along six key watersheds in the Gulf of Mexico will enhance biodiversity protection. To address Sustainable Forest Management, the Project will focus on providing PES in areas threatened by high deforestation and biodiversity loss beyond Protected Areas. These activities will be complemented by capacity building and support to local communities to improve management of degraded agro-ecosystems to reduce pressures on natural resources, consistent with the goals of the Land Degradation focal area. Support to communities will include implementation of IWAPs, including incorporation of agro-forestry practices, and soil conservation in degraded lands aimed at sustained livelihoods. For Climate Change Mitigation, the Project will assist stakeholders in each watershed to reduce pressure on forest resources through improved forest management, including a reduction in areas affected by fire. Activities under Land Degradation and Sustainable Forest Management will contribute to further mitigate carbon emissions in the selected watersheds. Carbon monitoring throughout the Project will ensure that mitigation targets are met at the local level. Consistent with the *GEF-5 Focal Area Strategies* document, synergies of Climate Change Mitigation with Sustainable Forest Management, Biodiversity, and Land Degradation are explored to generate multiple global environmental benefits, as well as social and economic benefits.

Table 7.1 Country-Level Programs Included in the Baseline Situation (US$ million)

Program	Description	Amount
CONANP fiscal support to protected areas	Existing fiscal support to the protected areas in the selected watersheds (personnel and basic operating costs)	19.231
CONANP central support to monitoring	Personnel in central offices supporting monitoring in the protected areas in the selected watersheds	0.159
CONANP Temporary Employment Program (PET) and Conservation for Development Program (PROCODES)	These programs support social participation of communities living in the protected areas in the selected watersheds	0.050
CONANP-KfW (German government cooperation)	Includes support for infrastructure and equipment, as well as US$2.15 million in endowment funds, for two of the protected areas and one of the watersheds included in the project	15.956
CONANP-GIZ (German government)	Support for climate change adaptation along one of the watersheds in the Gulf of Mexico and to all SINAP	5.265
CONANP-GIZ (German government)	Technical cooperation for governance for protected areas included in the project	9.215
SIL loan by the World Bank to CONAFOR	Support of PES in the project watersheds	125.000
Jalisco coastal watersheds by CONAFOR	Development of a forest investment model to increase connectivity and support key biodiversity	18.750
INECC fiscal budget	Operative and personnel costs for monitoring watersheds	3.503
FMCN for the Gulf of California	Includes projects supported, learning community, as well as funds channeled to fundraising campaign in the Gulf of California	2.690
Betty and Gordon Moore Foundation grant to FMCN	Developing capacities in monitoring forests in Mexico project to establish deforestation and degradation protocols and baseline data	2.000
Total		201.819

Table 7.2 Incremental Cost Matrix (US$ million)

Part/ other costs	Category	Amount (US$ million)	Domestic benefits	Global benefits
Creation and consolidation of Protected Areas	Baseline	45.421		Maintain current levels of management support in protected areas with biodiversity of global importance in the Gulf of Mexico and the Gulf of California with a management effectiveness of 30%.
	Alternative	66.068	Additional fundraising capacity for FMCN will generate additional benefits over the long term for Protected Areas along the Gulf of Mexico and the Gulf of California. Strengthened public-private association that can attract more funds at the national level.	Consolidation and enhanced management, including incorporation of Climate Change Strategy for Protected Areas in 9 existing and 2 new protected areas (1.1 million ha) along the Gulf of Mexico, resulting in threefold management effectiveness, reduced deforestation and degradation in protected areas with global biodiversity along the Gulf of Mexico and the Gulf of California.
	Increment	20.647		
Promoting sustainability within watersheds	Baseline	125.000		Continuation of climate change mitigating activities including PES in the watersheds along the Gulf of Mexico and the Gulf of California (1 million ha conserved between 2007 and 2011).
	Alternative	157.224	Improved investment in PES by adding the subprojects in agro-ecosystems and sustainable forest management that will reduce surrounding pressure for land transformation.	CONAFOR 1:1 match to the Biodiversity Fund will conserve sites with biodiversity of global importance. Mitigation is expected to reach 4.015 million tonnes CO_2 over project duration and 16.060 million tonnes CO_2 over 20 years.
	Increment	32.224		
Enabling adaptive management by strengthening monitoring capacities	Baseline	7.919	Isolated monitoring initiatives that will develop methodologies in watershed management, deforestation, and degradation.	
	Alternative	14.019	Monitoring of land use change, water quality, carbon,	Long-term monitoring of 6 watersheds (1.8 million ha) through dynamic models that allows for

Part/ other costs	Category	Amount (US$ million)	Domestic benefits	Global benefits
			biodiversity, and socioeconomic data in project watersheds provides a comprehensive system that allows for improved decision making.	replication in at least 5 additional watersheds (200,000 ha) under improved management by incorporating lessons derived from the project.
	Increment	6.100		
Innovative mechanisms for inter-institutional collaboration and promoting participation	Baseline	14.356	Social participation mechanism strengthened by each of the participating institutions.	
	Alternative	19.050	Landscape focus on the watershed allows for coordination of initiatives on the ground by determining problems and solutions, and identifying institutions that can provide these solutions.	Synergy among Conventions on Biological Diversity, Climate Change, and Desertification, efficiencies enabling further global benefits.
	Increment	4.694		
Project management	Baseline	9.123		
	Alternative	11.436		Long-term financial management of the endowment funds that will ensure the financial sustainability of the project.
	Increment	2.313		
TOTAL	Baseline	201.819		
	Alternative	267.797		
	Increment	65.978		
Financing plan for increment	GEF	39.518		
	Endowment match by CONAFOR and FMCN	26.460		

Annex 8. Stages of Climate Change Engagement in Mexico

MEXICO
Coastal Watershed Conservation in Response to Climate Change (P131709)

Stages of Climate Change Engagement in Mexico

	Foundations (Before 1999)	Early Support [1999–2007)	Strengthening [2007–2009]	Consolidation [2010–]
Knowledge Services		• LAC Region Landfill Gas Initiative (FY06) • Evaluation of Energy Efficiency Initiatives (FY06) • Economic Assessment of Policy Interventions in the Water Sector (FY06)	• **Carbon Finance Assistance Program for Mexico (FY09)** • **Low-Carbon Study (FY09)** • Mass Urban Transport-Federal Program (FY09)	• Social Impacts of Climate Change (FY11/12) • Othon P. Blanco Sustainable Development Strategy (FY11/12) • Climate Change Public Expenditure Review (FY12) • **Advisory Services under the Program on Forests (PROFOR) (FY11-on**) • SEP Adaptation of Water Sector to CC (FY 12) • Programmatic Approach for Environmental and Climate Change Policies (FY 14) • **Forest Carbon Partnership Facility (FY14)**
Financial Services	• Solid Waste Management Pilot Project (FY86) • Urban Transport Project (FY87) • **Community Forestry (FY97)**	• Renewable Energy for Agriculture Project (FY99) • Introduction to Climate-friendly Measures in Transport (FY03) • **Mexico Environmental Services Project (FY06)** • **Programmatic Environment DPL I and II (FY06)**	• Climate Change DPL (FY08) • **Environmental Sustainability DPL (**FY09**)** • **Sustainable Rural Development Grant** (FY09)	• Urban Transport Transformation Program (FY10) • Green Growth DPL (FY10) • Adaptation to Climate Change in the Water Sector DPL (FY11) • Low-carbon DPL (FY11) • **Adaptation to Climate Change Impacts in the Coastal Wetlands (FY11-on**) • Social Resilience to CC DPL (FY12) • Hydrometeorological Service SIL (FY12) • Ecosystems Adaptation DPL (FY13) • **Forest and Climate change SIL and FIP (FY13-on)** \ • **Coastal Watershed Conservation in the Context of Climate Change (FY14)**

[a] The figure highlights several significant examples and does not aim to exhaustively illustrate all climate change activities.

Convening and Coordination Services		• Consolidation & Strengthening of the Mexican Office for Greenhouse Gas Mitigation (FY99)	• Preparation of the CTF Investment Plan (FY09)	• Energy-efficiency conference (FY10) • Water sector events in the lead-up to COP16 (FY10) • High level facilitation activities related to COP 16 (FY10 • **Agriculture and forestry sector events during COP16 (FY10)**

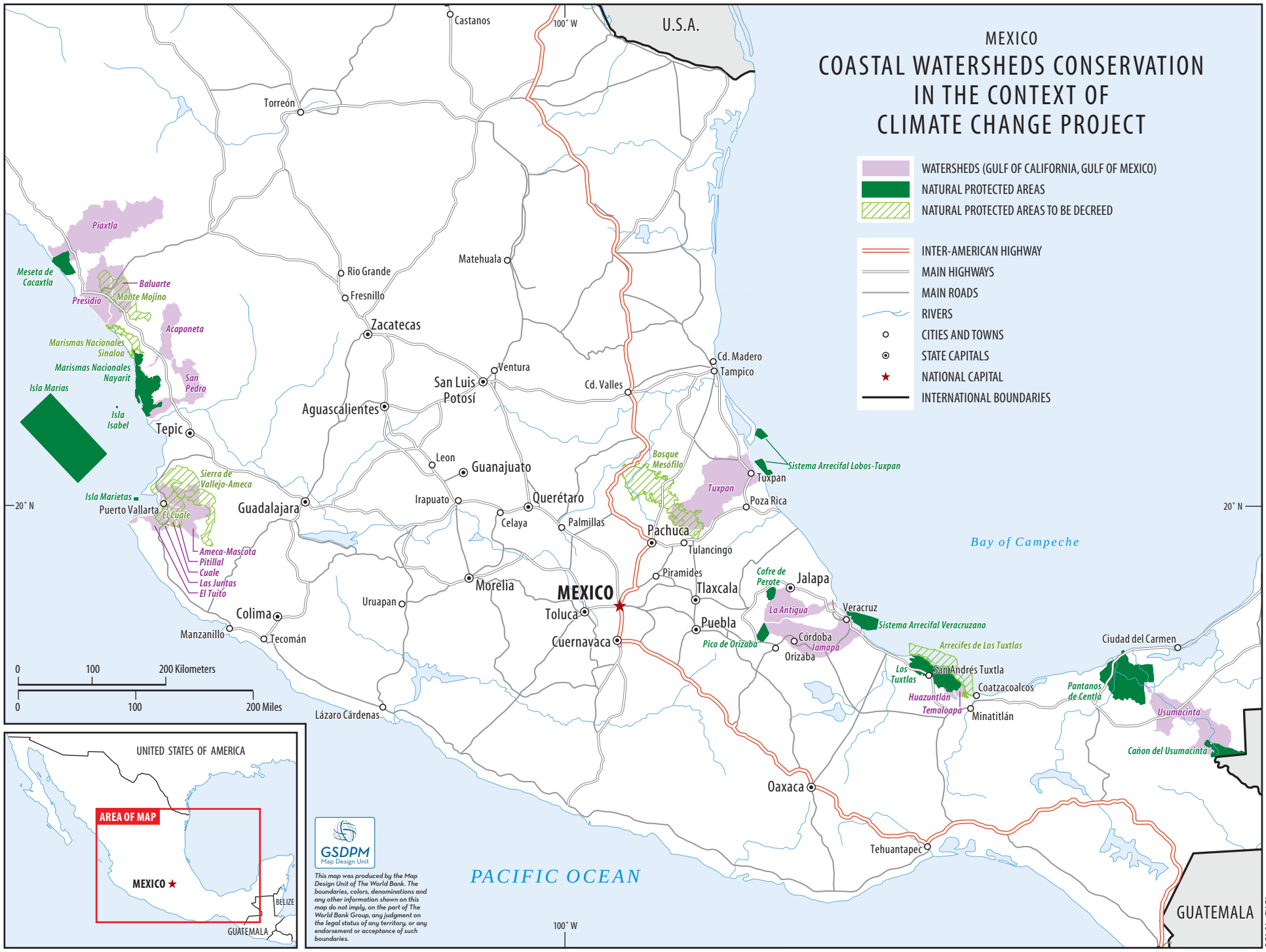
Annex 9. List and Map of Selected Watersheds

Mexico
Coastal Watershed Conservation in Response to Climate Change (P131709)

Gulf of Mexico region				
Watershed (State)	*Subwatershed*	*Area (ha)*	*Protected area*	*Area (ha)*
1. Tuxpan (Veracruz)		671,790	Bosque Mesófilo[1]	340,980
			Sistema Arrecifal Lobos-Tuxpan	30,571
2. Antigua (Veracruz)		219,600	Cofre de Perote	11,700
3. Jamapa (Veracruz)		406,184	Pico de Orizaba	19,750
			Sistema Arrecifal Veracruzano	52,239
4. Coatzacolacos (Veracruz)	Río Huazuntlán	31,063	Los Tuxtlas	155,122
5. Río Temoloapa (Veracruz)		25,161	Los Tuxtlas	
			Arrecifes de Los Tuxtlas[1]	175,389
6. Grijalva-Usumacinta (Tabasco)	Río Usumacinta	488,378	Pantanos de Centla	302,707
			Cañón de Usumacinta	46,128
Total area		**1,842,176**		**1,134,586**

Gulf of California region				
Watershed (State)	*Subwatershed*	*Area*	*Protected areas*	*Area*
1. Río Piaxtla (Sinaloa)		696,420	Meseta de Cacaxtla	50,862
2. Río Presidio (Sinaloa)		289,361	Monte Mojino[1]	203,467
3. Río Baluarte (Sinaloa)		151,946	Monte Mojino[1]	
			Marismas Nacionales Sinaloa[1]	
4. Río Acaponeta (Nayarit)		161,884	Marismas Nacionales Nayarit	133,854
			Islas Marías	641,542
			Isla Isabel	194
5. Río San Pedro (Nayarit)		249,476	Marismas Nacionales Nayarit	
			Islas Marías	
6. Río Cuale (Nayarit y Jalisco)		26,674	El Cuale[1]	121,651
			Islas Marietas	1,383
			Islas Marías	
7. Río Ameca (Jalisco)		272,416	El Cuale[1]	
			Sierra de Vallejo-Ameca[1]	277,448
8. Río Los Juntas (Jalisco)		32,773	El Cuale[1]	
			Islas Marietas	
			Islas Marías	
9. Río Pitillal (Jalisco)		43,207	El Cuale[1]	
			Islas Marías	
			Islas Marietas	
10. Río El Tuito (Jalisco)		44,492	El Cuale[1]	
			Islas Marietas	
			Islas Marías	
Total		**1,968,649**		**1,430,401**

[1]To be decreed


MEXICO
COASTAL WATERSHEDS CONSERVATION IN THE CONTEXT OF CLIMATE CHANGE PROJECT
WATERSHEDS (GULF OF CALIFORNIA, GULF OF MEXICO)
NATURAL PROTECTED AREAS
NATURAL PROTECTED AREAS TO BE DECREED
INTER-AMERICAN HIGHWAY
MAIN HIGHWAYS
MAIN ROADS
RIVERS
CITIES AND TOWNS
STATE CAPITALS
NATIONAL CAPITAL
INTERNATIONAL BOUNDARIES
U.S.A.
Castanos
Torreón
Matehuala
Rio Grande
Fresnillo
Zacatecas
Ventura
San Luis Potosí
Cd. Valles
Cd. Madero
Tampico
Aguascalientes
Tepic
Leon
Guanajuato
Irapuato
Querétaro
Celaya
Palmillas
Guadalajara
Puerto Vallarta
Tuxpan
Poza Rica
Pachuca
Tulancingo
Piramides
Tlaxcala
Jalapa
Veracruz
Puebla
Córdoba
Orizaba
Morelia
MEXICO
Toluca
Cuernavaca
Uruapan
Colima
Manzanillo
Tecomán
Lázaro Cárdenas
Oaxaca
Tehuantepec
Coatzacoalcos
Minatitlán
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Ciudad del Carmen
Bay of Campeche
PACIFIC OCEAN
GUATEMALA
Piaxtla
Meseta de Cacaxtla
Baluarte
Presidio
Monte Mojino
Acaponeta
Marismas Nacionales Sinaloa
Marismas Nacionales Nayarit
San Pedro
Isla Marías
Isla Isabel
Sierra de Vallejo-Ameca
Isla Marietas
El Cuale
Ameca-Mascota
Pitillal
Cuale
Las Juntas
El Tuito
Bosque Mesófilo
Tuxpan
Sistema Arrecifal Lobos-Tuxpan
Cofre de Perote
La Antigua
Pico de Orizaba
Jamapa
Sistema Arrecifal Veracruzano
Arrecifes de Los Tuxtlas
Los Tuxtlas
Huazuntlán
Temoloapa
Pantanos de Centla
Usumacinta
Cañon del Usumacinta
100° W
20° N
0 100 200 Kilometers
0 100 200 Miles
UNITED STATES OF AMERICA
AREA OF MAP
MEXICO
BELIZE
GUATEMALA
GSDPM
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AUGUST 2013
IBRD 40156