Document of
The World Bank

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Report No: 88067-CO

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

IN THE AMOUNT US$10.40 MILLION

TO THE

PATRIMONIO NATURAL FUND FOR BIODIVERSITY AND PROTECTED AREAS

FOR THE

FOREST CONSERVATION AND SUSTAINABILITY IN THE HEART OF THE COLOMBIAN AMAZON PROJECT

17 November 2014

Environment and Natural Resources Global Practice
Latin America and the Caribbean Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective October 9, 2014)

Currency Unit	=	Colombian Peso (COP$)
COP$ 2,053.98	=	US$1.00
US$ 0.00049	=	COP$ 1.00

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AC	Advisory Committee
AATIs	Indigenous Peoples Traditional Authority Associations *(Asociación de Autoridades Tradicionales Indígenas)*
ANH	National Hydrocarbons Agency *Asociación Nacional de Hidrocarburos*
AOP(s)	Annual Operating Plan(s)
BCR	Benefit-Cost Ratio
BD	Biodiversity
CCM	Climate Change Mitigation
CDA	Corporation for the Sustainable Development of the Amazon Northeast *Corporación para el Desarrollo Sostenible del Nororiente Amazónico*
CDS	Regional Corporations for Sustainable Development *Corporaciones Regionales para el Desarrollo Sostenible*
Corpoamazonia	Corporation for the Sustainable Development of the Southern Amazon *Corporación para el Desarrollo Sostenible del Sur de la Amazonia*
CO_2	Carbon Dioxide
CSO	Civil Society Organization
DA	Designated Account
EC	Executive Committee
ENREDD+	National Strategy for Reducing Emissions from Deforestation and Forest Degradation
ESMF	Environmental and Social Management Framework
FCPF	Forest Carbon Partnership Facility
FEDEGAN	Colombian Cattle Ranching Association *Federación de Ganaderos de Colombia*
FIP	Forest Investment Program
FMIS	Financial Management Monitoring System
FARC	Revolutionary Armed Forces of Colombia *Fuerzas Armadas Revolucionarias de Colombia*
FM	Financial Management

GEO	Global Environmental Objective
GEF	Global Environmental Facility
GHG	Greenhouse gas
GoC	Government of Colombia
ha/year	per hectare per year
IDEAM	Institute of Hydrology, Meteorology and Environmental Studies *Instituto de Hidrología, Metereología y Estudios Ambientales de Colombia*
IFRs	Interim Financial Reports
INCODER	Colombian Institute of Rural Development *Instituto Colombiano de Desarrollo Rural*
INVIAS	National Institute of Roads *Instituto Nacional de Vías*
IPP(s)	Indigenous Peoples Plan(s)
IPPF	Indigenous Peoples Planning Framework
ISP	Implementation Support Plan
LULUCF	Land Use, Land-use change and Forestry
m	Meter(s)
MADS	Ministry of Environment and Sustainable Development *Ministerio de Ambiente y Desarrollo Sostenible*
MADR	Ministry of Agriculture and Rural Development *Ministerio de Agricultura y Desarrollo Rural*
M&E	Monitoring & Evaluation
MVR	Measuring, Reporting and Verification
NDP	National Development Plan
NGO	Non-Governmental Organization
NPV	Net Present Value
NSFCM	National System for Forest and Carbon Monitoring
OM	Operations Manual
OP/BP	Operational Policy/Bank Procedure
PA(s)	Protected Area(s)
PCU	Project Coordination Unit
PDO	Project Development Objective
PES	Payment for Ecosystem Services
PNF	Patrimonio Natural Fund for Biodiversity and Protected Areas *(Patrimonio Natural Fondo para la Biodiversidad y Areas Protegidas)*
PNN	Natural National Parks Unit *Unidad de Parques Nacionales Naturales*
PNNSCH	Natural Chiribiquete Mountain Ridge National Park *(Parque Nacional Natural Serranía de Chiribiquete)*
R-PP	Readiness Preparation Proposal
REDD	Reducing Emissions from Deforestation and Forest Degradation
SFM	Sustainable Forest Management
SINCHI	Amazon Institute for Scientific Research *(Instituto Amazónico de Investigaciones Científicas)*

SINAP	Protected Areas National System *(Sistema Nacional de Areas Protegidas)*
tC/ha	Tons of carbon per hectare
tCO_2e	Tons of Equivalent carbon dioxide
TOR	Terms of Reference
TT	Tracking Tools
UNFCCC	United Nations Framework Convention on Climate Change

Regional Vice President:	Jorge Familiar
Country Director:	Gerardo Corrochano
Practice Director:	Paula Caballero
Practice Manager:	Emilia Battaglini (acting)
Task Team Leader:	Adriana Moreira and Marcelo Acerbi

COLOMBIA

Forest Conservation and Sustainability in the Heart of the Colombian Amazon Project (P144271)

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PROJECT APPRAISAL DOCUMENT

LATIN AMERICA AND CARIBBEAN

Environment and Natural Resources Global Practice

Report No.: PAD763

Basic Information			
Project ID P144271	EA Category B - Partial Assessment	Team Leader Adriana Goncalves Moreira	
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [ ] Financial Intermediaries [ ] Series of Projects [ ]		
Project Implementation Start Date 02-Mar-2015	Project Implementation End Date 30-Jun-2019		
Expected Effectiveness Date 02-Mar-2015	Expected Closing Date 30-Jun-2019		
Joint IFC No			GEF Focal Area Biodiversity
Practice Manager/Manager Emilia Battaglini	Senior Global Practice Director Paula Caballero	Country Director Gerardo M. Corrochano	Regional Vice President Jorge Familiar

Borrower: Patrimonio Natural Fund for Biodiversity and Protected Areas			
Responsible Agency: Ministry of Environment and Sustainable Development			
Contact:	Laura Bermudez	Title:	Punto Focal Operativo GEF-OAI
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Responsible Agency: Parques Nacionales Naturales			
Contact:	Diana Castellanos	Title:	Directora Territorial Amazonia - Unidad de Parques Nacionale
Telephone No.:	57-1-3532400	Email:	diana.castellanos@parquesnacionales.gov.co
Responsible Agency: IDEAM			
Contact:	Paola Bernal	Title:	Asesora de Cooperación Internacional
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Responsible Agency: Instituto SINCHI de Investigación Amazónica			
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Project Financing Data(in USD Million)

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

Total Project Cost:	45.85	Total Bank Financing:	0.00
Financing Gap:	0.00		

Financing Source	**Amount**
Borrower	35.45
Global Environment Facility (GEF)	10.40
Total	45.85

Expected Disbursements (in USD Million)

Fiscal Year	2015	2016	2017	2018	2019	0000	0000	0000	0000	0000
Annual	0.40	2.00	4.00	3.00	1.00	0.00	0.00	0.00	0.00	0.00
Cumulative	0.40	2.40	6.40	9.40	10.40	0.00	0.00	0.00	0.00	0.00

Institutional Data

Practice Area / Cross Cutting Solution Area

Environment & Natural Resources

Cross Cutting Areas

[X]	Climate Change
[ ]	Fragile, Conflict & Violence
[ ]	Gender
[ ]	Jobs
[ ]	Public Private Partnership

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	74	50	50
Public Administration, Law, and Justice	Central government administration	13		
Public Administration, Law, and Justice	Sub-national government	13		

	administration			
Total		100		

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

Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Environment and natural resources management	Biodiversity	54
Environment and natural resources management	Environmental policies and institutions	23
Social dev/gender/inclusion	Participation and civic engagement	14
Environment and natural resources management	Land administration and management	9
Total		100

Proposed Global Environmental Objective(s)

The project's global environmental objective (GEO) is the same as the project's development objective (PDO), namely, to improve governance and promote sustainable land use activities in order to reduce deforestation and conserve biodiversity in the Project area.

Components

Component Name	**Cost (USD Millions)**
Component 1 - Protected Areas Management and Financial Sustainability	1.49
Component 2 - Forest Governance, Management and Monitoring	2.89
Component 3 - Sectoral Programs for Sustainable Landscape Management	4.78
Component 4 - Project Coordination, Management, Monitoring and Evaluation (M&E)	1.23

Compliance

Policy

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

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

Legal Covenants

Name	Recurrent	Due Date	Frequency

Description of Covenant

Conditions

Source Of Fund	Name	Type
GEFU	Effectiveness Conditions in Section. 5.01 of Art. 5	Effectiveness

Description of Condition

(a) If the World Bank so requests, the condition of the Recipient, as represented or warranted to the World Bank at the date of this Agreement, has undergone no material adverse change after such date.
(b) The Inter-institutional Agreement has been executed on behalf of the Recipient and each of the Partner Entities, respectively

Source Of Fund	Name	Type
GEFU	Disbursement, in Section B.1(b) of Schedule 2	Disbursement

Description of Condition

For eligible expenditures under Category 2 namely "Goods, non-consulting services, consultants' services, Training and Operating Costs under Part 3.C. of the Project, no withdrawal shall be made until the Sub-Grant Agreement, in form and substance acceptable to the World Bank, has been executed by the Recipient and SINCHI.

Team Composition

Bank Staff

Name	Title	Specialization	Unit

Marcelo Hector Acerbi	Senior Environmental Specialist	Co-TTL	GENDR
Kristyna Bishop	Senior Social Development Specialist	Social Safeguards Specialist	GSURR
Sofia De Abreu Ferreira	Counsel	Counsel	LEGEN
Sandra Ximena Enciso Gaitan	E T Consultant	E T Consultant	GGODR
Adriana Goncalves Moreira	Senior Environmental Specialist	Team Lead	GENDR
Dmitri Gourfinkel	Financial Management Specialist	Financial Management Specialist	GGODR
Sofia Keller Neiva	E T Temporary	E T Temporary	LCC5C
Klas Sander	Senior Environmental Economist	Senior Environmental Economist	GENDR
Daniel M. Sellen	Program Leader	Sector Leader	LCC1C
Guadalupe Romero Silva	Consultant	Consultant	GENDR
Carla Patricia Vale	Consultant	Consultant	GENDR

Non Bank Staff

Name	Title	City

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments
Colombia	Guaviare	Departamento del Guaviare	X		
Colombia	Caqueta	Departamento del Caqueta	X		
Colombia	Amazonas	Departamento del Amazonas	X		

I. STRATEGIC CONTEXT

A. Country Context

1. Over the last decade, Colombia has experienced strong economic performance which has been accompanied by poverty reduction and shared prosperity. Using the World Bank's "one dollar twenty-five a day" poverty line, the incidence of extreme poverty declined from 8.8 to 5.5 percent of the population between 2008 and 2011. Poverty reduction has been accompanied by progress in shared prosperity, with the income growth of the bottom 40 percent of the population reaching 7.9 percent over the period 2008-2012 as compared to 5.2 percent for the total population. More than 60 percent of the poverty reduction over the last decade is explained by income growth and labor market participation. The unemployment rate followed a downward path (from 15.6 percent in 2002 to 9.6 percent in 2013) and the overall participation rate increased (from 62.3 to 64.2 percent in the same period), but Colombia's labor market outcomes are still much worse than the average for Latin American countries (6.5 percent unemployment and 71 percent participation rate).

2. Colombia is one of the five mega-diverse nations in the world. It ranks third in terms of biodiversity and is home to almost 15 percent of all known terrestrial species, including the largest number of species of birds and amphibians in the world. Protected Areas (PAs) and indigenous reserves (*resguardos*) represent 34 percent of the national territory. The Colombian Amazon represents 6.5 percent of the biome's rainforest and 42 percent of the country's land mass. Over 1.2 million people live in this region; 12.4 percent are indigenous peoples and 2 percent are Afro descendants[1].

3. The consolidation of Colombia's PAs is considered a priority in a number of environmental policies in Colombia[2]. For several decades, Colombia has been developing an extensive system of PAs (18 national parks and natural reserves encompassing 7.9 million hectares) and indigenous reserves in the Amazon (189 reserves covering 25.6 million hectares). The passage of Forest Law Number 2 in 1959, declared the vast majority of the Colombian Amazon forest an "Amazon Forest Reserve Area", which covers 37.8 million hectares of territory in ten departments.[3] This, in turn, granted a basic degree of protection for this invaluable, biodiversity-rich area. At the United Nations Climate Change Summit in Copenhagen in 2009 and in Cancun, in 2010, Colombia indicated its commitment to reduce deforestation in the Amazon to net zero by 2020, provided that international financing and support are available. In addition, the updated National Development Plan 2010-2014 seeks to integrate environmental sustainability as a key aspect of the country's development strategy.

4. In October 2013, the Government of Colombia (GoC), through the Ministry of Environment and Sustainable Development (MADS), presented its "Low Deforestation Development Vision

[1]GoC, Ministry of Environment and Sustainable Development, 2014.

[2] The 1996 Colombian National Policy for Biodiversity set the stage for conservation, knowledge, and sustainable use of biodiversity through *in-situ* conservations. In 1997, the GoC adopted the Policy for the Creation and Consolidation of a Protected Areas System.

[3] The ten departments are: *Amazonas, Putumayo, Nariño, Cauca, Caquetá, Guainia, Guaviare, Huila, Meta and Vaupés*.

for the Colombian Amazon" (i.e., "the Amazonia Vision"), in which it articulated its commitment to build "a desired partnership model between Colombia and international parties, addressing Colombia's overall vision for the establishment and scaling up of low-carbon development models in all of its forested areas."[4] The starting point for this venture is the PA in Southern Colombia, which is over 2.7 million hectares and is known as *Parque Nacional Natural Serranía de Chiribiquete* (PNNSCH)[5] and its direct intervention area ("the Project area," see Annex 2 and 7). Altogether, the Project area encompasses a little over nine million hectares. In its vision, the GoC recognizes that the Amazon, "cannot simply be a large protected area, but ought also to provide additional alternatives for development and integration into the global economy for its population, as well as wealth and prosperity for the country at large."[6] Through the implementation of this Project, with support from the GEF and other international donors, Colombia is positioning itself to fulfill that vision. The Amazonia Vision calls for the establishment of a "results-based payment mechanism" to which international, national and private partners can contribute by rewarding the protection of the climate change mitigation (CCM) services provided by the Colombian Amazon forests."[7]

B. Sectoral and Institutional Context

5. Between 1990 and 2010, Colombia lost 6.2 million hectares of forest, equivalent to a deforestation rate of 310,349 hectares/year or about 0.5 percent annually.[8] Although this is a much lower rate than that observed in adjacent countries, it still generates many tons of CO_2 emissions. Preliminary projections by the Colombian Institute of Hydrology, Meteorology and Environmental Studies (IDEAM) indicate that, if current trends continue, by 2030 an additional 13,000 km² of rainforest will be lost in the Colombian Amazon. This may lead to losing the ecological connectivity between the Andean and Amazonian forests in the country completely.

6. Deforestation in Colombia has several causes. The main driver is extensive cattle ranching, followed by peasant colonization, including those fleeing from conflict areas. Hotspots of deforestation, like those found in Guaviare and Caqueta departments near the PNNSCH, are places where the Government has historically lacked adequate presence.[9] This situation has limited the opportunity to promote sustainable land-use management practices. Other drivers of deforestation include clearing of forests for growing illicit crops, mining, timber extraction for sale or personal use, and wildfires (see Annex 2, Section C. Drivers and Monitoring of Deforestation). In addition, the potential expansion of oil and mineral exploitation and

[4] MADS, 2013. *Low Deforestation Development Vision for the Colombian Amazon*.
[5] The Park was created in 1989 and it originally covered about 1.2 million hectares of Amazon territory. In September 2013, the GoC expanded it to cover 2.7 million hectares.
[6] MADS, 2013. *Op. cit.* p. iii.
[7] MADS, 2013. *Op cit.*, p. iv.
[8] Colombia National Programme Submission Form – Colombia UN-REDD Programme Tenth Policy Board Meetings 25-28 June 2013 Lombok, Indonesia; (UNREDD/PB10/2013/V/5a). The average annual deforestation rate decreased from 238,273 hectares in the period from 2005 to 2010, to 147,946 hectares in the period from 2011 to 2012. About 22,375 km² of Amazon rainforest were lost between 1990 and 2010 in Colombia. Between 2005 and 2010, 12.75 million tons of CO_2 per year were generated due to deforestation.
[9] Despite recent important advances in the peace process, the Revolutionary Armed Forces of Colombia (FARC) are still present in a few areas by the forest frontier. Historically, this occupation has contributed to deforestation through extensive land clearings for cultivation of illicit crops.

construction of road projects in the Amazon (see Annex 2, table 2.2) will require the development of infrastructure, which is known to lead to rapid population growth and increasingly negative pressures on the forest. The situation is complicated by lack of land-use planning and low land-tenure security in the Amazon Forest Reserve. In the coming years, Colombia must ensure proper land use and zoning and restore degraded areas by adopting an Integrated Landscape Management approach[10] that integrates sustainable development plans with conservation goals.

7. The GoC and the World Bank have a long-standing and deep engagement on biodiversity and forests. The World Bank's Programmatic Knowledge Services (PKS) for Colombia Environment, Natural Resources Management and Extractive Industries (P143933) supports the GoC's agenda on Environment, Natural Resources Management, and Extractive Industries, laying out the ongoing and future activities by the Bank. In addition, the GEF has financed two biodiversity projects in recent years that are of relevance to this operation: (a) the National Protected Areas Conservation Fund Project (P091932), approved by the Board of Directors in March 2006 with Additional Financing (AF – P112106) approved in 2011, and (b) Colombia - Mainstreaming Sustainable Cattle Ranching (P104687), whose development objective is to promote the adoption of environment-friendly silvopastoral production systems for cattle ranching.Higher Level Objectives to which the Project Contributes

8. The proposed Project is consistent with the World Bank Group Country Partnership Strategy (CPS) 2012-2016 for Colombia (Report 60620-CO) discussed by the Executive Directors on July 21, 2011, which supports the country's development goals as expressed in the National Development Plan (NDP) 2010-2014. The proposed Project is also consistent with the Country Partnership Strategy Progress Report for Colombia (Report 83966-CO) for the period FY12-FY16, dated July 16, 2014.

9. This proposed Project is designed to improve governance and the sustainable management of over nine million hectares in the Heart of the Colombian Amazon. This national commitment is reflected in the country's NDP 2010-2014. The Plan highlights the need to focus on five areas as a way to encourage sustainable development in agriculture, mining, infrastructure, housing and innovation. Although the first four areas put pressure on natural resources and deforestation, the Plan recognizes the urgent need to carry out a thorough analysis of the implications that developing these five engines of growth will have on both sectoral development trends and land-use and management decisions.

10. The GoC is also engaged in fighting climate change, as evidenced by the existence of four mutually reinforcing strategies: (a) Strategy for Low-Carbon Development; (b) National Strategy for Reducing Emissions related to Deforestation and Forest Degradation (ENREDD+);

[10] Integrated Landscape Management (ILM) provides a context to spatially target and harmonize investments so that they can efficiently yield public goods and private financial returns while mitigating investment risks. A pressing challenge is to link agriculture with the other inter-related needs from the landscape, including provision of ecosystem services, protection of biodiversity, local livelihoods, and human health and well-being. ILM describes long-term collaboration among different groups of land managers and stakeholders to achieve the multiple objectives required from the landscape (Shames, Hill Clarvis, and Kissinger. 2014. *Financing Strategies for Integrated Landscape Investment: Synthesis Report.*)

(c) National Climate Change Adaptation Plan; and (d) Financial Protection Strategy against Disasters. These strategies are also part of the Government's NDP 2010-2014. Colombia is one of 53 partner countries that are participating in the UN-REDD Program that supports the development and implementation of such national strategies. The ENREDD+ for Colombia is in advanced stages of development: the Readiness Proposal Preparation (R-PP) for the National Strategy was carried out by MADS between June 2010 and April 2013. A key strategic partner for the UN-REDD Program, the Forest Carbon Partnership (FCPF), will provide a US$3.6 million grant to help fund some of the activities related to institutional strengthening, Strategic Environmental and Social Assessment to further engage stakeholders, and the preparation of a grievance mechanism for REDD+ activities.[11]

11. In December 2010, Colombia submitted its Second National Communication to UNFCCC, signaling its commitment to engage in CCM actions. Although Colombia plays only a marginal part in GHG emissions (about 0.37 percent of global totals in 2004), it has developed and implemented a number of policies that promote sustainable development associated with low emissions of such gases, as the result of an evolution of mitigation on a national scale. With regard to forest governance, the country is implementing the National Forest Strategy for Prevention, Monitoring and Law Enforcement. According to the NDP 2010-2014, there is also a plan to develop a strategy of social responsibility in the fight against forest fires, which is relevant for the deforestation frontier.[12]

12. The significance of Amazon forests has been widely documented in the literature: it is the largest carbon stock in the world and acts as a powerful climate regulator; it is the Earth's greatest biological reservoir, home to millions of endemic species, an irreplaceable provider of ecological services, and a source of livelihood/shelter for indigenous peoples. Its preservation is of the utmost global and regional importance. In the Amazon, poverty rates tend to be higher and social development indicators are often lower than in the rest of the country. According to the 2005 Census, there were 28,754 households with a population of 130,811 inhabitants in the six municipalities located in the Project area. Of these, 92 percent live in rural areas. The multidimensional poverty index is 92.89 percent in rural areas and 72.75 percent in urban areas, which is significantly higher than department-wide rates and almost twice as high as the average national index.[13] As a result of their heavy dependence on natural resources, vulnerable populations in this region include small farmers (*campesinos*) and indigenous peoples living in the Project area. It is expected that 200 *campesino* families will benefit directly from the implementation of agroforestry productive arrangements and knowledge transfer on forest

[11] Overall, the development and implementation of such activities is estimated to cost US$27.51 million.

[12] See NDP 2010 – 2014, Chapter VI: "Environmental Sustainability and Risk Prevention." Available online at https://www.dnp.gov.co/LinkClick.aspx?fileticket=pWe6xuYO5b0%3d&tabid=1238.

[13] Colombia is one of the pioneering countries in the use of multidimensional poverty measurement for poverty reduction. This method uses the household as unit of analysis and assesses aspects of poverty in five dimensions using 15 indicators, where each dimension has the same weight (20%), and each indicator has the same weight within each dimension. The dimensions are: education, childhood and youth conditions, labor, health, public utilities, and housing conditions. (OPHI, *Measuring Multidimensional Poverty: Insights from around the world*. University of Oxford. Available online at http://www.ophi.org.uk/wp-content/uploads/Measuring-Multidimensional-Poverty-Insights-from-Around-the-World.pdf?7ff332&7ff332). If measured by the Unsatisfied Basic Needs Index, the average poverty rate for these municipalities is 68% (National Statistics Administrative Department, (DANE).).

conservation techniques financed by the proposed Project, and that the capacity of indigenous peoples authorities to support sustainable land-use practices and forest governance within the reserves be strengthened. Despite representing over 40 percent of the national territory, the Colombia Amazon today contributes only 1 percent to national GDP.[14] However, the project can have a multiplier effect through establishing a powerful demonstration that can be emulated by other sustainable land management and conservation efforts in this region and by means of promoting financial support from international donors for the GoC's Amazonia Vision. Through both these direct and indirect effects, the proposed Project would contribute to the twin goals of alleviating extreme poverty and boosting shared prosperity for the bottom 40 percent in this poverty-ridden region.

13. The proposed Project is also aligned with the actions and goals set forth in the National Action Plan for Implementation of the Protected Areas Work Program of the Convention on Biological Diversity, of April 2012, and the supporting Policy for Consolidation of the National System of Protected Areas, established in 2010, as well as with the Aichi Biodiversity Targets, particularly targets 7, 11 and 15.[15] The Project will also help preserve the ecological integrity of the existing network of PAs and interconnectivity between the Andes and the Amazon through the *Serranía de la Macarena*.

14. Finally, the proposed Project will take place against the backdrop of the ongoing peace process between the Government and the illegal armed group FARC-EP. The peace process aims to find a solution to the armed conflict that has been occurring in Colombia for decades. Integrated rural development is one of the five components under discussion in that process. As mentioned in the "Low Deforestation Development Vision for the Colombian Amazon" document, "the relationship between environment, peace and livelihoods has become central to the post-conflict scenario that Colombia hopes to enter." While fully recognizing the limits of its contribution, the Project is expected to contribute to the advancement of this higher goal.

II. PROJECT DEVELOPMENT OBJECTIVE(S)/GLOBAL ENVIRONMENT OBJECTIVE(S)

A. PDO

15. The proposed Project's Global Environmental Objective (GEO) is the same as the Project's Development Objective (PDO), namely, to improve governance and promote sustainable land-use activities in order to reduce deforestation and conserve biodiversity in the Project area.

B. Project Beneficiaries

16. The direct Project beneficiaries are:

[14] The combined GDP contribution of three of the departments in the Project area to national GDP is only 0.6% −Amazonas, Caqueta and Guaviare. (Ministry of Commerce, Industry and Tourism, 2014.)

[15] These targets are enunciated under the five Strategic Goals of the Strategic Plan for Biodiversity 2011 – 2020, adopted by the Convention on Biological Diversity.

(a) An estimated 3,485 indigenous peoples, including their authorities (AATIs), living in the seven indigenous reserves (in the following *resguardos: Miritί-Parará, Nonuya de Villazul, Aduche, Mesai, Yaguará II, Monochoa and Puerto Zábalo*);[16]

(b) *Campesino* families in Cartagena de Chaira, San Jose de Guaviare and Calamar (approximately 200 families involving 800 people[17]);

(c) Agricultural and rural producer associations;

(d) The municipal and regional governments of Caqueta and Guaviare Departments; and

(e) Regional environmental authorities (i.e. CDA and Corpoamazonia).

17. During preparation and implementation, the proposed Project will involve multiple stakeholders including the Indigenous Peoples Traditional Authority Associations (AATIs), social and environmental NGOs working in the area, government agencies such as the Colombian Institute of Rural Development (INCODER), the Ministry of Agriculture and Rural Development (MADR), the Ministry of Mines and Energy, the Oil and Hydrocarbons Agency (ANH), the National Roads Institute (INVIAS), the National Environmental Licensing Authority (ANLA); and the municipalities of San Jose del Guaviare, Calamar, San Vicente del Caguan, Cartagena del Chaira, and La Macarena. These are all deemed key Project stakeholders although they are not all direct beneficiaries (see paragraph 16 for a list of direct beneficiaries). By improving land-use patterns and management, creating opportunities for income generation, promoting opportunities for better participation in the regional and national economy, and fostering more effective participation in decision-making processes, especially for indigenous peoples and women, the Project is expected to benefit all those involved.

C. PDO Level Results Indicators

18. The results indicators at the PDO level are the following:

(a) Areas of environmental significance are brought under protection measures and effectively managed in the medium and long term.

(b) Governments and indigenous authorities are strengthened for the sustainable management, monitoring and enforcement of the Amazon frontier, including the capacity to monitor GHG emissions.

(c) Areas subject to land or other management practices agreed among authorities to reduce pressures on forests and biodiversity and control the main drivers of deforestation.

19. The proposed Project's main results and intermediate results indicators are presented in Annex 1 (see for details).

[16] The IPs are well organized and were engaged in a process of prior consultation during the expansion of the PNNSCH. These consultations have led to agreed lines of work that form the basis of the activities that will be financed by this Project. It is estimated that about 1,742 of these beneficiaries are females.

[17] It is estimated that about 400 of the beneficiaries will be females.

III. PROJECT DESCRIPTION

A. Project Components

20. The proposed Project includes four parts as follows:

21. **Part 1: Protected Areas Management and Financial Sustainability.** GEF: US$1.49 million. Counterpart: US$1.89 million. This part seeks to: (a) strengthen the management effectiveness of the PNNSCH and its buffer zone through *inter alia*, the design and implementation of a management plan for the PNNSCH; and (b) increase the financial sustainability of about 2.7 million hectares of PAs within the PNNSCH and its buffer zone.

22. **Part 2: Forest Governance, Management, and Monitoring**. GEF: US$2.89 million. Counterpart: US$4.80 million. This part seeks to: (a) enhance the institutional capacity and financial sustainability for sustainable landscape governance, management, and monitoring of the Project area; (b) enhance the institutional capacity to monitor greenhouse gas (GHG) emission reductions in the Project area; (c) enhance the capacity of indigenous peoples' authorities for sustainable land-use practices and forest governance within indigenous territories in the Project area; and (d) support the disclosure of data on reduction of deforestation in the Project area.

23. **Part 3: Sectoral Programs for Sustainable Landscape Management.** GEF: US$ 4.78 million. Counterpart: US$28.20 million. This part seeks to: (a) support improvement of cross-sectoral policy coordination and consistency to achieve long-term reductions in deforestation in the Project area; (b) support the development and adoption of guidelines and programs in, *inter alia,* the agriculture, extractive industries and infrastructure sectors, aimed at reducing pressures on forests and biodiversity, and GHG emissions and restoring ecosystems in the Project area; (c) support the promotion of sustainable land-use and natural resource management practices that contribute to the restoration of vegetation, reduce pressure on forests and advance the livelihoods of local communities in the municipalities of San Jose del Guaviare, Calamar and Cartagena de Chaira (see Map in Annex 7). PNN, MADS and PNF will share responsibility for implementing aspects of this part according to the responsibilities to which they have agreed (see Annex 3).

24. **Part 4: Project Coordination, Management, and Monitoring and Evaluation (M&E).** GEF: US$1.23 million. Counterparts: US$0.54 million. This part will strengthen the Project Coordination Unit (PCU) to ensure coordination, management, monitoring, evaluation, and communication in connection with the implementation of the Project.

B. Project Financing

25. **Grant instrument.** The agreed instrument is Investment Project Financing (IPF) that is financed through a GEF Trust Fund grant in the amount of US$10.4 million. The Project, with a total project cost of US$45.85 million, will also be financed by counterpart contributions of US$35.45 million.

C. Project Cost and Financing

26. The financing plan is summarized in Table III.1 below. A breakdown of costs by GEF strategic objective can be found in Annex 2.

Table III.1 Project Financing

Project Parts	Project cost (US$)	GEF Financing (US$)	% Financing
1. Protected Areas Management and Financial Sustainability	3,383,328	1,490,000	44.04
2. Forest Governance, Management and Monitoring	7,709,273	2,899,817	37.61
3. Sectoral Programs for Sustainable Landscape Management	32,986,155	4,780,028	14.49
4. Project Coordination, Management, and M & E	1,772,028	1,230,155	69.42
Total Costs			
Total Project Costs Total Financing Required	**45,850,785**	**10,400,000**	**22.68**

D. Lessons Learned and reflected in the Project Design

27. A number of lessons have been learned from other projects that have been financed by the GEF and other institutions dealing with the establishment and management of PAs. Two examples that are highly relevant for this Project are the Amazon Region Protected Areas Projects in Brazil (ARPA Phase 1 and Phase 2) and the Environmental Services Project in Mexico (P089171). Lessons learned through the ARPA Project in Brazil demonstrate that financial sustainability cannot be achieved solely through reliance on endowment funds. While this proposed Project does not seek to create an endowment fund, it takes this lesson as a reminder that long-term financial sustainability necessarily depends on identifying and cultivating multiple funding sources and mechanisms such as Payment for Ecosystems Services (PES), REDD+, and environmental compensation mechanisms.

28. While the importance of PAs in achieving biodiversity conservation goals and preserving indigenous reserves is widely recognized, recent studies have highlighted the failure, in practice, of many ongoing and past efforts. These failures result from a combination of factors, including: flawed initial design; weak management and/or enforcement; failure to consider potential indirect impacts arising from displacing the users of the resources; and neglecting to address external threats from degradation of surrounding ecosystems. Ineffectively managed PAs can also undermine biodiversity conservation by creating an illusion of protection. The proposed Project seeks to address these challenges through the combination of its main components.

29. Likewise, ensuring effective coordination between multiple executing agencies is also crucial for project success. The Environmental Services Project's experience in creating alliances with biodiversity conservation institutions was instrumental in helping promote and strengthen local beneficiaries' associations. Moreover, early and meaningful stakeholder participation during preparation was very important in securing input into the design of local PES arrangements, and also to ensure that Project beneficiaries had the capacity to take advantage of the opportunities offered and meet their obligations as participants. Borrowing from these experiences, the Project's implementation arrangements foresee the existence of such alliances with SINCHI, IDEAM, MADS and PNN as well as a focus on citizen engagement and feedback.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

30. As requested by the GoC, the recipient of the Grant will be Patrimonio Natural Fund for Biodiversity and Protected Areas (PNF), which has set up a Project Coordination Unit (PCU) for the Project. PNF is a non-profit foundation comprised of the GoC, through the Colombian National Nature Parks Unit, and other institutions.[18] The Grant Agreement will be executed between the World Bank and PNF. PNF will administer project funds, supervise compliance with safeguard policies and carry out procurement and financial management (FM), as well as have oversight of all project activities through the PCU.

31. PNF will also execute a Sub-grant Agreement with SINCHI Institute so that SINCHI can, in turn, implement Part 3(c) of the proposed Project. Transfer of financial resources from PNF to SINCHI will take place through this sub-grant, through direct transfer of financial resources from the World Bank to SINCHI.

32. Prior to the proposed Project's effectiveness date, the co-executing agencies, a.k.a "partner entities", will sign an Inter-institutional Agreement for the execution of specific Project activities, according to their technical area of expertise. These entities are PNF, SINCHI, MADS, PNN and IDEAM. There will be no transfer of financial resources to any of these institutions (see Annex 3 for details).

33. PNF will also sign Cooperation Agreements with indigenous people authorities (AATIs) and regional sustainable development corporations (CDS) to carry out specific activities detailed in Annex 2. Some of these activities include the implementation of actions agreed upon with the *resguardos* during the consultation process that took place in the context of PNNSCH's expansion. These activities and the implementation plan are detailed in the Indigenous People's Plans (IPPs) prepared with the indigenous authorities and disclosed per the requirements of OP 4.10 [(see section VI(E)]. PNF will also enter into Cooperation Agreements with key public agencies, including MADR, ANH and INVIAS, to roll out the targeted sectoral guidelines and

[18] The Alexander Von Humboldt Institute for Biological Resources Research; the Colombian Network Association of Natural Reserves from Civil Society; the Natura Foundation; the Center for Investigation of Agricultural Sustainable Productive Systems (CIPAV); the Autonomous Regional Corporate (ASOCAR) and the Pontifical Xaverian University.

programs under Part 3 and to develop strategies to increase financing for the management of PNNSCH. No transfer of financial resources to these institutions will take place either.

34. An Advisory Committee (AC), led by the Vice Minister of MADS will be established to provide strategic guidance and facilitate project mainstreaming into key productive sectors and coordinate strategies of international cooperation. The Committee will meet at least twice a year and will be comprised of representatives from the national, regional and local governments, as well as from civil society and a representative from donor organizations. The AC is to evolve into a Consultative Committee and related bodies, as called for in the Amazonia Vision, once the Government establishes governance arrangements for the latter. The AC will be able to set up task forces to deal with issues of a complex or strategic nature, as needed. An Executive Committee (EC), comprised of representatives from PNF, SINCHI, MADS, PNN and IDEAM, will provide technical guidance to and supervision of Project activities.

35. The PCU will have a team of technical staff and a team of administrative staff whose work will be led by a Project Coordinator. Annex 3 explains in detail the governance structure and the contractual and implementation arrangements that will govern the Project. Finally, the PCU will host a grievance mechanism that will address requests and complaints that may arise in connection with the activities the Project will finance and, in particular, those that relate to safeguards compliance.

B. Results Monitoring and Evaluation

36. Project Monitoring and Evaluation (M&E) will be carried out by the PCU. Progress will be tracked against the indicators outlined in the Project's Results Framework (Annex 1) and the actions agreed in the Project's Annual Operating Plans (AOPs), which will be agreed yearly with the EC and donors. Bi-annual financial, progress and M&E reports will be submitted to the World Bank. Bi-annual progress reviews will be conducted by the PCU and reviewed and approved by the EC; a mid-term review of the Project's implementation will be conducted jointly by the GoC, the EC, the World Bank and PNF (PCU); and an independent end-of-project evaluation will be also completed. Finally, a project implementation completion report will be prepared. GEF Tracking Tools (TT) will be used for measuring indicators in the three GEF focal areas, namely, Sustainable Forest Management (SFM), Climate Change Mitigation (CCM) and Biodiversity (BD).

C. Sustainability

37. The outcomes of this proposed GEF Project are likely to be sustainable in the long term, beyond the Project's lifecycle, given the strong ownership of the Project objectives by the GoC, and the fact that the activities supported by the proposed Project are already included in the government policies and priorities, the NDP 2010-2014 (prior consultation with indigenous peoples) and the Amazonia Vision itself.[19] From a technical perspective, Part 3: Sectoral

[19]The latter initiative recognizes and prioritizes the need for achieving sustainability, as demonstrated by a sound strategy which includes the following pillars: (a) improved governance, (b) enhancing legal sustainable productive activities, (c) strengthened participation and capacity of indigenous communities; and (d) enabling conditions to

Programs for Sustainable Landscape Management, is expected to play a significant role in ensuring that key productive sectors work together towards a common objective to reduce deforestation. Embedding this "work together" premise in the proposed Project's institutional arrangements and through a stand-alone component can be expected to trigger positive synergies in favor of achieving long-term sustainability. As a critical mass is bolstered by fostering capacity building and consolidation of organizations dealing with biodiversity conservation and deforestation issues in Colombia, the proposed Project will contribute to address future sustainability as the GoC's Amazonia Vision initiative becomes better positioned to capture funding beyond the end of the Project.

V. KEY RISKS AND MITIGATION MEASURES

A. Risk Ratings Summary Table

Risk Category	**Rating**
Stakeholder Risk	Moderate
Implementing Agency Risk	
- Capacity	Substantial
- Governance	Moderate
Project Risk	
- Design	Moderate
- Social and Environmental	Substantial
- Program and Donor	Moderate
- Delivery Monitoring and Sustainability	Moderate
- Other (Optional)	
Overall Implementation Risk	**Substantial**

B. Overall Risk Rating Explanation

38. The overall level of risk for project implementation is substantial**.** The unfolding peace process (see Annex 4 for details) presents a challenge to implementing the IPPs in the very remote and somewhat politically unstable regions around the PNNSCH. In order to mitigate these risks, the proposed Project will build local social capital and involve a wide range and number of stakeholders from the local and indigenous communities, civil society, private sector, as well as municipal governments and actors across central government. Effective coordination in the implementation of the proposed Project activities, particularly at the local level, is vital for successful implementation and to ensure that local stakeholders are involved and activities respond to beneficiaries' needs. Coordination and definition of roles and responsibilities developed during project preparation will also help further integrate the institutions involved.

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support a zero net deforestation vision for the Amazon region. The Vision calls for the establishment of a results-based payment mechanism to which international, national and private partners can contribute by rewarding the protection of CCM services provided by the Colombian Amazon forests**.**

Coordinating with other government institutions and NGOs already present in the Project area is envisioned to ensure that capacity is adequate for supervision in remote areas.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

39. The *ex-ante* economic efficiency analysis conducted for the proposed Project results in positive economic outcomes that will be achieved by the proposed Project. The consideration of only a few of the benefits into the quantitative analysis sufficed to yield positive economic results. The results of the quantitative simulations are also robust across a range of sensitivity analyses assuming significant changes in discount rates and key simulation parameters, notably, benefit-value parameters. Throughout the analysis, it was emphasized that benefit assumptions were always done conservatively, using lower-bound values, especially as regards non-market benefits, such as watershed and carbon benefits, but also existence values. In particular, absolute carbon benefits estimated in tCO_2e for the Project are likely to be under- rather than overestimated, which is further magnified by applying very low assumptions for the opportunity costs of carbon and not including broader climate regulation benefit values. All of these would have resulted in significantly higher simulation results across all assumed parameter changes, hence underlying the robustness of the economic rationale of the proposed Project, even in the undesired scenarios where Project benefits would have to be downgraded in the course of Project implementation.

40. Applying an incremental difference of 0.5 percent deforestation between the "with-" and "without-" Project situation, the analysis yields positive results across all sensitivity assessments (see Annex 6, table 6.1 – 6.3). The 0.5 percent deforestation increment situation mirrors a situation where the PA would reduce deforestation to zero if the national deforestation average is used as a reference. Sensitivity analyses included benefit value estimations that underwent reductions of minus 10 percent, 20 percent and 50 percent and discount rate variations of 5 percent, 10 percent, and 20 percent, respectively. Furthermore, the analysis was also differentiated as regards the inclusion or exclusion of wetland benefit values. Though not included in the assessment, one of the most important impacts of the proposed Project probably relates to the capacity building of government institutions at central and decentralized levels. Enhanced capacities of government institutions should improve public service delivery, which in turn with numerous benefits and positive economic impacts. Given the ongoing challenges in natural resources management—not least due to climate change—the aspect of improvements in the way in which public institutions function cannot be underestimated, particularly in a "with-" and "without-" Project scenario. Enhanced functioning of government institutions would also facilitate the implementation of future projects and investments that would build upon and continue the expected achievements of this proposed Project. Similar considerations apply to knowledge generation and management achieved by the proposed Project.

B. Technical

41. From a technical point of view, the proposed Project seeks to consolidate the expansion of PAs in the Project area and improve forest governance and management, with a landscape approach perspective. The creation and implementation of PAs has been found to be one of the

most effective ways to reduce deforestation and safeguard indigenous peoples' territories. Although there is a debate about whether PAs really reduce deforestation or simply avert it to other areas, the strategic use of PAs, in tandem with other policies, has proven effective in deforestation control.[20] In addition, PAs are the best way to protect particular conservation targets, such as endemic and endangered species.[21] Its design draws upon the lessons learned with the establishment of PA systems in other parts of the Amazon, particularly in Brazil, seeking to avoid and mitigate identified risks stemming from, *inter alia*, poor system design, weak stakeholder participation and other factors. In addition to the more traditional protection schemes, the landscape approach is a framework for making landscape-level conservation decisions beyond the jurisdiction of the PNNSCH. It contributes to broad-scale approaches to conservation. 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.

C. Financial Management

42. PNF, in its capacity of grant recipient, has adequate capacity to carry out the main tasks in terms of FM, given its long-standing experience and satisfactory performance in executing Bank-financed projects. It also has a sound internal control environment which is supported by the following mitigating controls: (a) all project payments will be made centrally by PNF; (b) revised manuals of policies and procedures will be in place; (c) the implementation of the sub-grant (Part 3) by SINCHI will be subject to standard Bank's procurement, financial reporting and audit arrangements;[22] (d) there is an integrated FM Information System in place to perform and control project budgeting, accounting, and payments; (e) there exists a suitable organizational structure, which allows for the proper segregation of the main FM-related functions; (f) there is a requirement in place for the preparation and submission to the Bank of semi-annual non-audited Interim Financial Reports (IFRs); (g) annual financial audits will be conducted by external eligible auditors and based on TORs acceptable to the Bank; (h) there exist unqualified (clean) auditor's opinions on both PNF's institutional financial statements and the ongoing Bank-financed project (P112106) covering fiscal year 2013, which is currently under implementation by PNF.

D. Procurement

43. A PCU was created within PNF and will be responsible for project implementation. A full assessment of PNF's capacity to implement procurement functions was performed in February 2014 which reviewed the organization, staffing, procurement experience, procurement practices, track records and filing, and the interaction of the Procurement Unit with other

[20] Britaldo Soares-Filho et al., "Role of Brazilian Amazon protected areas in climate change mitigation," *PNAS Early Edition*, 2010. Available online at www.pnas.org/cgi/doi/10.1073/pnas.0913048107.

[21] Refer to Nelson and Chomitz, 2009. Protected Area Effectiveness in Reducing Tropical Deforestation: *A Global Analysis of the Impact of Protection Status.* IEG, The World Bank: Washington, DC. This study found that "[m]ulti-use protected areas generally provide greater deforestation reduction (in absolute terms) than strict protected areas."

[22] An assessment of SINCHI's FM capacity revealed that it also has strong institutional FM and administrative capacity.

technical and administrative areas of the organization, relevant to management of procurement. The assessment confirmed that PNF is a robust institution with a suitable legal framework, organization, support systems and staff knowledgeable of Bank Procurement Policies and Procedures. It is also familiar with the World Bank's procurement guidelines and procedures, standard bidding documents, performance of prior and post reviews, and preparation of procurement plans, and it has demonstrated sound implementation performance, including a satisfactory performance in procurement. PNF will conduct its own procurement processes and will provide procurement services to participating partner entities engaged in specific project activities, such as IDEAM. Except for PNF and SINCHI Institute, no other participating entities or organizations will manage procurement processes (see Annex 3 for a procurement risk mitigation plan). At the GoC's request, SINCHI Institute will sign with PNF a Sub-Grant Agreement for the implementation of specific activities under Part 3(c). A full capacity assessment of SINCHI was conducted in May 2014. SINCHI is a well-established entity, a civil corporation of a public nature, legal status, which operates with full administrative autonomy and under private regulations, and it is linked to the Ministry of Environment of Colombia.[23] The institute is exempted from using local public procurement regulations (Law No. 80) and has thus developed its own regulations and procedures. Based on the assessment findings, SINCHI Institute's capacity in procurement should be reinforced in procurement planning, via training delivered to staff in the use of Bank Guidelines, procedures and standardized Bank procurement and selection of consultant documents.

E. Social (including Safeguards)

44. Overall, the proposed Project is expected to have positive social outcomes and contribute to increased well-being and livelihood security of the population living in the *resguardos* and communities in the Project area. The social safeguard policies triggered for the Project are OP 4.12 on Involuntary Resettlement and OP 4.10 on Indigenous Peoples. In addition to safeguard considerations, other social issues to be considered during project implementation include the particular impact of poverty on land-use decisions and management and the unique socio-economic challenges that inhabitants in the Amazon region face such as insecure land tenure, ensuring equal participation in terms of gender and ethnicity in participatory natural resource management, indigenous peoples collective rights and economic migration.

45. Physical relocation or land acquisition will not be required for proposed Project activities but a Process Framework (PF) has been prepared in order to screen for and manage any involuntary restrictions on access to natural resources in the forest buffer zone during the process of identifying new regional PAs. The PF does not cover the voluntary process that will be managed using a voluntary agreement with SINCHI under Part 3. A social assessment to identify some of these potential impacts and their scope, as well as the stakeholders that might be affected, was completed during project preparation and a summary of the results is included in the PF. The Framework was consulted and disclosed in country, and disclosed on the Bank's website, per the requirements of OP 4.12.

[23] The Minister of Environment and Sustainable Development chairs SINCHI's Board of Directors.

46. Indigenous People's Plans (IPPs) were prepared for each of the seven indigenous *resguardos* in the proposed Project area, as required by OP 4.10. A comprehensive social assessment was carried out by the GoC during preparation and was used as background during the process of preparing the IPPs. The final versions of the IPPs were disclosed on the websites of PNF and PNN, as well as on the Bank's website. In order to support the implementation of the activities included in the IPPs, the IPPs provide for the establishment of special "Monitoring Committees" (*Comités de Seguimiento)* in each of the *resguardos*. These Committees will be provided with the appropriate resources and support so that the indigenous communities themselves are able to plan and track the execution of the activities included in the various IPPs agreed with the AATIs and so that they can prepare any culturally adapted and appropriate tools for engaging the rest of the community. In terms of addressing any possible grievances related to project design or implementation, whenever feasible, the PCU will support existing conflict resolution mechanisms in *campesinos* and indigenous peoples communities.

47. Investments to be financed by the proposed Project are not intended to promote or facilitate contact with either indigenous peoples who might be living in voluntary isolation in the proposed Project area, nor with their potentially existing institutions. However, in order to address the unique issue of protecting indigenous peoples living in voluntary isolation and/or initial contact, Guidelines for Indigenous Peoples Living in Voluntary Isolation (a.k.a. Institutional Guide) were prepared to address unintended contact but also to avoid forced contact with indigenous peoples who live in voluntary isolation. The Guidelines (a.k.a. Institutional Guide) were not consulted with these populations but were prepared using international best practice and guidance from national policies in Brazil, Peru and Colombia. These Guidelines include a procedure based on a precautionary approach to avoid and protect indigenous peoples living in voluntary isolation.

F. Environment (including Safeguards)

48. The proposed Project is classified as "Category B" for environmental safeguard purposes. Its investments seek to protect critical natural habitats through significantly expanding and existing PA and supporting governance (institutions, zoning, action plans, dialogue and policies) for the entire area. Significant environmental impacts are not expected. Hence, he proposed Project is essentially a conservation initiative, expected to generate positive and long-lasting social, economic and environmental benefits. As previously described, deforestation is a threat to Colombia's natural capital, including biodiversity and ecosystem services. Consolidation of PAs will help preserve this natural wealth. The following environmental safeguard policies are triggered: Environmental Assessment (OP/BP 4.01); Natural Habitats (OP/BP 4.04); Forests (OP/BP 4.36); Pest Management (OP 4.09) and Physical Cultural Resources (OP/BP 4.11). An Environmental and Social Management Framework (ESMF) has been prepared for the proposed Project and was subject to public consultation and disclosure locally, prior to Project appraisal. There were four consultations held between December 2013 and August 2014 to obtain feedback regarding the proposed Project and incorporate it into its design. Specific consultations for the safeguards instruments were held between May and August 2014. The ESMF was disclosed on the Bank's website, as well as in country on the websites of PNF, PNN and SINCHI. (See Annex 3 for details.)

Annex 1: Results Framework and Monitoring

Country: Colombia

Project Name: Forest Conservation and Sustainability in the Heart of the Colombian Amazon (P144271)

PDO Statement

The proposed Project's Global Environmental Objective (GEO) is the same as the Project's Development Objective (PDO), namely, to improve governance and promote sustainable land-use activities in order to reduce deforestation and conserve biodiversity in the Project area.

These results are at	Project Level

Global Environmental Objective Indicators

Indicator Name	Core	Unit of Measure	Baseline	Cumulative Target Values					Frequency	Data Source/ Methodology	Responsibility for Data Collection
				YR1	YR2	YR3	YR4	End Target			
Indicator 1 Areas of environmental significance brought under protection measures and effectively managed in the medium and long term	☒	Hectares of protected areas (ha)	0	675,000	1,350,000	2,025,000	2,700,000	2,700,000	Annual	Effectiveness Analysis of the Protected Areas with social participation	PNN
Indicator 2 Governments and indigenous authorities are strengthened for the sustainable	☒	Capacity Assessment	Low	Low	Medium	Medium	High	High	Midterm Final	Reports and stakeholders assessments (qualitative methodology to be defined)	MADS PNF IDEAM SINCHI PNN

management, monitoring and/or enforcement of the Amazon frontier, including the capacity to monitor GHG emissions											
Indicator 3 Areas subject to land or other management practices agreed among authorities to reduce pressures on forests and biodiversity and control main drivers of deforestation	☒	Hectares (ha)	0	0	600,000	1,200,000	2,532,700	2,532,700	Midterm Final	Monitoring of the areas that will be subject to sectoral agreements with MADR. Progress reports based on AOPs M&E Reports from PNF	MADS SINCHI PNN PNF

Intermediate Results Indicators

Indicator Name	Core	Unit of Measure	Baseline	Cumulative Target Values					Frequency	Data Source/ Methodology	Responsibility for Data Collection
				YR1	YR2	YR3	YR4	End Target			
Intermediate result 1: Protected Areas Management and Financial Sustainability											

Indicator 1.1 PNNSCH with increased management effectiveness measured by Tracking Tool	☐	Increase in 80% of the tracking tool measure of management effectiveness	35	42	49	56	63	63	Annual	Reports of BD tracking tool	PNN
Indicator 1.2 Increased funding to meet total expenditures required for management of PNNSCH	☐	% Increase in rate over baseline annual budget, estimated at US$294,198	0 %	50 %	100 %	150 %	200 %	300 %	Annual	Progress reports based on AOPs M&E Reports from PNF	PNF
Intermediate result 2: Forest governance, management and monitoring											
Indicator 2.1 Capacity to monitor for GHG emission reduction and increase in carbon stocks	☐	Degree of development of the NSFCM as per measurement goals specified in TT (SFM-REDD #2.1)	2	2	2	2	3	3	Initial Midterm Final	Tracking tool	IDEAM
Indicator 2.2 Validated, public data of reduction of deforestation in the Project area compared to the Amazon forest	☐	Number of public reports on deforestation	0	2	4	6	8	8	Annual	Annual reports of the NSFCM	IDEAM

subnational reference emission level, including updated carbon estimations in natural forests generated for the Project area											
Indicator 2.3 Conservation of at least 95% of the PNNSCH's forest carbon stock, barring natural disturbances, by the lifetime of the Project[24]	☐	Percentage reported (%)	100	100	100	At least 95	At least 95	At least 95	Annual	Annual reports of the NSFCM	IDEAM
Intermediate result 3: Sectoral Programs for Sustainable Landscape Management											
Indicator 3.1 Amazon Forest Reserve area of the "A type", with a management proposal in place	☐	Hectares (ha)	0	0	400,000	600,000	1,000,000	1,000,000	Initial Midterm Final	Progress reports based on AOPs M&E Reports from PNF	PNN

[24] This indicator refers to the estimate of carbon stocks conserved in the PNNSCH (see methodology and calculations on pages 34, 35).

Indicator 3.2 Number of agreements with sectors driving deforestation (agriculture extractive industries and infrastructure) on land-use planning, strategies for integrated landscape management, policies or regulations, achieved or implemented	☐	Number of agreements	0	0	0	2	2	3	Midterm Final	Progress reports based on AOPs M&E Reports from PNF	MADS PNN, SINCHI, PNF
Indicator 3.3 Local population benefiting from sectoral programs by improvements in their livelihoods	☐	Number of persons with improvements in their livelihoods	0	400	800	3,460	4,285	4,285	Midterm Final	Socioeconomic information from survey of farm characterization Reports of the indigenous authorities Progress reports based on AOPs M&E Reports from PNF	SINCHI, PNN

Annex 1 (continuation): Results Framework and Monitoring
Country: Colombia

Global Environmental Objective Indicators	Description (indicator definition, etc.)
Indicator 1 Areas of environmental significance brought under protection measures and effectively managed in the medium and long term.	Core sector Indicator. Unit of measure: Hectares of protected areas (ha). This indicator will measure the achievement of management effectiveness in the PNNSCH which stems from efficaciously achieving the established goals and objectives as well as from the quality achieved in the use and performance of resources in the short, medium and long term. In the short term, effectiveness is measured annually and depends on the degree of governance achieved in the PA and on the quality of operational planning. In the medium term, i.e., every 3 years, effectiveness depends on the PA's management potential and on the management planning quality. In the long term, it is determined based on the ecological integrity of the PA. In Colombia, the methodology and source for this indicator is the PNN tool called *Análisis de Efectividad del Manejo del Área Protegida con Participación Social* or "Effectiveness Analysis of the Protected Areas with Social Participation."
Indicator 2 Governments and indigenous authorities are strengthened for the sustainable management, monitoring and/or governance of the Amazon frontier, including the capacity to monitor GHG emissions.	This indicator will measure how the different stakeholders will be strengthened by the Project in order to conduct carbon accounting, sustainable forest management and governance in the Project area through the use of a Capacity Assessment.
Indicator 3 Areas subject to land or other management practices agreed among authorities to reduce pressures on forests and biodiversity and control main drivers of deforestation	This indicator measures the area covered by the adoption of practices in sustainable forest management to avoid deforestation as well as area the Project improves for biodiversity through biodiversity mainstreaming tools and instruments. Includes area subject to both good forest management practices applied in existing forests AND biodiversity mainstreaming, as follows: 1.17 million hectares under sectoral agreements; 1.34 million hectares of

	indigenous reserves subject to land-use zoning and SFM; and 22,700 hectares under agroforestry arrangements that will help preserve ecological interconnectivity. "Management practices" refers to measures such as incorporation of standards and adoption of good environmental practices in (a) oil/gas exploration and exploitation, (b) infrastructure improvements and (c) agriculture/cattle ranching activities.
Intermediate Results Indicators	
Intermediate result 1: Protected Areas Management and Financial Sustainability	
Indicator 1.1 PNNSCH with increased management effectiveness measured by Tracking Tool	This indicator will measure the increase of management effectiveness through the use of the BD Tracking Tool, Objective 1, section II, Assessment form.
Indicator 1.2 Increased funding to meet total expenditures required for management of PNNSCH	This indicator will measure the increase in rate over baseline annual budget, estimated at US$294,198.
Intermediate result 2: Forest Governance, Management and Monitoring	
Indicator 2.1 Capacity to monitor for GHG emission reductions and increase in carbon stocks	This indicator will measure increasing institutional capacity to monitor greenhouse gas (GHG) emission reductions, in alignment with the National System for Forest and Carbon Monitoring (NSFCM).
Indicator 2.2 Validated, public data of reduction of deforestation in the Project area compared to the Amazon subnational reference forest emission level for Colombia, including carbon estimations in natural forests generated for the Project area	Describes the disclosure of validated data of deforestation reduction taking the Amazon forest subnational reference emission level as a reference, using the number of public reports on deforestation and carbon stocks issued as a proxy.
Indicator 2.3 Conservation of at least 95 percent of the PNNSCH's forest carbon stock, barring natural disturbances, by the lifetime of the Project	This indicator records the carbon stock conservation target, as estimated by IDEAM methodology, which is based on the following parameters: - Emission factors were calculated using aerial biomass to carbon conversion values recommended by the

	Intergovernmental Panel on Climate Change (IPCC). - Estimated above ground biomass of humid tropical forests is 264.1 tons per hectare (Mg/ha), equivalent to 124.13 Tn C per hectare (IDEAM, 2011). - Estimated current carbon stock reserves in natural forest area of the PNNSCH (2,564,813 hectares) are 318,362,543 Tn C (IDEAM, 2011). This was estimated using Holdridge's climate classification and has an associated uncertainty of 14 percent. - Conversion factor to CO_2 eq used is 3.67, as per IPCC recommendation. - Applying this factor 1,168,390,534 Tn CO_2 eq are obtained. This represents the total value of carbon stocks in the natural forest area of the PNNSCH[25]. - The target is to maintain at least 95 percent of this carbon stock, equivalent to 1,11Mt CO_2eq.
Intermediate result 3: Sectoral Programs for Sustainable Landscape Management	
Indicator 3.1 Amazon Forest Reserve area of the "A type" with a management proposal in place	"**Type A" zone** Neighboring zones or zones in proximity to PNNSCH that are important for the preservation of Andes-Amazonia's ecosystem interconnectivity. These areas "guarantee the preservation of basic ecological processes that are required to ensure the supply of ecosystem services that are mainly related to hydrological and climate regulation; assimilation of air and water pollutants; soil formation and protection; landscape protection, cultural heritage protection; and support to biological diversity." The resolution that created them calls for the promotion of certain scientific research and implementation of key activities meant to foster sustainability and conservation in these areas (MADS, 2013. Resolution 1925 of 2013, Art. 2(1)). The management proposals to be put in place in

[25] The estimates of avoided deforestation will be presented in the GEF tracking tools during the Project implementation.

	these areas will result from the sectoral agreements to be achieved with the CDS on one hand, and with ANH and INVIAS, on the other hand.
Indicator 3.2 Number of agreements with sectors driving deforestation (agriculture, extractive industries and infrastructure sectors) on land-use planning, strategies for integrated landscape management, policies or regulations, achieved or implemented	This indicator describes the number of agreements reached to improve cross-sectoral policy coordination and consistency in critical sectors in order to achieve long-term reductions in deforestation. (See Section C of Annex 3 for a discussion on deforestation drivers in the Project area).
Indicator 3.3 Local population benefiting from sectoral programs by improvements in their livelihoods	This indicator documents the number of small farmers and their families who will enter into voluntary agreements to pursue agroforestry productive arrangements in the municipalities of San Jose del Guaviare, Calamar and Cartagena del Chaira as well as the number of indigenous peoples whose livelihoods are expected to improve as a result of developing food security strategies and alternative economic development strategies designed in coordination with their AATIs.

Annex 2: Detailed Project Description

COLOMBIA
Forest Conservation and Sustainability in the Heart of the Colombian Amazon Project (P144271)

A. Project Scope and Direct Intervention Area

1. The proposed Project seeks to address the conservation of an area of over nine million hectares in the Heart of the Colombian Amazon, which is a vast area of humid tropical forest that spans the neighbouring provinces of *Amazonia* and *Guyana*. The Project aims to avoid million tons of CO_2 emissions per year, while helping promote peace and sustainable development in that region.

2. The proposed Project area spans the departments of Caqueta, Meta, Guaviare and Amazonas and is in the jurisdiction of the following municipalities: San Vicente del Caguan, Cartagena del Chaira and Solano (in Caqueta Department); San Jose del Guaviare y Calamar (in Guaviare Department); La Macarena (in Meta Department); and in Miriti-Paraná—an area that is not yet within a municipality (in Amazonas Department) (see Map in Annex 7). These territories encompass the areas in table 2.1:

Table 2.1 Project Area

Project area	Size (in million ha)
Heart of the Amazon polygon	**9.09**
Natural Chiribiquete Mountain Ridge National Park *(*PNNSCH): A Protected Area created in 1989 by Resolution 120 of the Ministry of Agriculture and expanded in 2013 through MADS Resolution 1038.	2.78
Indigenous reserves in the Project area (seven *resguardos*): Six are located along the Caqueta river between the departments of Caqueta and Amazonas. They are: (i) *Puerto Zábalo-Los Monos*, (ii) *Monochoa*, (iii) *Aduche*, (iv) *Nonuya de Villazul*, (v) *Mesai* and (vi) *Miritί-Paraná*. The seventh reserve, *Yaguará II* is spread over three municipalities in two departments, namely La Macarena, San Vicente del Caguan and San Jose del Guaviare.	2.53
Amazon Forest Reserve areas: Located in Caqueta and Guaviare Departments.	3.52
-"Type A" zones	3.28
-"Type B" zones	0.23
Ariari-Guayabero District of Integrated Management of Natural Renewable Resources: Located in the municipality of San Jose del Guaviare (Guaviare Department).	0.61

<u>Areas removed from the Amazon Forest Reserve in the Project area:</u> Located in the municipalities of Cartagena del Chaira and Calamar (in Caqueta Department) and San Jose del Guaviare municipality (Guaviare Department).	0.46

Source: PNN, Amazonia Territorial Directorate, 2014.

Note: The areas listed in the table should not be added up because there are many overlapping areas and adding them up would result in double-counting of some areas. *Source:* GoC, August 2014.

3. PNNSCH represents the core of the Project area and features extensive *tepuis*—towering rock formations—belonging to the Guyana biogeographic province, surrounded by undisturbed rainforest of highly difficult access due to the lack of roads and presence of rapids that impede navigation. The park includes the upper reaches of the Apaporis and Yari rivers, major tributaries of the Caqueta River, which empties into the Amazon River. The Apaporis River is the second longest river entirely within Colombia and is of enormous cultural significance for indigenous peoples in the Amazon.

4. The park is also known for its abundant rock paintings in 32 archaeological sites. Colombia has submitted an expression of interest for potential consideration by UNESCO as a World Heritage site.[26] PNNSCH comprises 41 different ecosystems, including *vàrzea* forests and savannahs, *terra firme* forests, and savannahs and shrublands associated with *tepuis*. Eight of these ecosystems are not represented in existing PAs. The area is an important centre of endemism, and while its fauna and flora are still far from having been studied extensively, 300 species of birds have been reported, as well as 72 species of beetles, 313 species of butterflies, 261 species of ants, seven species of primates, three species of otters, four species of felines, 48 species of bats, two species of dolphins and 133 species of fish. There are 43 species ranked as threatened, including the flagship Harpy Eagle *Harpia harpiya* and the only bird species endemic to the Colombian Amazon, the hummingbird *Chlorostilbon olivaresi.*[27]

5. As a matter of national policy, Colombia has for several decades developed an extensive system of PAs and indigenous reserves in the Amazon, which have proved effective in preventing further deforestation. This Project is an integral part of this commitment, designed to consolidate and sustainably manage the Protected Areas system in the heart of the Colombian Amazon. In October 2013, the GoC, through the Ministry of Environment and Sustainable Development (MADS), presented its "Low Deforestation Development Vision for the Colombian Amazon" (i.e., "the Amazonia Vision"), in which it articulated its commitment to build, "a desired partnership model between Colombia and international parties, addressing Colombia's overall vision for the establishment and scaling up of low-carbon development models in all of its forested areas". The starting point for this venture is the Project area. In its vision, the GoC recognizes that the Amazon, "cannot simply be a large protected area, but ought also to provide additional alternatives for development and integration into the global economy for its population, as well as wealth and prosperity for the country at large."[28] Through the

[26] According to the Government, the expression of interest does not constitute a nomination in the strict sense. Resources for the preparation of a dossier needed in support of an actual nomination are not expected to be appropriated until the 2016 fiscal year.
[27] PNNC, 2012.
[28] MADS, 2013. *Op. cit.* p. iii.

implementation of this proposed Project, with support from the GEF and other international donors, Colombia is positioning itself to fulfill that vision. The Amazonia Vision calls for the establishment of a results-based payment mechanism to which international, national and private partners can contribute by rewarding the protection of the climate change mitigation services provided by the Colombian Amazon forests."[29]

6. In the last ten years, the areas surrounding the park have experienced a sharp increase of interest in oil and gas exploration. The National Hydrocarbons Agency (ANH) has designated extensive areas as reserved exploration blocks for future lease for oil and gas exploration. The area is also a target for the development of road infrastructure, with Colombia's commitment to build the *Marginal de la Selva* road to unite Ecuador with Venezuela, thus placing increased pressure on the area. Preliminary projections by IDEAM indicate that, if current trends continue, by 2030 an additional 13,000 km^2 of rainforest will be lost in the Colombian Amazon, affecting the connectivity between the Andean and Amazonian forests in the country. The proposed Project seeks to curtail that trend. Table 2.2 shows in detail the area that could potentially be impacted by these planned or potential developments.

Table 2.2 Oil and Gas blocks set aside for potential development in the Project area

Type of area	Location and rationale for targeting by Project					
	Areas potentially linked to buffer zone of PNNSCH	**Areas needed to preserve ecosystem interconnectivity**	**Areas along planned *Marginal de la Selva* road**	**New settlements near rivers in Cartagena del Chaira**	**Sabanas del Yari – priority area for regional conservation**	**Hectares (thousands)**
Reserved[30]		AMA1				655
Available[31]	CAG 3					825
	Bicuda	Bicuda			Bicuda	563
Available but in the process of being incorporated[32]			PUT 29		PUT 29	171
				PUT 19	PUT 19	144
				PUT 21		141
				PUT 28	PUT 28	154
Under exploration with ANH[33]						
			Macaya			79
				Sangretoro		155

[29] MADS, 2013. *Op cit.*, p. iv.
[30] Areas that ANH has defined and set aside given their geological, environmental and social characteristics, or for having conducted studies in them that point to valuable exploratory information. They are set aside due to energy policy, national security or public order reasons.
[31] These areas are under no contract, lease or adjudication at present.
[32] Plots that have been devolved partially or totally and are under study by ANH with the goal of deciding how their public sale will take place.
[33] Areas where exploration works are currently underway.

Total	2	2	2	4	4	**2,891**

Source: GoC, 2014.

7. In terms of shared prosperity and poverty alleviation, this operation also seeks to provide additional alternatives for development and integration into the global economy for its population. Despite being over 40 percent of the national territory, the Amazon region today contributes only 1 percent to national GDP. The nine million hectares comprising the Project area represent 19 percent of the Colombian Amazon. Here, poverty rates are significantly higher, and social development indicators are much lower, than in the rest of the country. In six of the municipalities in the Project area, multidimensional poverty rates range from 66 percent in urban areas and up to 95 percent in rural ones.[34] In fact, over 90 percent of the population in the Project area lives in rural areas where poverty rates are the highest. The national government has focused on addressing these realities as a priority, taking advantage of Colombia's improving environment for private investment, and increasing infrastructure development and population settlement in the Amazon Region.

B. Project Components

8. The proposed Project will include four parts or components, which are described in detail next.

9. **Part 1: Protected Areas Management and Financial Sustainability.** GEF: US$1.49 million. Counterpart: US$1.89 million. *This part seeks to: (a) strengthen the management effectiveness of the PNNSCH and its buffer zone through inter alia, the design and implementation of a management plan for the PNNSCH; and (b) increase the financial sustainability of about 2.7 million hectares of PAs within the PNNSCH and its buffer zone.* Implementation of this component will be carried out by PNN and PNF. **Thus, expected outcomes from this part are both an increase in the management effectiveness of PNNSCH and increased funding to meet the total expenditures required to manage this PA.**

(a) Strengthen the management effectiveness of the PNNSCH and its buffer zone through, inter alia, the design and implementation of a management plan for the PNNSCH. This aspect will be accomplished through the following actions:

(i) Formulation and implementation of a management plan for PNNSCH. This entails coordination with strategic actors to guarantee the proper functioning of the park. It will require carrying out field visits and studies to accurately characterize and monitor pressures and threats to PNNSCH's buffer zone. Specific inputs for this activity are:

a. Consulting services for the preparation of a study to formulate the management plan.

b. PNN workshops at the local, central and territorial level to discuss and assess the management plan.

[34] OPHI, n/d. *Measuring Multidimensional Poverty: Insights from around the world*. University of Oxford. Available online at http://www.ophi.org.uk/wp-content/uploads/Measuring-Multidimensional-Poverty-Insights-from-Around-the-World.pdf?7ff332&7ff332). If measured by the Unsatisfied Basic Needs Index, the average poverty rate for these municipalities is 68%. (National Statistics Administrative Department, DANE.)

c. Workshops between PNN and territorial authorities and CDS to discuss, assess and seek input to proposed management plan.

d. Surveying trips and field visits throughout the park and to Solano, San Jose del Guaviare and Calamar.

e. Workshops between PNN and different CSOs such as NGOs operating in municipalities within the PNNSCH's direct influence area to bring about awareness on the management plan and identify opportunities for cooperation in its implementation.

(ii) Delimitation and zoning of buffer zones in the municipalities of Calamar and Cartagena del Chaira. It will require the following:

a. Consultancy for the preparation of a study on the characterization and monitoring of existing threats and pressures to biodiversity linked to the expansion of the agricultural frontier in the PNNSCH's buffer zone, making use of remote sensing for the analysis of forest cover, land-use projections, and the production of deforestation maps at various time intervals. It will include a socio-economic study on deforestation in critical areas of Caqueta Department.

b. Workshops and meetings to disseminate and discuss findings of studies with local communities and their authorities.

c. Consulting services for the production of a report outlining the required skills, capabilities and resources that PNN staff ought to have in order to guarantee PNNSCH protection.

d. Purchase of equipment and financing of improvements for PNNSCH administrative and operational headquarters, such as office furniture for Florencia, Calamar, and San Jose del Guaviare; three motorcycles; five sub-numerical K2 model GPS; one videobeam; two photographic cameras and two laptops and necessary software.

(iii) Detailed design and implementation of a regional management model for the 2.7 million hectares occupied by PNNSCH and their integration with other PAs that encompass the forest reserve's beltway. The required inputs envisioned for this activity are the following:

a. Consulting services for a study that will provide the technical basis for the selection of the aforementioned regional management model for the 2.7 million hectares of PNNSCH and their integration with other PAs.

b. Workshops organized by PNN at the local, central and territorial level in order to establish agreements with all actors involved in the implementation of the resulting regional management model.

c. Consulting services for the production of a report on tools, instruments and strategies needed to achieve the efficient management of Amazonia parks. The target recipient and main user of this report is PNN.

d. Workshops with local, regional and national actors to discuss findings of items (a) and (c).

e. Ongoing capacity building on the technical and methodological topics that relate to the regional management model via training sessions and workshops for PNN staff, Corpoamazonia, SINCHI and relevant public agency staff.

f. Workshops to carry out evaluation of results and take stock of lessons learned in this process to be fed back into the Project.

(iv) Establishment of sound inter-institutional coordination arrangements with the aim of neutralizing existing illegal dynamics that constrain the mandate of the environmental authority through, *inter alia,* enhanced preventive actions, surveillance and control of the PA. Specific inputs envisioned for this activity are:

a. Workshops and working meetings to determine and roll out coordination plans for the exercise of environmental authority in the PA, in keeping with current legislation.

b. Informational meetings held with public entities and institutions in charge of the area's surveillance and control for environmental education purposes.

c. A communication strategy to be implemented by the administrative and operational headquarters of PNNSCH with the aim of reducing response times to address illegal situations in the Project area. This includes establishing connectivity to satellite Internet in Solano, connectivity to a mobile phone network and to an electronic communications system for San Jose del Guaviare, Calamar, Alto Yari, Eje Caguan, and Miriti-Villaflores.

(v) Establishment of protective measures for the territories of indigenous people living in voluntary isolation. Inputs envisioned are the following:

a. Consulting services and PNN workshops at the central, territorial and local level for the preparation of zoning and protection measures for communities living in voluntary isolation to be included in the legal framework.

b. Consulting services and workshops in coordination with CDS (CDA and Corpoamazonia) for harmonizing sub-zoning in the existing Forest Reserve Law 2 of 1959 with the protective measures to be developed under item (iv)(a).

c. Consulting services and workshops between PNN, CDS and territorial authorities to inform and educate municipalities on how to avoid contact with communities that live in voluntary isolation.

(vi) Monitoring and research strategy for conservation targets in the PA and its buffer zone. Key inputs envisioned for this activity include:

a. Workshops and meetings to establish a consultative body that will guide the research portfolio and monitoring program.

b. Consultancy for the definition and implementation of the monitoring strategy, the elaboration of the baseline (i.e. status indicators and deforestation pressure values that are associated to conservation objectives in PNNSCH) through rapid ecological assessments and scientific field trips, and for the establishment of multi-purpose plots.

A priori, the following variables will be monitored under this Project part:

a. Forest cover in *Amazonia* and *Orinoquía* humid jungle areas, in biogeographical districts Yari-Miritíí (Guyana province) and Caguan-Florencia (Amazonia province), and in the ecosystem regulating services associated with these areas.

b. Remainder areas of the Guiana shield and endemism found in those areas.

c. Areas of Chiribiquete's cultural heritage including a network of estuaries (marshs), petroglyphs, and indigenous people's ancestral housing structures (i.e. *malocas*), among others.

d. Headwaters of Ajanu, Macaya, Meta and Miriti rivers and the Huitoto River channel (there is some indication that there may be IPs living in voluntary isolation in these areas).

e. Upper and middle portions of the basin of the Apaporis river, Mesai river's Cuñare channel, and the lower portion of the Yari river basin (due to the presence of natural resources such as fishing grounds and some at-risk-fish species that are of significance to local communities settled along the area of influence of the PA).

(b) Increase the financial sustainability of about 2.7 million hectares of PAs within the PNNSCH and its buffer zone. This will require the design and adoption of a financial strategy for the PNNSCH, in concurrence with relevant authorities and sectoral agencies and consistent with the proposed PA management model. In order to achieve this, it will first be necessary to review and apply an expenditure-revenue model for use in Amazon PAs to determine the existing financial gap, and to develop and implement a tracking model for the PA's financing strategy. Taking into account the Amazonia Vision initiative for a results-based payment system, the Project will review and propose technical and operational mechanisms that will allow the implementation of such a model in the short term. Specific inputs into this activity are as follows:

a. Consultancy for the preparation of a study on a cost-revenue model for the PA with a conceptual framework and an estimation methodology based on ARPA experience, but tailored to the Colombian context.

b. Workshops between PNN and relevant entities to define an incremental goal to be targeted for closing the financing gap for effective PA management in the short, medium and long term.

10. **Part 2: Forest Governance, Management, and Monitoring**. GEF: US$2.89 million. Counterpart: US$4.80 million. This part seeks to: *(a) enhance the institutional capacity and financial sustainability for sustainable landscape governance, management, and monitoring of the Project area; (b) enhance the institutional capacity to monitor greenhouse gas (GHG) emission reductions in the Project area; (c) enhance the capacity of indigenous peoples' authorities for sustainable land-use practices and forest governance within indigenous territories in the Project area; and (d) support the disclosure of data on reduction of deforestation in the Project area.* Implementation of this part will be carried out by PNN, MADS, IDEAM, SINCHI and PNF.

11. Under this part, seven AATIs will carry out environmental and cultural zoning in their *resguardos* and ancestral lands as well as adopt regulations for the sustainable use of natural resources (i.e., fishing, hunting, mining and forestry) in an area comprising 1,342,515 hectares. In addition, PNN, in coordination with CDS and in agreement with ANH and INVIAS, will

develop special land management categories for areas that have been destined to preserve ecological interconnectivity in the Andes-Amazonia corridor and PNNSCH buffer zones in light of ongoing and future oil and gas exploration and exploitation activities as well as construction of the *Marginal de la Selva* road in the Project area (see table 2.2). Finally, Project beneficiaries will put in practice different natural resources management practices that integrate conservation efforts and sustainable use of BD.

12. Thus, expected outcomes from this part are: an increase in the capacity of various government and indigenous authorities to monitor reductions on GHG emissions and increases in the carbon stock; the ability to produce and make available to the public validated data on deforestation reduction and updated carbon estimations in natural forests; and the conservation of at least at least 95 percent of the PNNSCH's forest carbon stock by the time the Project comes to an end.

13. Below is a more detailed description of each of the integrating aspects of this part, mentioned earlier.

(a) Enhance the institutional capacity and financial sustainability for sustainable landscape governance, management, and monitoring of the Project area. This will require the following:

(i) Strengthening the capacity of regional sustainable development corporations (i.e, Corpoamazonia, CDA) and municipalities for forest governance and monitoring through the execution of a cooperation agreement with such entities. Key inputs include the following:

a. Consultancy for the development and implementation of an institutional strengthening strategy for the aforementioned entities. The strategy will identify priority work areas, goals, activities and specific functions to be pursued by these entities in the context of Project Parts 1 and 3, as well as define institutional arrangements for the implementation of the strategy. It will also help define the roles of the CDAs with regard to governance and forest monitoring in the context of the Amazonia Vision.

(ii) Establishing a surveillance and control committee to design and track preventive actions for controlling deforestation in the areas identified in early warning reports. This will require:

a. Technical assistance for the establishment of the committee and in support of its mission and for the preparation of background/support technical materials with the aim of adopting a protocol for the control of deforestation.

(iii) Generating NSFCM's deforestation early warning reports and issuing bi-annual early warning reports; generating annual indicators of natural forest cover, changes in natural forest cover and deforestation rate and issuing reports on these indicators at the regional level. This will require the following:

a. Consultancies for experts in deforestation as well as satellite image processing and interpretation in order to generate early warning reports on deforestation at least on a bi-annual basis, generate natural forest area annual indicators, changes in natural forest area and deforestation rates, and reports on forest area changes and deforestation at the regional level, by jurisdiction of environmental agencies, by departments, and by watershed More precisely, this monitoring entails: Identification of forest cover (F) and non-forest cover (NF); quantification of the net deforestation area; quantification of area that is regenerated

during the analysis period (i.e., area that changes from non-forest to forest); production of bi-annual early warning deforestation bulletins for the second semester of 2014, the first and second semesters of 2015; the first and second semesters of 2016, and the first semester of 2017; production of natural forest area maps in a 1:100,000 scale for the years 2014, 2015, 2016, and 2017; production of natural forest cover area changes in a 1:100,000 scales for the periods 2013-2014, 2014-2015, 2015-2016 and 2016-2017; evaluation of the thematic precision of the deforestation maps generated; production of indicator report for the Project reference period; and production of technical reports quantifying deforestation for the periods 2013-2014, 2014-2015, 2015-2016 and 2016-2017.

(b) Enhance the institutional capacity to monitor greenhouse gas (GHG) emission reductions. This will be accomplished, *inter alia*, through the following:

(i) Capacity building and transfer of knowledge and methodologies regarding the National System for Forest and Carbon Monitoring (NSFCM[35]) targeted at local authorities. Key inputs will be the following:

a. Technical workshops and training sessions with these groups focused on the use of protocols and algorithms employed by the NSFCM.

b. Production of technical materials to support the training initiatives in (i)(a).

(c) Enhance the capacity of indigenous peoples' authorities for sustainable land-use practices and forest governance within indigenous territories in the Project area. This can be achieved through ongoing coordination between relevant public entities and AATIs and through coordination among the seven *resguardos* in the Project area. It will require, *inter alia*, the following specific actions and inputs:

(i) Consultancy, including workshops, to generate a joint definition of identification criteria for buffer zones and the development of an action roadmap for the adoption of territorial management strategies and prevention, surveillance and control actions. Free, prior and informed consultation with each of the *resguardos* will be required and carried out as needed. An annual reconnaissance trip by air to generate and update the documentation of special areas that are of special interest for conservation will also be financed.

(ii) Consultancy, including workshops, to support the environmental and cultural zoning efforts in *resguardos* and ancestral lands, and for the development of regulations for the utilization of natural resources (eg.: fishing, hunting, mining forestry).

(iii) Technical assistance for the consolidation of the Action Plans of the indigenous people authorities' Environment and Territorial Committees.[36] This work will be carried out in close collaboration and with the full and effective participation of the AATIs.

[35] Colombia is consolidating an official and robust National System for Forest and Carbon Monitoring that has produced wall-to-wall national forest/non-forest data and deforestation rates for 1990- 2000-2005- 2010- 2012. It is slated to operate on a biennial basis with new deforestation data on 2014, but with additional resources it could operate on an annual basis starting with 2013 deforestation data. Colombia is amenable to independent verification of this data and proposes including safeguard measures related to carbon accounting. (MADS, 2013. *Colombia's Low-Deforestation Development Vision*, p. iv.)

(iv) Consultancy for the design of a food autonomy strategy and an action plan that includes the participation of public entities at the municipal, departmental and national level as well as of private sector entities.

(v) Workshops to exchange information and discuss experiences regarding food autonomy and sustainable economic alternatives.

(vi) Establishment, adoption of normative and operationalization of *resguardo-based* Monitoring Committees (*Comités de Seguimiento*) that, according to the IPPs,[37] have responsibility for monitoring the implementation of the activities agreed in the IPPs. It is expected that an annual meeting with each Monitoring Committee will be required and supported by the Project. The Project will also support the acquisition of mobile phones for the committees to facilitate communication.

(vii) Consultancy for the annual planning exercise that will be undertaken with the *resguardos* in order to prioritize the activities that have been agreed upon with the *resguardos* in their respective IPPs. The planning exercise will be managed by the National Parks Agency and will include the preparation of the budget for the activities prioritized.

(viii) Consultancy for the elaboration of a strategy proposal to link the *resguardos* to a results-based payment scheme with specific conservation/deforestation reduction targets that is consonant with their way of life and provides the basis for the appropriate channeling and distribution of resulting benefits.

(d) Support the disclosure of data on reduction of deforestation in the Project area. This will be accomplished through:

(i) Consultancy for experts in carbon monitoring for the estimation of natural forests carbon stock in at least two areas (i.e biomass and soils) in accordance with the results derived from monitoring of the forest area, as well as for conducting spatial analysis for the identification of deforestation emission mobility outside of the Project area. Key inputs include:

a. Lifting of forest inventories needed for the estimation of carbon stocks in natural forests.
b. Estimation of carbon stocks.
c. Production of technical reports for the reference period for both natural forest area and emission mobility outside of the Project area.

14. **Part 3: Sectoral Programs for Sustainable Landscape Management.** GEF: US$4.78 million. Counterpart: US$28.20 million. This part seeks to: *(a) support improvement of cross-sectoral policy coordination and consistency to achieve long-term reductions in deforestation in the Project area; (b) support the development and adoption of guidelines and programs in, inter alia, the agriculture, extractive industries and infrastructure sectors, aimed at reducing pressures on forests and biodiversity, and GHG emissions and restoring ecosystems in the Project area; and (c) support the promotion of sustainable land-use and natural resource*

[36] These committees are a part to the political-administrative structure of the government and are responsible for exercising environmental authority in the *resguardos*.
[37] This refers to the IPPs that were developed with the *resguardos* during the prior consultation exercise carried out in the framework of the expansion of PNNSCH that took place during 2012 and 2013.

management practices that contribute to the restoration of vegetation, reduce pressure on forests and advance the livelihoods of local communities in the municipalities of San Jose del Guaviare, Calamar and Cartagena de Chaira (see Map in Annex 7). PNN, MADS and PNF will share responsibility for implementing aspects of this part according to their technical capabilities. SINCHI will be responsible for the sound implementation of agroforestry productive arrangements to be carried out under item (c).

15. More specifically, Part 3 will incorporate conservation and sustainable use of biodiversity principles and biodiversity management principles into selected government sectors that are drivers of deforestation (i.e., agriculture, extractive industries and infrastructure) through sectoral agreements and/or instruments.[38] Each activity to be identified in the agreements will follow three steps: (a) consolidation of existing information (assessment of obstacles and alternative solutions); (b) consensus building with stakeholders (analysis of constraints and solutions); and (c) development of solutions (methods and procedures).[39] As a result, government agencies (i.e., MADR, INVIAS and ANH) will dedicate attention and resources to the identification and implementation of mainstreaming opportunities at the regional level that enjoy the support of relevant stakeholders at the national level. It will also pursue strategies for incorporating the objective of biodiversity conservation and sustainable land use into policies, programs, projects, and development plans at different levels of government activity. These mainstreaming practices will be tested on the ground through applied land management activities adopted in concrete cases that have environmental implications for connectivity and conservation in the Project area (eg.: oil/gas exploration and exploitation activities, construction of roads, etc.) Moreover, 200 *campesino* families will incorporate agroforestry sustainable management practices in the cultivation of their plots. If successful, these practices will contribute to scale up the mainstreaming of environmental policies from the bottom, which could be translated at the top into the promotion of incentives, access to credit and similar measures for the segment of producers involved.

16. Thus, the expected outcomes from this part are crafting and implementation of at least three sectoral agreements with deforestation-inducing sectors to place portions of the PA under land or other management practices so as to reduce deforestation pressures on forests and biodiversity, and to control the main deforestation drivers; and engaging local communities and IPs in the adoption of sustainable natural resource management practices, forest governance and land use. A detailed explanation of each aspect of the part is provided below.

(a) Support improvement of cross-sectoral policy coordination and consistency to achieve long-term reductions in deforestation in the Project area. This will be accomplished through the actions described next.

[38] Initially, the resulting agreements will be voluntary and will cover specific actions and commitments of the different parties. While it is expected that this process will influence policies and regulations at the regional level, the Bank cannot guarantee specific policy and regulations outcomes.

[39] This approach is based on the experiences of the National Biodiversity Projects (PROBIO I and II) in Brazil and current government initiatives in terms of consolidating information and building consensus.

(i) Elaboration of a management proposal for "type A" zones within the Amazon Forest Reserve, in proximity or next to PNNSCH, those are important for the preservation of the Andes-Amazonia ecosystem interconnectivity, in conformity with management categories as per the Protected Areas National System (SINAP) and all other sectoral agreements.

(ii) Establishment of a working group in charge of coordination, strategic planning and tracking of zoning that pertains to the Forest Reserve Law No. 2 of 1959, capable of identifying and adopting sectoral arrangements that can be linked to deforestation reduction and biodiversity conservation efforts.

(b) Support the development and adoption of guidelines and programs in, inter alia, the agriculture, extractive industries and infrastructure sectors, *aimed at reducing pressures on forests and biodiversity, and GHG emissions and restoring ecosystems in the Project area.* The following activities will support this aspect of the part:

(i) Development and adoption of guidelines for the prevention and control of deforestation and incorporation into the environmental management instruments of the agriculture, extractive industries and infrastructure sectors. Key inputs include:

a. Consultancy to carry out a study to evaluate the existing restrictions and gaps on environmental licensing and similar instruments related to road construction and improvements and exploration and exploitation of hydrocarbons.

b. Workshops with sectoral, environmental and territorial authorities as well as the private sector and civil society organizations.

c. Consultancy to carry out a study that will outline the technical basis for the incorporation of voluntary good practices, environmental standards and licensing by the sectors in areas deemed and prioritized as being of special environmental interest.

d. Execution of a "Pact on good practices for the prevention and reduction of deforestation in areas of special environmental importance" between environmental authorities and development sectors (agriculture, extractive industries and infrastructure). Key inputs will include inter-sectoral workshops.

(ii) Strengthen productive chains by identifying institutional, technical and financial conditions under which private sector participation can help promote the development of markets for low-deforestation productive activities and formulate a plan to finance and promote sustainable production and market development while conserving biodiversity. A key input for this activity is:

a. Consultancy for the elaboration of a proposal of productive chains associated with biodiversity conservation and a financing instrument for their development (including markets).

(c) Support the promotion of sustainable land-use and natural resource management practices that contribute to the restoration of vegetation, reduce pressure on forests and advance the livelihoods of local communities in the municipalities of San Jose del Guaviare,

Calamar and Cartagena de Chaira.[40] This will be accomplished through the following actions:

(i) Promotion of sustainable practices for the prevention and control of deforestation due to the expansion of the agricultural frontier and colonization.[41] (Box 2.1 provides details on the selection criteria used by the Project to determine the areas to be prioritized for the implementation of agroforestry productive arrangements under this aspect of the part). To achieve this end, the following key inputs will be needed:

a. Technology transfer to 200 *campesino* families in the municipalities of San Jose de Guaviare, Calamar and Cartagena de Chaira for the establishment and maintenance of 600 hectares of agroforestry plots and the conservation of 22,700 hectares of forest. This will require carrying out geo-referencing of the plot sites and production of maps as key inputs needed for the demarcation of project intervention areas; participation of the beneficiaries in workshops and consultations in order to develop land-use and management plan proposals for the sites; capacity building for these families on environmental regulations, zoning and planning tools, and farm organization. A proposal for managing each plot will also be necessary.

b. Consultancy for the design and implementation of agroforestry productive practices that promote both ecological connectivity and provision of ecosystem services in the region. Implementation will require the production and provision of seedlings and vegetal material to beneficiaries and close follow up.

c. Capacity building and training for producers and local organizations on sustainable productive systems (eg.: soil protection and improvement in environmental conditions; selection of agroforestry species; maintenance of the forestry part); optimal use of biodiversity products; clean production and biodiversity conservation, and forest landscapes; and REDD+ strategies.

d. Consultancy to carry out a diagnostic assessment of alternative policy instruments, including financial and economic instruments, used to prevent deforestation and promote best practices in soil use and land management. Through this assessment, the Project seeks to determine the suitability of such instruments for adoption in the Project area, as well as to identify enabling conditions for their application.

e. Consultancy for the design and implementation of a financial strategy to initiate the pilot phase of a biodiversity offset scheme, including capacity building workshops on the subject.

f. Consultancy for a study to track and document financing opportunities for conservation strategies, deforestation reduction and promotion of sustainable economic development, as defined in the Amazonia Vision. It will include the identification of

[40] This aspect of the Project will integrate the gender dimension into consideration and will target its activities to women in these communities. The associated indicator to measure the impact of these activities will be fed by gender-disaggregated data. It has been estimated that these activities will reach about 1,742 females in *resguardos* and about 400 females in *campesino* communities.

[41] Since 1995, SINCHI has carried out the implementation of proposals and research projects in Guaviare department in agroforestry. The data stemming from nearly two decades of work in the area points to the somewhat promising potential of agroforestry in the region (see box 2.2).

potential investments and will define the requirements and opportunities that are present in order to channel such investments in the direction of the objectives and strategies laid out in the Amazonia Vision.

g. Consultancy for monitoring agroforestry production in the priority areas selected for the establishment of productive arrangements and sectoral agreements with MADR. At a minimum, the following variables will be monitored on a regular basis: coverage change monitoring, changes of chosen species in height, diameter, survival, strength and some impact indexes that are measured annually and are related to impact on soil and microbial diversity; carbon and biomass valuation with dasometric growth parameters and application of prediction models that are custom-designed for the area; and techniques and costs for the establishment, management and utilization of the production.

17. **Part 4: Project Coordination, Management, Monitoring and Evaluation (M&E).** GEF: US$1.23 million. Counterparts: US$0.54 million. *This part will strengthen the Project Coordination Unit (PCU) to ensure coordination, management, monitoring, evaluation, and communication in connection with the implementation of the Project.* The PCU through PNF will have a leading role in this part while PNN, MADS, IDEAM and SINCHI will support the PCU in tracking PDO result indicators and intermediate indicators, as detailed in Annex 1. This part envisions the establishment of appropriate communication channels among the five Project co-executing agencies as well as the creation of spaces for effective discussion and feedback and the establishment of a Project grievance mechanism. Coordination of Project activities, production of progress reports and dissemination of Project information and outcomes will also be carried out under this part. Project management including financial management and procurement, overall monitoring and safeguards compliance will be carried out through this part. PNF will be in charge of leading this part with guidance from the EC. Key inputs include:

a. Consultancy for the design of a methodology to assess strengthening of institutional capacity of key government institutions and indigenous authorities envisioned under Indicator 2 in the Results Framework (see Annex 1).

b. Consultancy for the gathering, consolidation and analysis of all Project indicators and production of progress reports.

Box 2.1 Selection criteria for the identification of priority areas where the Project will encourage interventions in land-use and natural resources management

The selection of the areas chosen for intervention was based on a multicriteria analysis applied in 628,545 hectares of territory in the Project area. The analysis consisted of qualifying and weighing a set of variables: (1) biodiversity, (2) social dimension, (3) legal land status, (4) sustainability of production, and (5) present and future deforestation scenarios. These are explained below.

(1) Biodiversity: Three variables were chosen to prioritize this factor: First, existence of Andes-Amazonia connectivity of land ecosystems (north-south direction) and Tropical floodplain rivers and wetlands ecosystems (west-east direction); second, presence of ecosystem services pertaining to water regulation and carbon storage; and third, presence of priority ecosystems by virtue of their uniqueness or for serving as habitats to species that are key to preserving ecosystem health (eg.: jaguar).

(2) Social dimension: Two variables were chosen: first, deforestation drivers associated to each one of the zones of "low", "medium" or "high" intervention or transformation*; and second, presence/absence of social entities of territorial character (eg.: communal associations, *núcleos interveredales)* or productive character that may provide sustainability to the intervention.

(3) Legal land status: Four variables were taken into account in the characterization of this feature. First, type of Amazon Reserve Forest zoning. Zones classified as "A" or B" were given higher priorities than "C" zones (classification is given by Resolution 1925 of 2013). Second, land-use zoning of the Restoration Zone for southern Production of the Ariari-Guayabero Integrated Management District. Third, La Macarena Special Management Area. And fourth, the existence of land-use environmental and planning regulations in indigenous peoples reserves.

(4) Sustainability of production: In addition to taking into account the zoning characterizations mentioned in (3) above, two additional variables were established: first, potential for agroforestry and forest development and second, accessibility and interconnection of the area.

(5) Present and future deforestation scenarios: The analysis of present and future deforestation scenarios incorporated sectoral initiatives for oil development (i.e., areas under exploration, areas in the process of incorporation, and areas available for future negotiation rounds), mining (existing concessions and requests) and planned roads; property concentration trends, deforestation hotspots and level of intervention-change in coverage.

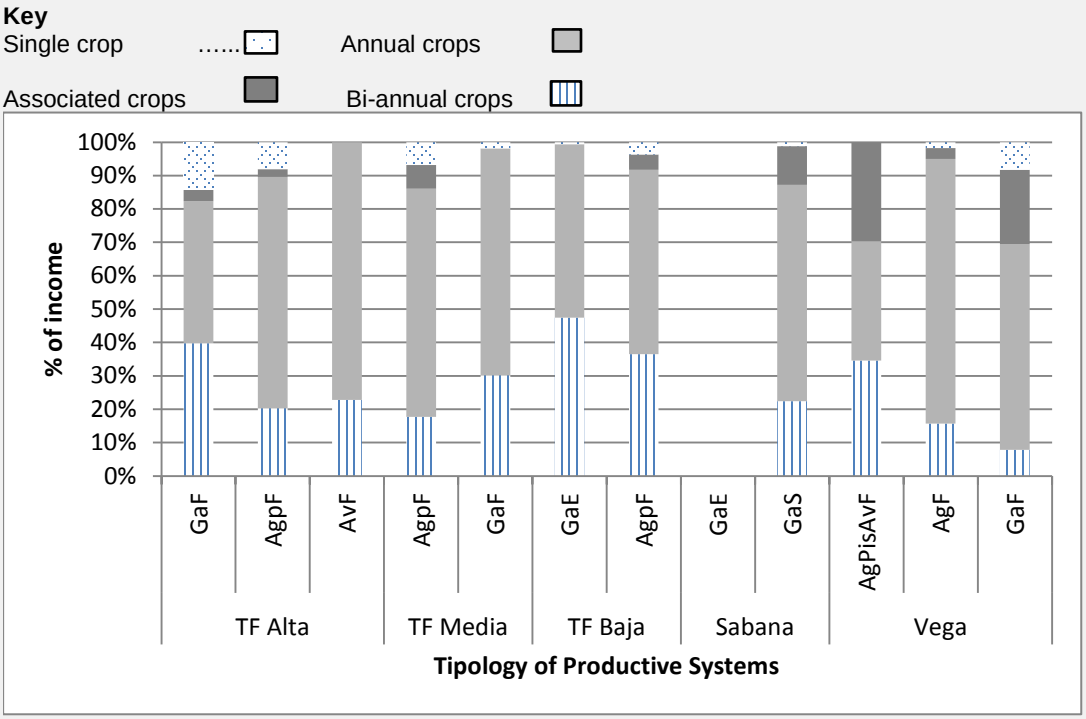
Finally, it was deemed necessary to identify the location of investments (existing and in process) to facilitate scaling up of interventions whenever feasible.

* Studies carried out by SINCHI on deforestation indicate that there is some correspondence between the degree of deforestation observed in these areas and modalities of production, socio-economic consolidation and the type of deforestation driver observed. "Low" intervention zones are characterized by the presence of recently-arrived colonizers, who settle either close or on the frontier of PAs. Slash-and-burn practices and subsistence farming are common in these areas. "Medium" intervention zones are characterized by the presence of agriculture and livestock producers usually without land tiles; forest and pastures coexist. In "high" intervention zones, the predominant activity is cattle ranching, roads and productive infrastructure; the use of modern technology in production is common in these zones. Deforestation rates are low due to the fact that the land has already been converted to pasture and there is a high concentration of land tenure and property.

Box 2. 2 Potential of agroforestry in Guaviare

To date, SINCHI's efforts in Guaviare Department have contributed to the preservation and cultivation of 1,100 hectares that have benefited 500 people. Early efforts targeted an area of 1 hectare per beneficiary and more recent ones, between 2007 and 2011, increased the plot area to 4 hectares per beneficiary. The data collected and analyzed shows that between 1998 and 2012, the area under cultivation of so called "associated crops", which comprise agroforestry products, increased from an average of 4.2% to 25%. This change signals a change in soil use. However, in terms of income generation, the data suggests that annual crops such as plantains, cassava and some fruits still account for 47%, while bi-annual crops such as maize and rice account for 21%. Income from agroforestry species only represents about 5% of agricultural income, but it is important to take into account that these species require a longer time horizon than their counterparts to generate income due to their longer cultivation times.

Distribution of agricultural income by type of crop



Source: Barrera *et al*, 2014. *Diversification of livelihoods and improvement in income generation of agroforestry systems in the Colombia Amazon.* Unpublished document. Sinchi Institute.

C. Drivers and Monitoring of Deforestation

18. In the case of Colombia, deforestation is largely determined by seven causes or drivers, namely: (a) expansion of the agricultural/livestock frontier; (b) illicit crop farming; (c) random settlement/displacement of populations; (d) infrastructure (including that associated with energy-related activities, roads, etc.); (e) mining; (f) extraction of timber for sale or personal consumption (including both legal and illegal extraction); and (g) wildfires.

19. These drivers of deforestation in turn have a number of underlying causes which may be demographic, economic, political, institutional, technical, environmental, or cultural. (see figure 2.1). Although it has been determined that about 75 percent of natural forest cover loss is associated with the expansion of the agricultural frontier and colonization, it must be recognized that it is also closely related to cultivation and eradication of illicit crops. Clearing of a few forest acres to create community settlements develop minor productive agricultural activities, but have a major impact on the increase in degradation and deforestation..

20. One initial way to approach a quantification of potential deforestation drivers in the country can be generated based on the classification of forest cover change with regard to other coverage made by the IDEAM for the 2000 to 2005 period. In its "Technical Report for the Quantification of Historical Deforestation in Colombia" (2010), it stated that "for the 2000-2005 period the change in forest cover through deforestation occurs mainly to secondary vegetation coverage, which corresponds to 38.2 percent of the changed area. It is also important to take into account changes to heterogeneous pastures and agricultural areas, with 36.2 percent and 14.7 percent, respectively." Deforestation associated with increases in pasture cover mainly occur in the Amazon region (14.1 percent of the total area of deforestation), followed by the Andean region (7.7 percent of the total area of deforestation). This reveals the significant role played by this driver of deforestation in these areas.

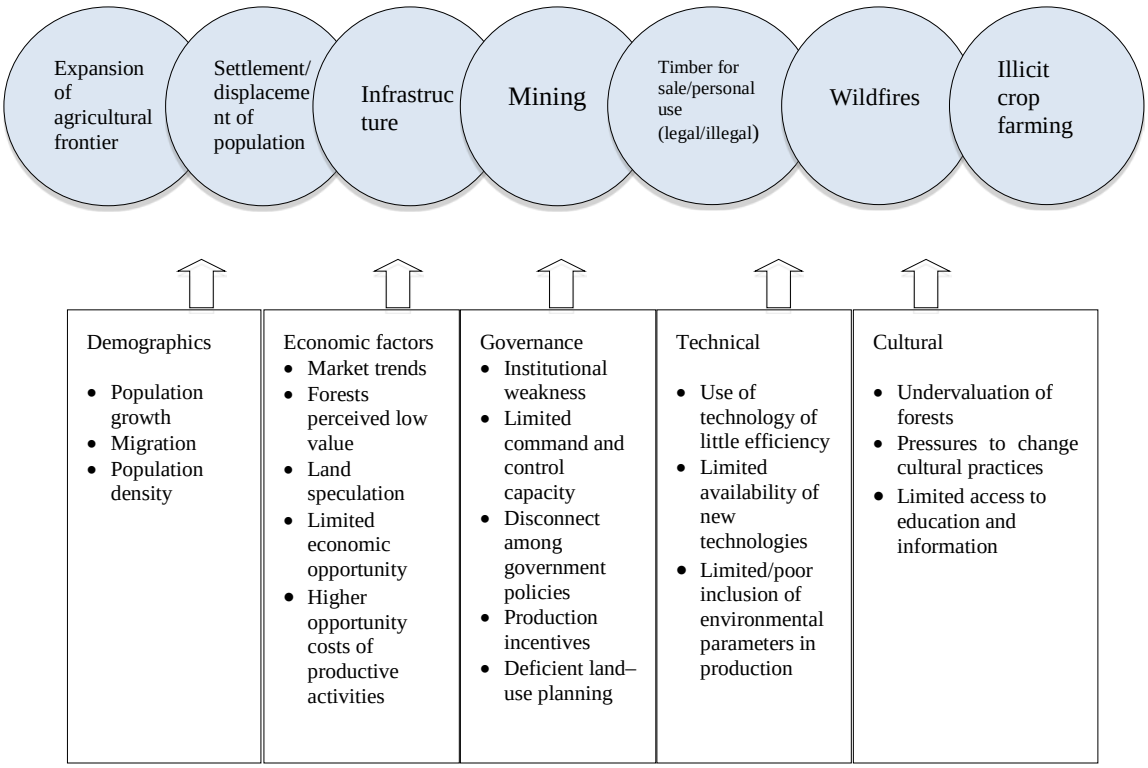
21. In addition, most of the change at the national level can be attributed to factors of forest degradation, probably because of selective cutting of timber for sale or personal consumption or small-scale agricultural activities. On the other hand, the change in pasture land (36.2 percent) hints at the expansion of the cattle frontier as the main factor driving the country's forests, which in turn is followed by its conversion to different types of agricultural land. From this type of information it is not possible to determine whether changes to heterogeneous grassland or cropland came about directly by means of a shift to agricultural uses or were prompted by a previous change due to development of illicit crops. These data show that about 90 percent of the deforestation in this period can be attributed to agricultural activities, whether legitimate or not. This same approach can be made at the regional level, where the areas of change from forest cover to secondary vegetation are concentrated in the Andean and Amazon regions, yielding percentages of 9.7 percent and 9.5 percent, respectively. This may suggest relevant degradation processes and/or forest intrusion.

22. In the case of the Orinoco region, the presence of burned areas was observed, a fact that could indicate the importance of mainly focusing activities on controlling this deforestation driver in that region.

23. IDEAM is the institution in charge of deforestation monitoring in Colombia. Colombia's approach to reference levels and a monitoring system for emissions and removals is detailed in its R-PP. With the support of the Gordon and Betty Moore Foundation, IDEAM undertook the Technical Capacity Project to support REDD in Colombia from 2009 to 2011. This project laid the basis for the Measuring, Reporting and Verification (MRV) system that the country is building to monitor deforestation and associated GHG emissions. The project developed important protocols for monitoring deforestation with remote sensing, estimating biomass and carbon contents of natural forests and the GHG emissions attributable to deforestation. These

protocols were validated in the field with a pilot project in Huila department in the Andes and Amazon regions. The project also had a part that laid the groundwork for future work in deforestation projections necessary to build reference levels.

Figure 2.1 Factors influencing deforestation drivers



Source: Ministry of Environment of Colombia, 2013. *Propuesta de Preparación ONU-REDD.* Submitted to FCPF on September 30. Available online at: http://forestcarbonpartnership.org/sites/fcp/files/2013/Nov2013/R-PP%20REDD%2B%20V-8.0%2030-sept-2013.pdf, accessed on June 6, 2014.

Deforestation monitoring with digital image processing

24. In order to quantify deforestation in Colombia, an approach was developed by IDEAM using multiple scales and combining optical and radar sensors. The Protocol of Digital Processing of Images for Deforestation Quantification in Colombia proposes national and subnational approaches at coarse and fine scales.

25. For the national level, the protocol indicates that a coarse-scaled analysis would be undertaken annually with low resolution images (250 m/1:500,000). The purpose of this monitoring is to rapidly identify deforestation hotspots. The fine-scale analysis would ideally take place every two years, employing medium resolution imagery (30 m/1:100,000). In addition to identifying deforestation, a land cover change analysis would be undertaken.

26. For the subnational level, the coarse-scale analysis indicated employs 10 m resolution imagery at a scale of 1:50,000. The fine-scale analysis, suitable for projects at a local level, employs high-resolution imagery (1-5 m/1:25,000 or higher).

27. IDEAM undertook the first iterations of the analyses following the protocols. National-level deforestation was calculated at a coarse level for the 2000-2007 intervals with MODIS imagery. The analysis at a fine scale was carried out for the intervals 1990-2000-2005-2010 with LANDSAT TM and ETM+ imagery.

Estimation of carbon contents

28. IDEAM estimated aerial biomass and carbon stocks in Colombia's natural forests using information from more than 3,500 vegetation plots and forest inventories throughout the country. Specific allometric models for Colombia were built for different types of forests, showing that the range of carbon content oscillates between 48 and 148 tons of carbon per hectare. The estimates were produced with a low uncertainty (14.6 percent) following IPCC guidance. With the project, IDEAM developed a Protocol for a National and Subnational Estimation of Biomass and Carbon Contents in Colombia, essential to determine baselines for any REDD+ projects.

29. IDEAM is developing the Reference Level for the Amazon region of Colombia, which will be ready by the beginning of 2015. This Project will support IDEAM as it improves information on carbon stocks of natural forests and appropriate methodologies implemented to account for emissions displacement, linked to the national MRV system.

30. The Project will also enable significantly the consolidation of the MRV system in the Amazon so that it enhances implementation of a "Payment-for-Results in Reducing Deforestation" program with Norway, United Kingdom and Germany. All three countries are working now on the feasibility stage of this program. CCM funding is catalytic because it enables SFM funding. It also provides for the inclusion of CCM concerns in the agenda of all the public private agreements that are the objective of the project, examining the carbon footprint of these activities and helping design the agreements with GHG reductions and carbon sequestration in mind.

D. Project Alignment with GEF Strategy

31. The proposed Project is consistent with the GEF focal areas of Biodiversity (BD), Climate Change Mitigation (CCM), and Sustainable Forest Management/REDD (SFM/REDD+). It is also consistent with the "GEF 5 Focal Area Strategies" document. The Project will contribute to the following GEF strategic objectives: (a) BD-1: Improve Sustainability of Protected Area Systems; (b) BD-2: Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors;[42] (c) CCM-5: Promote conservation and

[42] Under this strategic objective, Project beneficiaries will put in practice different natural resource management practices that integrate conservation efforts and the sustainable use of biodiversity. For instance, 200 *campesino* families will incorporate agroforestry sustainable management practices in the cultivation of their plots. Moreover, PNN, in coordination with CDS and in agreement with ANH and INVIAS, will develop special land management

enhancement of carbon stocks through sustainable management of land use, land-use change, and forestry (LULUCF); and (d) SFM/REDD+-2: Reducing Deforestation: Strengthen the enabling environment to reduce GHG emissions from deforestation and forest degradation and enhance carbon sinks from LULUCF activities. Table 2.3 shows the allocation of Projects funds by GEF strategic objective.

Table 2.3 Allocation of Project Funds by GEF Strategic Objective

Focal Area Objectives	Indicative Grant Amount ($)	Indicative Co-financing ($)
BD-1	1,797,539	2,028,796
BD-2	1,996,891	11,187,271
CCM-5	4,633,114	19,593,519
SFM/REDD-2	1,972,456	2,641,199
Total Project Cost	**10,400,000**	**35,450,785**

E. Consistency with National Initiatives

32. This proposed Project follows from Colombia's long-standing commitment to conservation, to improve governance, consolidate, preserve and sustainably manage Protected Areas in the Colombian Amazon. As mentioned, this national commitment is reflected in the NDP 2010-2014, as well as in the R-PP for its ENREDD+. The ENREDD+ for Colombia is in advanced stages of development: the Readiness Proposal Preparation (R-PP) for the National Strategy[43] was carried out by MADS, through its Directorate for Forests, Biodiversity and Ecosystem Services, between June 2010 and April 2013, in full consultation with some 280 organizations and 700 people, including indigenous peoples, Afro-Colombian communities, farmers, NGOs, productive sectors, regional authorities, ministries and the Ombudsman's Office.

33. In 2009, Colombia became the fifth Latin American country, and the twelfth in the world, in number of projects available that were eligible for Clean Development Mechanism (CDM) treatment in the Kyoto Protocol and contributed with a reduction of more than 827,384 tons per

categories for areas that have been destined to preserve ecological interconnectivity in the Andes-Amazonia corridor and PNNSCH buffer zones in the context of ongoing and future oil and gas exploration and exploitation, and the construction of the *Marginal de la Selva* road. Seven AATIs will also carry out environmental and cultural zoning in their *resguardos* and ancestral lands as well as adopt regulations for the sustainable use of natural resources (i.e., fishing, hunting, mining and forestry) in an area comprising over two million hectares.

[43] The R-PP includes an assessment of the country's situation with respect to deforestation, forest degradation, sustainable management of forests and related governance issues and identifies actions required in order to develop REDD+ strategy options; a management framework to manage key social and environmental risks and potential impacts associated with REDD+; a reference level of historic forest cover change and potentially forward-looking projections of deforestation; and a design of a forest monitoring system to measure, report and verify the effect of the REDD+ strategy on forest cover change and drivers of deforestation and forest degradation, as well as other variables relevant to the implementation of REDD+ strategies. (MADS, ¨Preparation Proposal (R-PP)¨. September 30, 2013. Available online at: http://forestcarbonpartnership.org/sites/fcp/files/2013/Nov2013/R-PP%20REDD%2B%20V-8.0%2030-sept-2013.pdf).

year of CO_2 equivalent.[44] The NDP states that Colombia plans to increase the number of CDM projects from 158 to 300 in 2014 (GoC, Second NatCom to UNFCC, 2010). Over 50 percent of total emissions were estimated in the 2004 GHG inventory to come from agriculture and LULUCF.[45]

34. At the UN Climate Summit in Copenhagen in 2009 and again in Cancun in 2010, Colombia indicated its goal to reduce deforestation in the Amazon to net zero by 2020, provided that international financial support is available. Restoration activities are a goal of the 2008 National Plan for Ecosystem Restoration, Recovery and Rehabilitation.

35. In 2011, MADS released its National Compensation Policy, which establishes clear procedures for identifying and quantifying measures for offsets in terms of biodiversity loss. The aim is to help government and the private sector create parallel measures for how each site affected by biodiversity loss should be compensated, thus ensuring that impacts of large infrastructure projects on the environment will be mitigated and compensated appropriately for any loss of biodiversity.

36. Finally, the proposed Project is also aligned with the actions and goals set forth in the National Action Plan for Implementation of the Protected Areas Work Program of the Convention on Biological Diversity, of April 2012, and the supporting Policy for Consolidation of the National System of Protected Areas, established in 2010, as well as with the Aichi Biodiversity Targets, particularly 7, 11 and 15.[46]

[44] GoC, Second National Communication to UNFCC. December 2010.
[45] IDEAM, 2009 in GoC, 2010.
[46] These targets are enunciated under the five Strategic Goals of the Strategic Plan for Biodiversity 2011 – 2020, adopted by the Convention on Biological Diversity. They are related to increasing the area under agriculture, aquaculture and forestry that is managed sustainably, promoting the conservation of terrestrial and inland water areas as well as coastal and marine areas through the establishment of PAs, and promoting the contribution of biodiversity to carbon stocks.

Annex 3: Implementation Arrangements

COLOMBIA
Forest Conservation and Sustainability in the Heart of the Colombian Amazon Project (P144271)

A. Project Institutional and Implementation Arrangements

Contractual Arrangements

1. The Recipient of the Grant will be PNF, which will act as the Project Coordination Unit (PCU) for the Project. The Grant Agreement will be entered into between the World Bank, as GEF Implementing Agency, and PNF.

2. PNF will also execute a Sub-grant Agreement with SINCHI Institute so that SINCHI can, in turn, implement specific activities related to the Project. Transfer of financial resources from PNF to SINCHI will be governed by this Agreement.

3. PNF will also sign an Inter-institutional Agreement with partner entities MADS, PNN, SINCHI and IDEAM, prior to the Project's effectiveness date. These institutions will be responsible for implementing specific Project activities under their respective technical areas of expertise (see section B. Functions and Responsibilities of Participating Institutions). No transfer of financial resources to these institutions will take place.

4. PNF, MADS, PNN, and IDEAM will also enter into Cooperation Agreements with CDS and AATIs for the execution of some activities under Part 2 pertaining to the implementation of actions agreed upon with indigenous peoples during the consultation process that took place in the context of PNNSCH's expansion, and which are detailed in the IPPs agreed with each *resguardo* [(see section VI (E)]. PNF, MADS, PNN, and IDEAM will also enter into Cooperation Agreements with key sectoral agencies, deemed strategic allies, in order to roll out the sectoral programs envisioned under Part 3 and to develop strategies to increase financing for the management of PNNSCH (Part 1). The institutions include MADR, ANH and INVIAS. No transfer of financial resources will take place in these cases either.

Governance and Implementation Arrangements

5. The governance structure will count on a high-level Advisory Committee, an Executive Committee, and the PCU.

6. The Advisory Committee (AC). This committee, led by the Vice Minister of MADS, or his/her delegate, will provide strategic guidance to overall project implementation, facilitate project mainstreaming into key productive sectors and coordinate strategies of international cooperation.[47] The AC will meet at least twice a year and will be comprised of representatives

[47] The existence of such an advisory body falls within the context of the GoC's Amazonia Vision initiative, which is led by MADS under the coordination of the Office of the Vice Minister.

from the national, regional and local governments as well as from civil society and a representative from donor organizations. Committee members will be convened by the MADS Vice Minister. The AC will be able to set up task forces to deal with issues of a complex or strategic nature, as needed. The AC is to evolve into a Consultative Committee and related bodies, as called for in the "Amazonia Vision" initiative, once the Government establishes governance arrangements for the latter initiative.

7. The Executive Committee (EC) will comprise of representatives from the partner entities with responsibility for implementing project activities under their competence. The EC will provide technical guidance and supervision to the PCU. PNF will serve as Technical Secretariat to this committee through the Project Coordinator appointed to lead the PCU. During the Project's first year the EC will make sure that participatory processes take place to: (a) thoroughly identify regional and local stakeholders so as to maximize the Project's positive impact; (b) carry out assessments to build a baseline for M&E purposes; and (c) establish the precise Project intervention area.

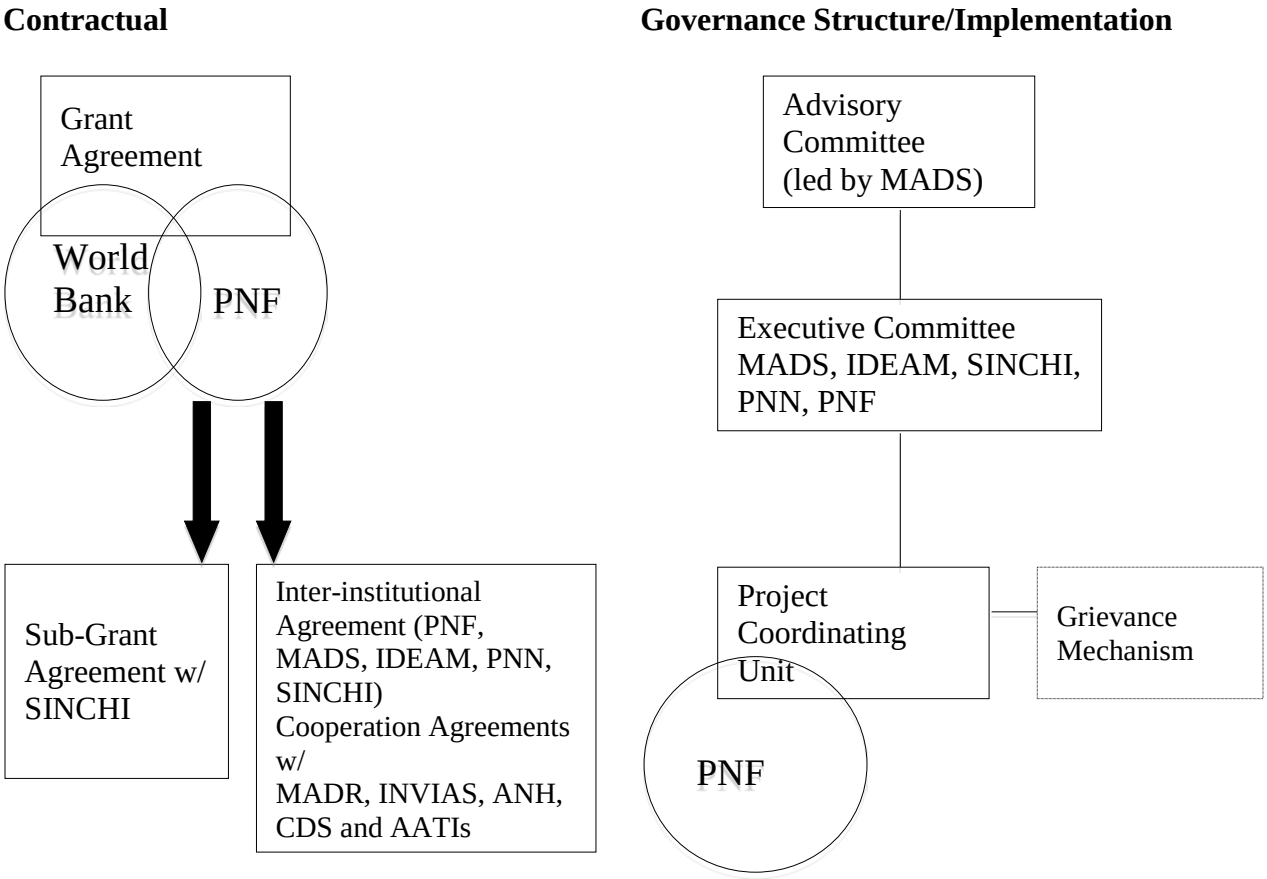
8. A PCU has been established within PNF to administer Project funds and carry out procurement and financial management, as well as have oversight of all project activities, including safeguards. The PCU will comprise of technical staff and administrative staff drawn from the participating implementing agencies. Their work will be led by a Project Coordinator. Technical staff will include the following: a Project Coordinator (PNF), a Support Professional (PNF), a Protected Areas Specialist (PNN), an Indigenous Peoples Specialist (PNN), a Deforestation Specialist (IDEAM), a Sectoral Policies Management Specialist (PNN), a Monitoring and Evaluation Specialist (MADS), a productive systems coordinator (SINCHI), a Financial Sustainability Expert (PNF). Administrative staff will include: a Procurement Specialist (PNF), a Financial Management Specialist (PNF)**,** an Administrative Assistant (PNF), a Procurement Specialist (SINCHI), a Financial Specialist (SINCHI)**,** an Administrative Assistant (SINCHI). Figure 3.1 depicts the governance, institutional and contractual arrangements of the Project.

9. A Project grievance mechanism will be set up within the PCU to address any potential conflicts or disputes involving Project beneficiaries or stakeholders throughout project implementation. The objective of the mechanism is twofold: (a) to ensure that requests and complaints brought forward by individuals and communities potentially affected by Project activities receive due attention and timely resolution; and (b) to serve as a learning mechanism for the Project to improve performance on an ongoing basis. In order to support the implementation of the activities included in the IPPs, the IPPs provide for the establishment of special "Monitoring Committees" (*Comités de Seguimiento)* in each of the *resguardos*. In the *resguardos*, the Monitoring Committees will address requests or complaints that originate within the *resguardos* first hand and will share the information regarding the receipt and processing of complaints with the PCU on a regular basis. These Committees will be provided with the appropriate resources and support so that the indigenous communities themselves are able to plan and track the execution of the activities included in the various IPPs agreed with the AATIs and so that they can prepare any culturally adapted and appropriate tools for engaging the rest of the community. In terms of addressing any possible grievances related to project design or implementation, whenever feasible, the PCU will support existing conflict resolution

mechanisms in *campesinos* and IP communities. The grievance mechanism will have clear procedures in place for dealing with requests and complaints. Such procedures are described in detail in the Project OM.

10. All the agencies involved in the proposed Project have capacity to implement social and environmental standards. For example, PNN has been working very closely with *resguardos* in the preparation of action plans as part of the expansion of PNNSCH. SINCHI is fully involved in field activities in the targeted area. MADS has benefited from working on the formulation of Colombia's ENREDD+ strategy, which involves the development of social and environmental safeguards. Responsabilities and roles are clearly outlined in the proposed Project's OM and will be included in the Inter-institutional Agreement to be executed by all Partner Entities as a condition for the proposed Projecte to become effective.

Figure 3.1 Governance Structure and Institutional Arrangements of the Project



B. Function and Responsibilities of Partner Entities

11. **PNF**, as Recipient, is responsible before the Bank, of ensuring that Project implementation be carried out, and of taking care of the Project's financial management, accounting and procurement processes. It has responsibility for the following functions and responsibilities:

(a) participate in both the Project's AC and EC through its Director or his/her delegate;
(b) execute and implement the Grant agreement subscribed with the Bank for the use of GEF financial resources in conformity with sound technical, economic, financial, managerial, and environmental and social standards and practices, acceptable to the Bank, including in accordance with the OM, and all of it in accordance with the Grant Agreement;
(c) sign a Sub-grant Agreement with SINCHI and keep track of and financially supervise said agreement;
(d) sign and coordinate the Inter-institutional Agreement for Project implementation with PNN, IDEAM, MADS and SINCHI;
(e) implement the Project with due diligence and efficiency;
(f) comply with the Bank's Anticorruption Guidelines as specified in the Grant Agreement;
(g) submit to the Bank bi-annual progress reports that include information on results indicators and other key indicators agreed with the Bank, FM reports, procurement reports and

detailed financial statements. These reports will be prepared by the PCU and submitted for approval to the Project's EC after they are submitted to the Bank, in conformity with that which is set forth in the Grant Agreement;

(h) provide all the necessary information to the Bank and the Project's AC regarding progress made, operations, records and documents relevant to the Project on a timely basis;
(i) participate in the Project's EC through its Director or delegate;
(j) chair the Technical Secretariat of the Project's EC through a Project Coordinator;
(k) establish the Project's PCU;
(l) coordinate and supervise the setting in motion of all activities through the PCU;
(m) coordinate the Project's financial management and procurement management;
(n) execute the Sub-grant Agreement with SINCHI and carry out the financial supervision of said agreement;
(o) submit withdrawal applications, Project budgets and AOPs to the Bank for approval and corresponding disbursement of funds;
(p) comply with all Bank procurement guidelines and procedures;
(q) formulate the Project's AOPs that correspond to the outputs under its responsibility, as per the Matrix of Results, Outcomes, Activities and Responsibilities, and submit them to the PCU for consideration and for approval by the EC;
(r) coordinate with partner entities the formulation of AOPs that require shared management, as per the Matrix of Results, Outcomes, Activities and Responsibilities, and facilitate and technically support the implementation of Project activities that so require;
(s) agree with partner entities on the timely application of social and environmental safeguards, in conformity with the guidelines established in the ESMF, all seven IPPs for the *resguardos* in the Project area, the Guidelines for Indigenous Peoples Living in Voluntary Isolation (a.k.a. Institutional Guide for Avoiding Contact and Negative Impact on Indigenous Peoples Living in Voluntary Isolation), and the PF;
(t) coordinate with partner entities the allocation of responsibilities that each will have in the tracking of the indicators laid out in the Project's Results Framework (Annex 1);
(u) provide support to the PCU in the estimation of the Project's baseline and in the tracking of project indicators;
(v) secure the participation of an expert in Financial Sustainability in the PCU;
(w) participate in local participatory, planning and monitoring mechanisms;
(x) prepare TORs and oversee the proper execution and implementation of contracts awarded for activities under its responsibility; and
(y) facilitate coordination with national and regional government agencies.

12. **SINCHI,** as sub-grantee, and partner entity, will be responsible for the following:
   (a) participate in the Project's AC and the EC through its Director or a delegate;
   (b) execute a Sub-grant Agreement with PNF and provide the corresponding reports in conformity with the commitments that stem from said agreement;
   (c) draft the AOPs and procurement plans relevant to the activities under its responsibility, as per the Matrix of Results, Outcomes, Activities and Responsibilities, and submit said plans to the consideration of the PCU, and for approval by the EC;
   (d) under the PCU's guidance, coordinate with partner entities the drafting of AOPs that require shared management, as per the Matrix of Results, Outcomes, Activities and

Responsibilities, and facilitate and technically support the implementation of Project activities that so require it;

(e) formalize the annual budget and procurement plans needed for the implementation of the activities under its responsibility;
(f) be in charge of the procurement process for goods and services needed for those activities under its responsibility, in accordance with procedures laid out in the Project's OM;
(g) prepare TORs and oversee contracts for the activities under its responsibility;
(h) ensure the participation in the PCU of one (1) expert to guide and supervise the implementation and monitoring of agroforestry productive arrangements and of sectoral and land zoning agreements for BD conservation and reduction of deforestation;
(i) secure the participation of one (1) FM specialist, one (1) Procurement Specialist and one (1) Administrative Assistant in the PCU;
(j) provide support to the PCU in the establishment of local participatory, planning and tracking mechanisms with key stakeholders and participate in said mechanisms;
(k) support the PCU in the elaboration of the Project's baseline and monitoring of performance indicators in the Results Framework, in accordance with its responsibilities under the Project;
(l) provide support to and help ensure compliance with safeguards policies and instruments for the activities under its responsibility, as per guidance provided by PNF; and
(m) provide bi-annual progress reports for implemented activities and monitoring of indicators so they can be consolidated by the PCU.

13. **MADS**, as co-executing partner, will be responsible for the following:

(a) convene and preside over the Project's AC through the Vice Minister or his/her delegate;
(b) participate in the Project's EC through its representatives from the Directorates of (i) Climate Change, (ii) Forests, Biodiversity and Ecosystems services, (iii) Sectoral and Urban, and (iv) the Office of International Affairs; or their delegates;
(c) facilitate the integration between the Amazonia Vision initiative and the Project, and coordination among National Environmental System (SINA) entities and sectoral agencies;
(d) facilitate the coordination with the CDS;
(e) promote the participation of and consultation with key stakeholders in local participatory, planning and tracking mechanisms in pursuit of Project objectives;
(f) draft the AOPs that correspond to the activities under its responsibility, as per the Matrix of Results, Outcomes, Activities and Responsibilities, and submit them to the consideration of the PCU for approval by the EC;
(g) coordinate with partner entities, and under the PCU's guidance, the elaboration of AOPs that need shared management, as per the Matrix of Results, Outcomes, Activities and Responsibilities, and facilitate and provide technical support to those activities that so require it;
(h) secure the participation of an M& E Specialist in the PCU;
(i) provide support to the PCU in the elaboration of a baseline for the Project and monitoring of indicators in the Results Framework; and
(j) provide bi-annual progress reports for implemented activities and monitoring of indicators so they can be consolidated by the PCU.

14. **PNN,** as co-executing partner, will be responsible for the following:
    (a) participate in the AC through its Director or his/her delegate;
    (b) participate in the EC through its Amazonia Territorial Directorate or delegate;
    (c) formulate AOPs for the outputs and activities under its responsibility, as per the Matrix of Results, Outcomes, Activities and Responsibilities, and submit said plans to the consideration of the PCU, and for approval by the EC;
    (d) under the PCU's guidance, coordinate with partner entities the AOPs that require shared management, as per the Matrix of Results, Outcomes, Activities and Responsibilities, and facilitate and technically support those Project activities that so require it;
    (e) formalize the annual budget and procurement plan needed for the implementation of the activities under its responsibility;
    (f) provide support to the PCU in the elaboration of the Project's baseline as well as with carrying out monitoring of indicators in the Results Framework, in accordance with its responsibilities under the Project;
    (g) secure the participation of one (1) Protected Areas Specialist, one (1) Sectoral Policies Management Specialist, and one (1) Indigenous Peoples Specialist in the PCU;
    (h) provide support to the PCU in the establishment of local participatory, planning and tracking mechanisms along with key stakeholders and participate in said mechanisms;
    (i) prepare TORs and oversee contract awards and execution of outputs under its responsibility;
    (j) support and help ensure compliance with and implementation of safeguards policies and instruments, as per PNF's guidance; and
    (k) provide bi-annual progress reports for implemented activities and monitoring of indicators so they can be consolidated by the PCU.

15. **IDEAM,** as co-executing partner, will be responsible for the following:
    (a) participate in the AC and in the EC through its Director or his/her delegate;
    (b) elaborate AOPs for the outputs and activities under its responsibility, as per the Matrix of Results, Outcomes, Activities and Responsibilities, and submit said plans to the consideration of the PCU, and for approval by the EC;
    (c) formalize the annual budget and procurement plans needed for the implementation of the activities under its responsibility;
    (d) under the PCU's guidance, coordinate with partner entities the AOPs that require shared, as per the Matrix of Results, Outcomes, Activities and Responsibilities, and facilitate and technically support the implementation of Project activities that so require it;
    (e) provide support to the PCU in the elaboration of the Project's baseline as well as with carrying out monitoring of performance indicators;
    (f) prepare TORs and oversee contract awards and execution of outputs under its responsibility;
    (g) secure the participation of a Deforestation Specialist in the PCU's technical implementing team;
    (h) facilitate, along with the PCU and according to Project needs, the establishment of local participatory, planning and tracking mechanisms with key stakeholders, particularly in what regards the development of territorial strategies for the management of deforestation early warning systems;

(i) support and help ensure compliance with and implementation of safeguards policies and instruments, as per guidance provided by PNF; and
(j) provide bi-annual progress reports for implemented activities and monitoring of indicators so they can be consolidated by the PCU.

16. Table 3.1 maps the participation of Project implementation entities in Project parts.

Table 3.1 Participation of implementing institutions by Project Part

Parts and activities	PNN	IDEAM	SINCHI	MADS	PNF
1. Protected Areas Management and Financial Sustainability					
Management effectiveness	Execution			Execution	Administration
Financial sustainability	Execution				Execution and administration
2. Forest governance, management, and monitoring					
Enhance institutional capacity and financial sustainability for sustainable landscape governance, management, and monitoring of the Project area		Execution		Execution	Execution and administration
Enhance capacity to monitor GHG emission reductions		Execution			Administration
Enhance capacity of indigenous peoples' authorities for sustainable land-use practices and forest governance within indigenous territories	Execution				Execution and administration
Disclosure of data on reduction of deforestation		Execution			Administration
3. Sectoral programs for Sustainable Landscape Management					
Cross-sectoral coordination and policy consistency	Execution			Execution	Administration
Development and adoption of guidelines/programs aimed at reducing	Execution			Execution	Administration

pressures on forests and biodiversity					
Promotion of sustainable land-use and natural resource management practices			Execution		Execution and Administration
4. Project Coordination, Management, Monitoring & Evaluation					
Coordination, management and M&E	Execution	Execution	Execution	Execution	Execution and administration

C. Financial Management, Disbursements and Procurement

Description and Assessment of Project FM arrangements

17. The Project will be implemented by five co-executing entities: (a) PNF; (b) the National Parks Service (PNN); (c) IDEAM; (d) MADS and (e) SINCHI. However, PNF will be the recipient of the grant funds and will be responsible for overall project financial management, procurement, including compliance with the Bank's procurement rules, preparation and submission of the interim and annual financial reports, and withdrawal applications, as well as processing of payments to consultants and providers.

18. The grant will mostly finance consultant and non-consultants' services, goods, small works, training, operating costs, and a sub-grant to be implemented by SINCHI.

19. **Staffing Arrangements.** PNF has adequate capacity to carry out the main tasks in terms of FM, given its long-standing experience in executing Bank-financed projects. It also has a sound internal control environment and a suitable organizational structure with trained staff that have the required experience and credentials, which allow proper segregation of FM-related functions, and overall responsible project management. Hence, PNF, through the institutional financial coordination unit, will be responsible for most Project FM-related tasks, including budgeting, accounting, financial reporting, audit and disbursements.

20. **Budgeting arrangements.** The Project budget will be based on the annual operating and procurement plans, which will be subject to approval by the Bank. The Project budget will be controlled and managed through the *Sistema de Información Contable y Financiero* (SICOP ERP), which is an integrated modular FM Information System (FMIS) that includes budgeting, accounting and treasury modules. The system is deemed strong and therefore it was considered acceptable to the Bank.

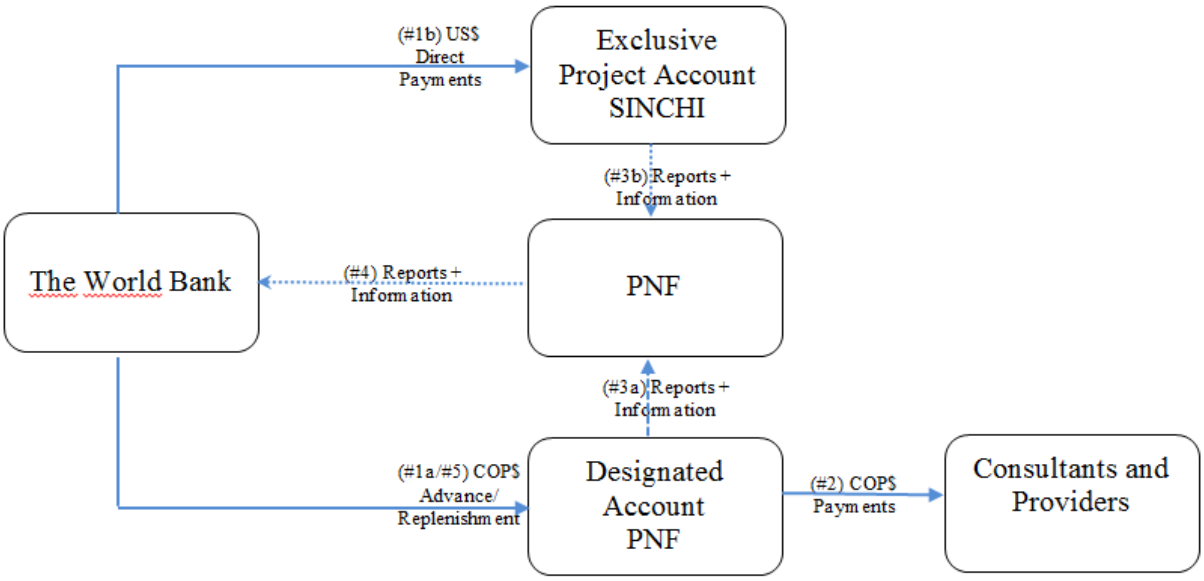
21. **Accounting system.** PNF will be also responsible for project accounting records, using the same SICOP ERP system, in order to ensure the adequate presentation of project financial operations in compliance with local requirements applicable to private and non-profit entities (*Normas de Contabilidad Generalmente Aceptados en Colombia*). It is worth mentioning that based on Law 1314, enacted in 2009, PNF will adopt the International Financial Reporting Standards (IFRS) starting in 2014.

22. **Internal control and internal auditing.** PNF does not have an internal control unit in place. However, the entity has a solid operational set of guidelines, as well as a clear segregation of the main FM-related functions. Moreover, the project implementation will be based on the Operations Manual (OM).

23. **General flow of funds and information.** In terms of the implementation of the sub-grant to SINCHI, under Part 3, the Bank will process a direct payment to SINCHI, upon PNF's request. In turn, SINCHI will be responsible for the execution of the Project activities included in the Procurement Plan to be approved by the Bank. The sub-grant will mostly finance consultant/non-consultants' services and operating costs. The use of funds will be reported on a semi-annual basis to PNF, and it will be subject to the project external audit. It is also worth mentioning that, even though SINCHI has not had previous experience in implementing Bank-financed projects, the entity has both strong institutional FM and administrative capacity, which are supported by the use of the Stone integrated FMIS and the existence of a suitable organizational structure, which allows for the proper segregation of the main FM-related functions.

24. The primary disbursement method for this project will be an advance to a segregated Designated Account (DA) in COP$ in *Banco de Bogotá*. In addition, depending of the type of expenditure, the PNF could also make use of the direct payment method. The description of the funds flow is presented in the following diagram, where the solid lines represent the flow of money and the dotted lines represent the flow of information:

Figure 3.2 Flow of Funds



(1) The Bank process: (a) advance the authorized amount into project DA, administered by PNF in *Banco de Bogotá;* (b) direct payment to Project exclusive account in *Banco DaVivienda*, administered by SINCHI.

(2) As expenditures are incurred, PNF processes payment to project's consultants and providers.

(3) SINCHI reports the use of funds to PNF.

(4) PNF, in turn, aggregates those eligible expenditures incurred under all parts, with the exception of those incurred by SINCHI under Part 3, in SOEs, and formally submits them, together with the grant withdrawal application to the Bank, in order to document the advance and/or to request DA's replenishment, whatever the case may be.

(5) The Bank replenishes the documented amount to the DA.

25. **Disbursement arrangements.** The grant disbursement arrangements,[48] which have been discussed and agreed, are summarized in tables 3.2 and 3.3.

Table 3.2 Grant Disbursement Arrangements

Disbursement method	1. Reimbursement 2. Advance to a segregated Designated Account, to be administered by PNF, in COP$ in *Banco de Bogota*. 3. Direct Payment to SINCHI under Part 3, and occasionally, to project's consultants and providers.
DA and timing of documentation	The proposed DA ceiling is equivalent to US$2 million. The funds advanced to the DA would be documented on a quarterly basis.
Supporting documentation	1. SOE[49] for reporting eligible expenditures paid from the DA. 2. Evidence of compliance of the disbursement condition under Part 3, and records evidencing eligible expenditures, e.g., copies of receipts, and suppliers/contractors' invoices, for requests for Direct Payment.
Limits	The recommended minimum value of applications for reimbursement direct payment is equivalent to US$200,000.
Retroactive expenditures	The retroactive financing would be up to US$2 million and will fulfill the following conditions: ✓ Made by the Recipient within one year before the date of the Grant Agreement. ✓ Be subject to the same systems, controls and eligibility filters described above in this Annex. These expenditures will also be subject to the regular project external audit.

[48] For details, see the Disbursement Handbook for World Bank Clients.

[49] All SOE 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.

Table 3.3 Disbursements

Category	Amount of the Grant Allocated (in US$)	Percentage of Expenditures to be Financed
(a) Goods, works, non-consulting services, consultants' services, Training and Operating Costs under Parts 1, 2, 3(a), 3(b) and 4 of the Project	6,794,872	100%
(b) Goods, non-consulting services, consultants' services, Training and Operating Costs under Part 3(c)	3,605,128	100%
TOTAL AMOUNT	**10,400,000**	

26. **Financial reporting and external audit.** PNF will consolidate and prepare semi-annual unaudited Project IFRs. These reports will be in local currency, using the format agreed for the ongoing operation. The annual audits of project financial statements and eligibility of expenditures incurred by PNF and SINCHI will be conducted by an independent audit firm and based on the TOR acceptable to the Bank. It is worth mentioning that the external auditor of the ongoing operation issued an unqualified (clean) opinion for the project audit covering calendar year 2012. Moreover, neither the auditor nor the Bank has identified any major findings. After grant effectiveness, the financial reports in table 3.4 will be submitted to the World Bank.

Table 3.4 Financial Reports to be submitted to the Bank

Report	Periodicity	Due date
Interim Financial unaudited Reports (IFRs)	Semi-annual	No later than 45 days after the end of each one calendar semester (February 15 and August 15)
Audited financial statements	Annual	No later than 6 months (June 30) after the end of fiscal year of recipient

27. **Written procedures.** PNF has adopted a Project OM, which includes the detailed description of the Project, as well as institutional, FM, disbursement, and procurement arrangements, among others relevant sections.

28. **Supervision strategy.** The scope of project supervision will review the implementation of FM arrangements and FM 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 IFRs 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; (c) updating the FM rating in the FM Implementation Support and Status Report (FMISSR), as needed.

29. **Risk assessment.** On the basis of the Bank's Project FM assessment, the overall FM residual risk is deemed **Moderate**, as summarized in the following table:

Table 3.5 Financial Management Risk Table

Risk type[50]	Risk Rating	Comments/risk mitigating measures incorporated into Project design	Residual Risk Rating
Inherent risk	**M**		**M**
Country level	M		M
Entity	S	PNF has considerable experience implementing Bank-financed projects, with a satisfactory record in terms of FM performance, as well as a solid internal control system in place.	M
Project	M	Overall, the Project design and implementation arrangements are quite straightforward. The grant will mostly finance consultant and non-consultants' services, small works, goods, training and operating costs.	M
Control risk	**M**		**M**
Budgeting	M	The Project budget will be based on the annual operating and procurement plans, subject to Bank's approval, and controlled and managed through integrated FMIS.	M
Accounting	M	The Project accounting will be carried out using the same SICOP ERP system in compliance with local requirements applicable to private and non-profit entities.	M
Internal Control	S	**Internal control and internal auditing**. The PNF does not have an internal control unit in place. However, the entity has a solid operational set of guidelines, as well as a clear segregation of main FM-related functions, while Project implementation will be based on the OM approved by the Bank.	M
Funds Flow	S	Primary disbursement methods for this Project will be: (a) reimbursement; (b) advance to a segregated DA in COP$; and (c) direct payment to Project's	M

[50] The **inherent FM risk** is that which arises from the environment in which the Project is situated. The **FM control risk** is the risk that the project's FM system is inadequate to ensure that project funds are used economically and efficiently and for the intended purpose. The **overall FM risk** is the combination of the inherent and control risks as mitigated by the client control frameworks. The **residual FM risk** is the overall FM risk as mitigated by the Bank supervision effort.

Risk type[50]	Risk Rating	Comments/risk mitigating measures incorporated into Project design	Residual Risk Rating
		consultants and providers. All Project payments will be made centrally by PNF.	
Financial Reporting	M	PFN will prepare and submit to the Bank semi-annual unaudited Project IFRs.	M
Auditing	S	The annual audits of Project financial statements and expenditure eligibility will be conducted by eligible independent audit firm and based on the acceptable TOR on auditing. The audit scope will include the use of project funds at Project and SINCHI level.	S
Overall risk	**S**		**M**
Residual risk			**M**

H: High; S: Substantial; M: Moderate; L: Low

Procurement

30. **Implementation arrangements.** PNF has created a single PCU for overall Project management and coordination, including procurement of the parts under its responsibility and procurement of the parts where partner entities will be engaged. Procurement tasks will be carried out by a procurement team located in this entity. The Procurement Officers at PNF are knowledgeable of the Bank Procurement and Consultants Guidelines, since PNF is implementing a GEF National Protected Areas Conservation Trust Fund Project, including an Additional Financing of the parent Project. Based on the findings of the assessment and a projected workload in 2014, it is considered that current staff will be able to manage the expected procurement workload at implementation stage.

31. At the GoC's request, SINCHI Institute will sign with PNF a Sub-Grant Agreement for the implementation of specific activities under Part 3(c). A full capacity assessment of SINCHI was conducted in May 2014. SINCHI is a well-established entity, a civil corporation of a public nature, legal status, which operates with full administrative autonomy and under private regulations, and it is linked to the Ministry of Environment of Colombia.[51] The assessment included a review of the legal status, procurement framework, organization, staffing, procurement experience, control systems and support, filing system, and contract administration. The findings confirmed that while the institute has not accumulated procurement experience at the implementation stage in Bank-financed projects, it is a well-organized entity with capable management and procurement staff, sound administrative procedures and control mechanisms, all of which constitute a sound basis to assign a risk level consistent with a moderately low risk.

[51] The Minister of Environment and Sustainable Development chairs SINCHI's Board of Directors.

32. **Procurement of works**. The Project will finance small works. These works will be procured using National Competitive Bidding following the procedures described in paragraphs 3.3 and 3.4 of the Bank Procurement Guidelines for contracts with estimated value above US$150,000 but below US$5,000,000, per contract, and shopping procedures for contracts costing less than US$150,000, per contract, as described in paragraph 3.5 of the Procurement Guidelines.

33. **Procurement of goods and non-consulting services.** The Project will finance services related to preparation of management plans, among others; characterization and monitoring of threats and pressures to biodiversity; diagnosis of skills, capabilities and resources of staff; identification of tools, instruments and strategies to increase efficiency of Amazon parks; communication strategy to reduce response times and address illegal situations in the Project area; studies on cost-revenue model and estimation methodology for the PA; development and implementation of a strategy for institutional strengthening of participating partner entities; production of educational materials for training; and spatial analysis for identification of deforestation emissions. Goods and non-consulting services to be financed with proceeds of this Project will be procured using National Competitive Bidding (NCB) following the procedures described in paragraphs 3.3 and 3.4 of the Bank Procurement Guidelines for contracts with estimated value above US$100,000 but below US$1,000,000, per contract, and shopping procedures for contracts costing less than US$100,000, per contract, as described in paragraph 3.5 of the Procurement Guidelines.

34. **Consultant services by firms.** These services will be procured in accordance with the Bank Consultant Guidelines and the agreed procurement plan. Contracts or employment of firms with estimated values of US$400,000 or more will be procured giving consideration to quality and cost and the procedures described in Section II of the Consultant Guidelines. Consultant services costing less than US$400,000, per contract, will be procured using Quality- and Cost-Based Selection (QCBS) procedures; selection based on consultants' qualifications (CQS); least-cost selection procedures (LCS); selection under a fixed budget (SBF); and single source selection procedures (SSS).

35. **Short list comprised entirely of national consultants**. The short lists for assignments estimated to cost up to US$400,000, per contract, may be entirely comprised of national consulting firms, in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

36. **Consultant services by individuals**. The Project will finance consulting services by individuals to carry out, *inter alia,* support to the PCU in specialized project management areas; provision of capacity building on technical and methodological topics related to the management model; preparation of zoning and protection measures for communities living in voluntary isolation; harmonization of sub-zoning in the existing Forest Reserve; definition and implementation of the monitoring strategy and elaboration of the baseline ecological assessments; elaboration of lessons learned report related to intervention on soil use and deforestation; TA for the setup of the surveillance and control committee; preparation of background technical materials; design of a network of permanent plots for carbon monitoring; and TA for the consolidation of action plans of Environment and Territorial Committees.

Consultants will be selected on the basis of their qualifications and experience for the intended assignment for which their services are being sought, and with the use of the procedures set forth in section 5.2 and 5.3 of the Consultant Guidelines. Consulting assignments meeting the conditions and requirements described in paragraph 5.4 of the Consultant Guidelines may be awarded with the use of sole-source procedures.

37. **Operating Costs**. The Project will finance under this category the incremental expenses incurred on account of Project administration, implementation, monitoring and supervision consisting of vehicle operation and maintenance, communication and insurance costs, banking charges, office rental expenses, freight charges, office (and office equipment) maintenance, utilities, printing, non-durable goods, travel cost and *per diem* for Project staff for travel linked to the implementation, monitoring and supervision of the Project, and salaries of contractual staff for the Project (excluding consultants' services and salaries of officials of the Government's civil service). To the extent possible, goods and non-consulting services under this category will be procured with the use of shopping procedures described in paragraph 3.5 of the Procurement Guidelines.

38. **Procurement Planning**. The PCU submitted a procurement plan for the first 18 months of project implementation, including the activities required for the implementation of the Sub-grant Agreement by SINCHI Institute. The plan provides the basis for the procurement methods and prior review thresholds. It will be used as the official tool for procurement planning, monitoring and control during project implementation. The plan will be available in the Project's database and in the Bank external website. The procurement plan will be incorporated in SEPA no later than 30 days after Grant approval.

39. **Details of procurement arrangements involving International Competition and Direct Contracting**

(a) Goods and Non-Consulting Services

(i) List of contract packages to be procured following ICB and Direct Contracting procedures

Part PAD	Description	Procurement Method	Estimated Cost (US$)	P-Q	Domestic Preference	Review by Bank (Yes / No)
None expected						

(b) Consulting Services

(i) List of consulting assignments with short list of international firms and sole source awards

Part PAD	Description	Procurement Method	Estimated Cost (US$)	Review by Bank (Yes / No)
None expected				

(c) **Date of General Procurement Notice**. The Recipient, through PNF, will advertise a General Procurement Notice (GPN) immediately after the Project enters into effectiveness but it will not exceed 30 days following the date aforementioned.

40. **Thresholds for Prior Review and Procurement Methods**: Procurement Decisions subject to Prior Review by the Bank as stated in Appendix 1 to the Guidelines for Procurement.

Table 3.6 Thresholds for Prior Review and Procurement Methods

Expenditure Category / Agency	Method	Thresholds (US$ thousands)	Prior review
Works	ICB	=>5,000,000	All
	NCB	>150,000 and <5,000,000	First 2 contracts
	Price Comparison (Shopping)	=<150,000	First 2 contracts
	Direct Contracting (DC)	Any value	All
Goods and Non-Consulting Services	ICB	= > 1,000	All
	NCB	>100 and < 1,000	First 2 contracts
	Price Comparison (Shopping)	= < 100	First 2 contracts
	Direct Contracting (DC)	Any value	All
Consultant Services			
Firms	QCBS	= > 400	All
	QCBS, QBS, LCS, FBS,	< 400	First 2 contracts; TOR only thereafter
	CQS	< 300	First 2 contracts; TOR only thereafter
	SS	Any value	All
Individuals	3 CVs	= > 100	All
	3 CVs	< 100	First 2 contracts; TOR only thereafter
	SS	Any value	All

41. **Bank Supervision and Post Review Frequency**. The Bank will conduct post-review missions once a year and, at least, two annual supervision missions. Contingent on the findings of the first ex-post review mission, the Bank may agree to change the thresholds in order to make them consistent with procurement performance and capacity. Consistent with the Moderate rating, the review will include not less than two in 10 contracts.

42. **Availability of Assessment Documentation and Dissemination**. Detailed procurement documentation relevant to this capacity assessment will be available in the Bank project files (P-RAM system). Once agreed with the Recipient, PNF will publish the 18-month Procurement

Plan in the Bank website in accordance with Bank Procurement Policies and Guidelines, and in its own web page.

43. **Project Operations Manual.** The Recipient, through PNF, has prepared an OM that describes the institutional and organizational procurement arrangements for implementation of the Project; the applicable procurement methods and procedures and the standardized procurement documents to be used for each procurement method. The manual describes the procurement coordination procedures between PNF, participating technical partner agencies; and the fiduciary responsibilities of PNF and SINCHI at the bidding and execution stages and of PNF, and those of participating technical partner agencies at execution stage, *inter alia*, the mechanisms for contract administration and monitoring by participating technical partner agencies.

44. **Risk Mitigation Plan**. The following table summarizes the mitigation actions proposed for the procurement-related risks identified above.

Table 3.7 Procurement Improvement Action Plan

Risks - Areas for improvements	Mitigation actions	Respons-ible	When
Patrimonio Natural Fund (PNF)			
Country procurement framework not fully consistent with the Bank procurement policies	1. Procurement and employment of consultants under the Project will be regulated by the Bank Guidelines and the Consultant Guidelines	PNF	By the effective date
	2. Harmonized standard documents and/or documents incorporating flexible arrangements acceptable to the Banks will be used	PNF	Before starting the first procurement process
Use of procurement documents becomes difficult and conducive to departures from the applicable Guidelines and causes disruptions and risks of misprocurement.	1. The PCU will include in the OM procedures for procurement of goods, works and non-consulting services, and consulting services, for each method	PNF	It has prepared a preliminary version of OM acceptable to the Bank. Final version must be delivered before the effective date
	2. PNF will submit documents for procurement of goods, works and non-consulting services, and consulting services, acceptable to the Bank	PNF	Before starting the first procurement process
	3. PNF staff is knowledgeable of the Bank Procurement Guidelines and procedures and has accumulated experience at the implementation of GEF-funded projects under Bank procurement regulations. The agency will confirm the availability of procurement staff currently in place	PNF	By the effective date

Risks - Areas for improvements	Mitigation actions	Respons-ible	When
Limited capacity to prepare and implement procurement plans. Plans are not used as a project management tool for planning, control and monitoring	PNF will submit a final procurement plan for the first 18 months of project implementation for review and approval. PNF will consolidate the needs of all participating agencies engaged in project implementation	PNF	PNF has prepared a procurement plan acceptable to the Bank
Participation of multiple executing agencies (e.g. PNN; IDEAM, SINCHI) might turn coordination cumbersome and cause disruptions and delays during project implementation, and eventually quality issues in key procurement activities	The OM will set out the roles and responsibilities of each participating entity engaged in project implementation and describe the processes and procedures for each agency to carry out their tasks.	PNF	It has prepared a preliminary version of OM acceptable to the Bank. The final version must be delivered before the effective date
Highly specialized activities may require a close review of the technical specifications, TORs and contract conditions to avoid issues that may affect competition and lead to cost overruns	1. The procurement plan will flag contracts of goods and services with complex designs/ technical specifications or TOR. 2. Contracts for procurement of goods and consulting services of a specialized nature identified in the procurement plan will be carried out by the PCU-PNF	PNF/ World Bank	PNF has prepared a procurement plan acceptable to the Bank Identification of specialized or complex procurement processes throughout project implementation
Project Operations Manual	The OM in place for the implementation of the GEF National Protected Areas Conservation Trust Fund will be reviewed and adapted in order to reflect the specific arrangements, procedures and	PNF	It has prepared a preliminary version of OM acceptable to the Bank. Final version must be

Risks - Areas for improvements	Mitigation actions	Respons-ible	When
	procurement documents to be applicable to this Project.		delivered before the effective date.
SINCHI (Part 3 (c))			
Lack of experience in the preparation of procurement plans in Bank-financed projects may include procurement methods and practices not foreseen in the Grant Agreement	PNF will assist and supervise the preparation of SINCHI's plan. The agency will incorporate SINCHI's plan in the project procurement plan The Bank will deliver basic procurement training to SINCHI procurement staff	PNF World Bank	PNF has prepared a procurement plan acceptable to the Bank. SINCHI's procurement plan was supervised by PNF By declaration of effectiveness
Lack of standardized procurement documents may result in the use of local practices and in deviations from applicable procedures	SINCHI will use project standardized / simplified documents for procurement of goods and non-consulting services	PNF / SINCHI	Throughout project implementation
Lack of knowledge of the Bank Procurement Guidelines and Procedures may lead to deviations in procurement processes	The Bank will provide basic procurement training in the use of the Bank Procurement and Consultant Guidelines and in standardized project procurement documents agreed upon for project implementation	World Bank	By declaration of effectiveness

D. Environmental and Social Aspects (including safeguards)

45. The following environmental safeguard policies are triggered: Environmental Assessment (OP/BP 4.01); Natural Habitats (OP/BP 4.04); Forests (OP/BP 4.36); Pest Management (OP 4.09) and Physical Cultural Resources (OP/BP 4.11).

46. **Environmental Assessment (OP/BP 4.01).** From an environmental standpoint, this is a category "B" operation. The proposed investments seek to protect critical natural habitats through the consolidation of the expansion of an existing protected area in the Colombian Amazon and to support sustainable governance arrangements for the entire area (i.e. institutions,

zoning, action plans, dialogue and policies). The adoption of sectoral programs in critical sectors such as agriculture, extractive industries and infrastructure to improve practices that reduce pressures on forests and biodiversity should also benefit the governance process as a whole; in particular, the implementation of sustainable land and other management practices should result in more stable support for biodiversity-friendly activities.

47. The proposed Project will only finance small works. The activities of protected areas management, land-use planning and forest management have important social and environmental implications. The proposed Project is designed to generate positive environmental impacts through the protection of critical natural habitats and improved land-use planning. Potential impacts, as described in the ESMF would be of limited scope and will not be significant or irreversible. The ESMF has conducted the analysis and screening of such potential impacts and has identified the measures to manage and mitigate them.

48. All Project activities are subject to the environmental procedures defined in the ESMF and in compliance with the requirements (as stated in the ESMF) of the national and subnational legal frameworks. The ESMF also provides guidance regarding measures to reduce the negative impact of Project activities on any livelihood activities of small landholders and communities. The ESMF incorporates guidance on how to carry out robust consultation processes with public agencies, *campesino* organizations and indigenous communities, among others. During preparation, efforts have been made to ensure consistency with other relevant national processes such as the FCPF/REDD+ process in Colombia, for which the Bank is the Delivery Partner.

49. **Natural habitats (OP/BP 4.04)**. This policy is triggered given that the decisions made in terms of land management planning will affect critical natural habitats. Policy, land-use and enforcement activities could accelerate deforestation processes if not approached correctly with proper social engagement and consultation. The ESMF includes a description of the process to engage the different stakeholders during the lifetime of the proposed Project to avoid or minimize any conversion or degradation that may result from human activity induced by the proposed Project. It also includes an action road map in the event that new categories of protected areas are created in the context of the existing SINAP legislation framework, as is the case of areas deemed important to guarantee the preservation of the Andes-Amazonia corridor's ecological interconnectivity.

50. **Forests (OP/BP 4.36).** This policy is triggered given that the decisions made in terms of land management planning, including forest management plans, will affect forests. The ESMF includes the process for to develop sustainable management plans and other forestry-related policies. The ESMF reviewed the Ministry of Environment and Sustainable Development's regulations in light of the Bank policy requirements for sustainable forest management.

51. **Pest management (OP 4.09).** Livelihood activities (i.e. agroforestry productive arrangements) might include sustainable agriculture or reforestation activities that may require pest management. No pesticides will be used. Only biological pest control (i.e. organic fertilizers) will be used and the impacts related to its use have been included in the ESMF.

52. **Physical resources (OP/BP 4.11).** This policy is triggered as the Project will support changes in the acceptable use and access to areas with potential cultural significance (i.e., sacred sites) for communities living within and around the protected areas and management zones. The principles of this Policy are fully integrated into the planning processes described in the ESMF.

53. The following social safeguard policies are triggered: Indigenous Peoples (OP 4.10) and Involuntary Resettlement (OP 4.12).

54. **Indigenous Peoples (OP 4.10).** This policy is triggered as there are seven indigenous *resguardos* as well as indigenous peoples living in voluntary isolation and initial contact in the Project area. A comprehensive social assessment was completed to inform the preparation of seven Indigenous Peoples Plans (IPPs). The IPPs are based on the agreements reached with the seven *resguardos* during the free, prior and informed consultation carried out by National Parks during the expansion of the PNNSCH in 2013, as well as on the results of the social assessment mentioned. Drafts of these IPPs were shared and discussed with the respective communities prior to Project appraisal and evidence of broad community support for the Plans was submitted to the Bank. Consultation meetings were carried out in the seven *resguardos*. The broad community support has been reflected in the proceedings of each meeting. The main issue brought up during consultations was the continuation of the work plans agreed between the *resguardos* and PNN as part of the PNSCH expansion. The contents of these agreements were included in the IPPs, as part of the Project design.

55. In addition, Guidelines for Indigenous Peoples Living in Voluntary Isolation were prepared to ensure that Project activities do not force contact or disturb these communities. The document is entitled “Institutional Guide for Avoiding Contact and Negative Impact on Indigenous Peoples Living in Voluntary Isolation” and includes guidance regarding how to carry out activities in the proximity of these communities so as to avoid contact and minimize any potential impacts. It also includes information on measures to be taken in the event of inadvertent contact. The Guidelines were prepared in collaboration with the Office of Indigenous Peoples Affairs in the Ministry of the Interior and based on best practices compiled from Colombia, Brazil and Peru.

56. **Involuntary Resettlement (OP 4.12).** While there will be no physical relocation of any families or homes and traditional use and access to natural resources is permitted in national protected areas according to national law, this policy is triggered as some activities financed under Part 1 and 3 might have a negative impact on the livelihoods of small landholders living in the forest buffer zone, especially in Cartagena de Chaira, San Jose del Guaviare and Calamar. In order to provide guidance for the implementation of IPPs already agreed with the *resguardos* and to ensure compliance with OP 4.12, a Process Framework was prepared and disclosed prior to appraisal. The Framework screens and provides guidance on how to manage any possible impacts on livelihoods in the Project area. Moreover, the ESMF includes a template for the voluntary agreements that will be made with beneficiary families before proceeding with the agroforestry activities to be financed under Part 3.

57. This Project will not finance any dams nor will rely on the operations of existing dams, will not finance activities that impact any international waterways and activities in disputed areas as defined by the relevant safeguard policy.

58. **Consultation and disclosure.** The safeguards documentation is available on the PNF, PNN, and SINCHI websites. All safeguard instruments have been widely disclosed within the country since August 21, 2014 and sent to the Bank's website on September 23/24, 2014. The calendar followed for the public disclosure and consultation of instruments is detailed in table 3.8. No significant issues were raised during the consultation process and the project design was not changed. Feedback provided has been taken into account.

Table 3.8 Safeguard instruments: schedule of disclosure and public consultation

Document	In- country disclosure	Consultation dates	Disclosure on the Bank's website
Environmental and Social Management Framework	21 Aug. 2014	11 July 2014 21/22 Aug. 2014	24 Sept. 2014
Social Assessment	21 Aug. 2014	16 May 2014 7/8 June 2014 21/29 Aug. 2014	23 Sept. 2014
Guidelines for Indigenous Peoples Living in Voluntary Isolation (a.k.a. Institutional Guide for Avoiding Contact and Negative Impact on Indigenous Peoples Living in Voluntary Isolation)	21 Aug. 2014	Consultation not required for this instrument	23 Sept. 2014
Process Framework	21 Aug. 2014	21/22 Aug. 2014	23 Sept. 2014
Indigenous People Plan - Miritί Paraná	21 Aug. 2014	16/19 May 2014 19 June 2014	23 Sept. 2014
Indigenous People Plan - Nonuya de Villazul	21 Aug. 2014	8 June 2014	23 Sept. 2014
Indigenous People Plan - Aduche	21 Aug. 2014	8 June 2014	23 Sept. 2014
Indigenous People Plan - Mesai	21 Aug. 2014	8 June 2014	23 Sep. 2014
Indigenous People Plan - Monochoa	21 Aug. 2014	7 June 2014 29 Aug. 2014	23 Sept. 2014
Indigenous People Plan - Puerto Zábalo-Los Monos	21 Aug. 2014	29 Aug. 2014	23 Sept. 2014
Indigenous People Plan - Yaguará II	21 Aug. 2014	21 Aug. 2014	23 Sept. 2014

E. Monitoring & Evaluation

59. Project Monitoring and Evaluation (M&E) will be carried out by the PCU. Progress will be tracked against the indicators outlined in the Project's Results Framework (Annex 1), and the actions agreed in the Project's Annual Operating Plans (AOPs), which will be agreed yearly with the Project's Advisory Committee and donors. Additionally, GEF "Tracking Tools (TT)" will be

used to measure indicators in the three GEF focal areas, namely, Sustainable Forest Management, Climate Change and Biodiversity.

60. Bi-annual progress and M&E reports will be submitted to the World Bank. In addition, bi-annual progress reviews will be conducted by the PCU and reviewed by the Executive Committee; a mid-term review of the Project's implementation will be conducted jointly by the GoC, the Executive Committee, the World Bank and PNF (PCU); and an independent end-of-project evaluation will be also completed. Finally, as it is customary, a project implementation completion report will be prepared after the end of the Project.

Annex 4: Operational Risk Assessment Framework (ORAF)

Colombia: Forest Conservation and Sustainability in the Heart of the Colombian Amazon Project (P144271)

<table>
<tr><td colspan="7">Project Stakeholder Risks</td></tr>
<tr><td>Stakeholder Risk</td><td>Rating</td><td colspan="5">Moderate</td></tr>
<tr><td>Risk Description:

The indigenous peoples and other social actors in the area are highly organized and have been actively involved in consultations that have led to agreements upon activities that are aligned and/or included in the Project. However, it is likely that they might have higher expectations regarding how they should benefit from Project activities than resources available. The private sector is present in the Project area and might pose some initial resistance to proposed initiatives, although there is buy-in from the Cattle Ranchers Union (FEDEGAN) for the Mainstreaming Sustainable Cattle Ranching Project (P104687).</td><td colspan="6">Risk Management:

The proposed Project design includes activities that involve and directly benefit local stakeholders. For example: training, technical assistance and promotion of productive arrangements for food security and Amazonian production systems for local communities and indigenous peoples; support for and strengthening of land management practices; prior consultation with indigenous peoples for activities with direct impact, as well as voluntary agreements with farmers and indigenous peoples for land-use management. Many activities have already been agreed as a result of the process of free, prior and informed consultation with indigenous peoples that occurred during the expansion of PNNSCH. The Bank sought stakeholder buy-in during Project preparation to ensure inclusion of the above-mentioned activities in Project design. Project implementation will be closely supervised to ensure timely and effective execution of these activities.

Resp: Both | Status: In Progress | Stage: Both | Recurrent: ☑ | Due Date: | Frequency: Yearly</td></tr>
<tr><td colspan="7">Implementing Agency (IA) Risks (including Fiduciary Risks)</td></tr>
<tr><td>Capacity</td><td>Rating</td><td colspan="5">Substantial</td></tr>
<tr><td>Risk Description:</td><td colspan="6">Risk Management:</td></tr>
<tr><td>PNF has proven capacity managing the National PAs Conservation TF Project (P091932) and the Additional Financing (AP) approved for that project by the Bank (P112106). The technical capacity of partner entities, SINCHI, MADS and PNN, is robust and adequate. In particular, MADS has staff responsible for execution of Bank projects</td><td colspan="6">All implementing agencies, including SINCHI and IDEAM, will be closely and continually monitored for timely project execution and financial management and procurement performance in accordance with Bank rules and standards. During project preparation, an Action Plan has been agreed upon between MADS, PNF, and executing agencies with Bank oversight. Project implementation units will receive training by Bank specialists and be closely supervised throughout project cycle. In addition, presence in the field will be supported by experienced experts in PAs and indigenous peoples and there will be coordination with other institutions, such as PNN, that already have experience working in the Project area.</td></tr>
</table>

who have sound skills in Bank procedures and policies, as well as experience in implementing GEF projects. The inclusion of SINCHI and IDEAM as new partner implementing agencies may pose some challenges to project execution given their limited experience in Bank-financed projects. The most significant capacity risk, however, stems from implementation in the field, that is, the PA itself, which is difficult to access, and where there has been limited state presence.	Resp: Both	Status: Not Yet Due	Stage: Both	Recurrent: ☑	Due Date:	Frequency: Yearly
Governance	**Rating**	**Moderate**				
Risk Description: The risk of governance occurs at two levels: partner entities and multi-sector participation. At the first level, the institutions have already agreed to an Action Plan where responsibilities are defined and to the establishment of an Executive Committee that will ensure coordination. At the second level, the risk lies in ensuring the participation and cooperation of the additional sectors that have been identified as relevant to achieving long-term deforestation reduction and improve practices to reduce pressures on forests and GHG emissions. This risk is rated moderate, however, given the Government of Colombia's and MADS's strong ownership of the Project, strong commitment to its own priorities, and record of maintenance of objectives and priorities to date. IDEAM and SINCHI National Parks have also demonstrated very strong buy-in to Project's overall goals.	**Risk Management:** Maintain periodic supervision by the Bank and continually assess progress with implementation of the agreed financial management, disbursement, and procurement arrangements. Supervision will also monitor the execution of Action Plans agreed upon between partner entities to make sure they are closely followed and subject to revision at the Executive Committee level, as needed, when implementation hurdles or bottlenecks arise that may call for a change. Expert Bank staff will carry-out periodic and up-close supervision procurement and financial management procedures, and ensure of transparency throughout entire process					
	Resp: Both	Status: Not Yet Due	Stage: Implementation	Recurrent: ☑	Due Date:	Frequency: Quarterly

Project Risks						
Design	**Rating**	**Moderate**				
Risk Description: Some project interventions are dispersed throughout large areas, some very remote, which could hinder progress. The implementation arrangements have a moderate level of complexity, due to the number of agencies involved (MADS, PNN, and PNF) and a moderate level of dependency on each other to complete activities. Implementation of the sub-grant implies the continuous monitoring and processing of direct payment to SINCHI.	**Risk Management:** The Bank has considered all design alternatives and components arrangements given available resources and implementation capacity. Implementation progress will be closely monitored for early warning of any Project design issues and challenges. Supervision will be carried out in all geographic areas covered by the Project. However, given the difficult and/or limited accessibility to remote sectors of the Project area, the Bank will explore alternative ways of supervision. Staffing the PCU with experts in PAs and indigenous peoples and coordinating with PNN and NGOs already present in the Project area will also help ensure appropriate local capacity for the adequate supervision of remote areas. Early coordination and definition of roles and responsibilities during project preparation, as well as regular coordination between partner entities through the EC will help minimize this risk.					
	Resp: Both	Status: In Progress	Stage: Both	Recurrent: ☑	Due Date:	Frequency: Quarterly
Social and Environmental	**Rating**	**Substantial**				
Risk Description: Safeguards risks are considered to be substantial given the Project's potential sensitive social context. However, all activities at the local and policy level supported by the Project are expected to have a positive social and environment impacts and positive effects on the country's environmental management, as they will continue to strengthen environmental governance and institutions,, as well as reduce deforestation and GHG emissions and conserve biodiversity.	**Risk Management:** The proposed Project has been confirmed as a "Category B" project. Project preparation includes the development of an ESMF that describes in detail the process and criteria used to establish the expanded PA, land-use plans in buffer zones, development of enforcement capacity, and design of a pilot offset program. A Social Assessment was also carried out as part of the preparation process for the IPPs. An IPP for each one of the seven indigenous reserves that exist in the Project area was developed, consulted and disclosed prior to appraisal. A Process Framework was also prepared. It addresses the potential impacts that may arise from restrictions to natural resources. In addition, Guidelines for Indigenous Peoples Living in Voluntary Isolation (a.k.a. Institutional Guide) were prepared to ensure that Project activities do not force contact or disturb these populations. The involvement of local communities in Project activities and benefits generated should also diminish the pressure on the forest frontier.					
	Resp: Client	Status: Completed	Stage: Both	Recurrent: ☑	Due Date:	Frequency: Continuous
Program and Donor	**Rating**	**Moderate**				

<table>
<tr><td>Risk Description:
Other donors and international development agencies are engaged in the broader area of environmental sustainability. The Embassy of the Netherlands and the EU has REDD+ demonstration projects in the area, which also have coordination by PNF. The Moore Foundation was the main donor supporting the Chiribiquete National Park’s expansion and the process of free prior and informed consultation with the indigenous resguardos. Norway is strongly considering supporting the overall initiative from 2014, which would represent a significant matching fund for this GEF project.</td><td colspan="6">Risk Management:
An Executive Committee will be established to oversee the progress of the initiative and generate political directives and orientation, which will be carried through to the various projects under the umbrella initiative, including this GEF Project. Donor coordination is headed by the Office of International Affairs at the Ministry of Environment (MADS). The Advisory Committee will have direct representation from the donor community which should allow for continuous dialogue and relationship building.
Resp: Both | Status: Not Yet Due | Stage: Implementation | Recurrent: ☑ | Due Date: | Frequency: Semi annual</td></tr>
<tr><td>Delivery Monitoring and Sustainability</td><td>Rating</td><td colspan="5">Moderate</td></tr>
<tr><td>Risk Description:
Track record of PNF indicates that disbursements and outcomes in the near future are realistic and satisfactory. The Project includes specific monitoring activities, not only of biodiversity and deforestation indicators, but also of poverty reduction, social and economic development indicators. The outcomes of the GEF Project are likely to be sustainable in the long term, beyond the Project’s life-cycle, given the strong ownership of Project objectives by the Government, and the fact that the activities supported are a central part of the Government policies and priorities in the areas of sustainable development and peace..</td><td colspan="6">Risk Management:
Project design foresees involvement of local communities, indigenous peoples and regional and local authorities in monitoring and evaluation of activities. Project PDO and indicators will be closely monitored to ensure the ability of implementing agencies to adequately sustain their efforts with continuity beyond Project completion.
Resp: Both | Status: Not Yet Due | Stage: Implementation | Recurrent: ☑ | Due Date: | Frequency: Yearly</td></tr>
<tr><td colspan="7">Overall Risk</td></tr>
<tr><td>Overall Implementation Risk:</td><td>Rating</td><td colspan="5">Substantial</td></tr>
</table>

Risk Description:
The proposed Project will build local social capital and involve a wide range and number of stakeholders from the local and indigenous communities, civil society, private sector, as well as municipal governments and actors across central government. Effective coordination in the implementation of Project activities, particularly at the local level, is vital for successful implementation and to ensure that local stakeholders are involved and activities respond to beneficiaries' needs. Indigenous groups and other social actors in the area are highly organized and have been actively involved in consultations that have led to agreements upon activities that are aligned and/or included in the proposed Project. The private sector is present in the Project area and might pose some initial resistance to proposed initiatives, although there is buy-in from the Colombia Cattle Ranching Association (FEDEGAN) for the ongoing Mainstreaming Sustainable Cattle Ranching Project (P104687).

Annex 5: Implementation Support Plan

COLOMBIA
Forest Conservation and Sustainability in the heart of the Colombian Amazon Project (P144271)

1. The Project Implementation Support Plan (ISP) describes how the World Bank, public entities and other development partners will address the risk mitigation measures (identified in the ORAF) and provides the technical advice necessary to facilitate achieving the PDO (linked to results/outcomes identified in the result framework). The ISP below also identifies the minimum requirements to meet the Bank's fiduciary obligations.

2. The PNF in Colombia has reasonable capacity, and performed well in previous GEF-financed projects. National government agencies (MADS and IDEAM) have varying capacities and will need to be engaged and supported. The SINCHI is relatively new institutions in managing fiduciary aspects with bank-financed projects and can benefit from technical assistance. The World Bank will provide guidance in accordance with each institution's comparative advantage.

Implementation Strategy - Potential Risks

3. As described in the ORAF, there are moderate-high risks to some stakeholders, especially because social safeguards on Indigenous Peoples (OP/BP 4.10) and Involuntary Resettlement (OP/BP 4.12) have been triggered. Although the public perception of the Project is likely to be positive, people's livelihoods could be disrupted by the consolidation of new PAs and the design of land-use plans; hence, perceptions of the Project could change. In order to mitigate any potential risk of social conflict during implementation, in addition to the face-to-face consultations on safeguard documents held in the Project area with indigenous peoples (as described in the Project's IPP, from May to August 2014), PNN, PNF, and SINCHI made a public disclosure of the Project's safeguard documents on their websites, making them available to download and comment.

4. In addition to making them publically available on their websites, the Project co-executing entities also conducted consultation meetings. Consultation meetings took place in the field and the feedback received during the process was taken into account during Project preparation. The compiled results of this consultation process have been included as part of the ESMF and IPPs.

5. This is the first project in which the World Bank is partnering with the Colombian Amazon. The relationship between the World Bank and the Project co-executing entities is expected to be strengthened during implementation, and the governance risk associated with these partner relations is moderate.

6. There are some risks related to the implementation agencies. There are many organizations at different levels involved in implementation, and the coordination of these will be a challenge. Additionally, some of the activities involved are relatively challenging, especially those targeted at other development actors where sectoral agreements are expected to be forged as part of new

inter-institutional working schemes, and they will depend on the establishment of new relationships with relevant partners.

7. Selecting areas to agree on sustainable land-use planning schemes/sectoral agreements will be technically challenging and may be controversial. Selecting areas to achieve the conservation benefits and to establish sustainable-use schemes will be challenging. If done well, this process could take time. While safeguard risks associated with the Project are not expected to be significant, these risks will nevertheless need to be managed carefully, particularly those associated with implementing the Indigenous Peoples Plan and Process Framework.

Administrative and Fiduciary Flexibility

8. Disbursement categories are aligned with parts, allowing flexibility in the use of funds to reach specific targets. The AOPs and annual Procurement Plans will allow the executing agencies to plan the use of funds based on actual opportunities and needs.

9. The initial disbursement size was determined based on the Project scope and expected disbursement profile. For procurement, appropriate streamlining and thresholds for prior and post review have been established. An audit of annual project financial statements will be conducted by an independent auditing firm and in accordance with terms of reference acceptable to the World Bank. Tables 5.1 and 5.2 provide the main activities to be carried out and respective skills/resources required for project implementation.

Table 5.1 Implementation Support Plan

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First twelve months	Establishing fiduciary systems in PNF and SINCHI	Procurement and FM expertise	To be included in Project AOP (US$60,000)	PNF and SINCHI to provide staff, space and equipment
	Communications strategy development and implementation	Communications specialists	US$30,000 (in annual operating plan)	PNF, PNN, MADS, SINCHI and IDEAM
	Environmental-Social Management Framework in place	Social/ indigenous peoples specialist; environmental impact evaluation experts	US$30,000	PNF, PNN, MADS, SINCHI and IDEAM staff to monitor IPPs, overall ESMF
	Establishment of Committees/Units and Project Council (and *ad hoc* working groups as needed) Sign Technical	Organization of regular high level meetings Legal expertise and political	No cost to Project	PNF, PNN, MADS, SINCHI and IDEAM Leadership

	Cooperation agreements with other sectors, etc.	support to engage relevant agencies and partners	No cost to Project	PNF, PNN, MADS, SINCHI and IDEAM leadership
13-48 months	Project's investments and bidding process adequately operating Carry out analytical work and technical consultancies Environmental-Social Management Framework in place Frequent updating of the Project's M&E system	Procurement and FM expertise Environment. NRM and social specialists. Social, indigenous peoples' specialist; environmental impact mitigation experts Technical expertise in selected sectors. M&E specialists		PNF and SINCHI leadership PNF, PNN, MADS, SINCHI and IDEAM leadership PNF, PNN, MADS, SINCHI and IDEAM leadership PNF, PNN, MADS, SINCHI and IDEAM leadership
Project Completion	Impact evaluation and sustainability planning	Impact evaluation experts		

Table 5.2 Skills Mix Required

Skills Needed	Number of Staff Weeks (SW)	Number of Trips	Comments
Safeguards (social, indigenous peoples, and environment; other safeguards per project documents)	Bank supervision will require 6 SWs per FY (mainly senior technical staff)	Two trips per fiscal year	
Institutional capacity strengthening (FM, procurement, disbursement)	14 SWs per FY (mix of junior and senior technical staff)	One trip per fiscal year	
Technical expertise enhancement (PA, land-use planning, 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 and Financial Analysis

COLOMBIA
Forest Conservation and Sustainability in the Heart of the Colombian Amazon Project (P144271)

Introduction

1. **This annex presents an analysis of the proposed Project's economic and financial benefits.** By estimating the (partial) values of changes to ecosystem services, one can compare the economic and financial benefits at different degrees of Project achievement by considering various interventions.[52,53]

Economic Benefits generated by the Project

2. **The proposed Project would generate a diverse portfolio of economic benefits ranging from direct use-values to indirect, non-use values.** A direct use value is, for example, the use of forest products, while a non-use value is related to the mere existence of virgin tropical rain forests. The transition from direct use to existence values is characterized by a decreasing tangibility of these values. The total value of tropical rainforest is comprised of the sum of a large number of different values from each value category.

3. **For this *ex-ante* economic analysis, only a few selected benefits are used for the quantitative economic assessment of project feasibility. These are: (a) carbon storage benefits, (b) existence values, and (c) watershed values.** These values have been chosen for the economic analysis due to the objectives of the Project and because these benefits are commonly referred to as the core environmental benefits of the Amazon basin rainforest. Accordingly, the associated economic benefits have been assessed in several studies that allow relying on a broad set of data for this economic assessment.

Stratification of Project Area for Benefit Estimation

4. **For assessing the benefits generated by the proposed Project, the different ecosystems targeted by the Project need to be identified and differentiated benefits have to be assigned.** The total Project area extends to about 9.09 million hectares, of which the PA occupies about 2.78 million hectares and its surrounding area has about 6.3 million hectares. The PA encompasses three ecosystems that need to be considered for estimating the total economic benefits of the core area. These are the following: (i) Tropical and Subtropical Moist Broadleaf

[52] Nunes, P.A.L.D. and J.C.J.M. van den Bergh. "Economic Valuation of Biodiversity: Sense or Nonsense?" *Ecological Economics*, 2001, vol. 39, issue 2, pp. 203-222.

[53] Ecosystem valuation is a difficult and controversial task, and economists have often been criticized for trying to put a "price tag" on nature. However, agencies in charge of protecting and managing natural resources must often make difficult spending decisions that involve tradeoffs in allocating resources. These types of decisions are economic decisions, and thus are based, either explicitly or implicitly, on society's values. Therefore, economic valuation can be useful, by providing a way to justify and set priorities for programs, policies, or actions that protect or restore ecosystems and their services. http://www.ecosystemvaluation.org/1-02.htm

Forests (about 2.5 million hectares); (ii) savannahs and shrublands (216,000 hectares), and (iii) freshwater biomes (about 20,000 hectares).[54]

5. **For this economic assessment, only the PA with these three ecosystems and the area surrounding the PA are considered**. This surrounding area is not further differentiated as regards ecosystems and benefits estimations are assumed to be much lower than for the PA (as will be stated for each benefit further below). Variations and benefits assignments for the remaining areas, beyond the core area, are unclear and could lead to potential over- or underestimations of benefits. Thus, limiting the analysis to the core area, contributes to its robustness.

Quantification of selected benefits

(a) Carbon

6. **Given the existence of a wide variety of different geographical features in the Amazon forests, it is especially difficult to quantify its forest carbon stock.** Estimates for density cover a range between 70 and 120 tons of carbon per hectare (tC/ha) (Rovere, 2000); 191 tC/ha (Fearnside, 1997); or 150 tC/ha (Andersen *et al*., 2001). Considering that in the transitional areas (with less biomass) deforestation is more pronounced, the latter probably represents the best average density of the region. A carbon stock of 100 tC/ha was assumed as the base value for tropical forest area; 30 tC/ha was assumed for the grassland and shrublands in the core PA, and 20 tC/ha was assumed for the surrounding areas.[55]

7. **The quantification of carbon benefits applied for this economic analysis follows an extremely conservative approach.** It only assumes avoided carbon emission as a result from enhanced forest conversation compared to the "without-project" situation, but it does not assume enhancing overall carbon stocks, e.g. in areas where currently degradation of forest may be present. As explained further below, these incremental carbon benefits are only modeled over a period of 15 years, although it can be expected that Project impacts will last for a longer time period. Consequently, the absolute carbon benefits of this economic analysis may differ from other carbon assessment undertaken for the Project, which—most likely—will exceed those modeled here. However, as this would only increase Project benefits and the Project's economic returns, it complies with the "threshold" approach taken for this analysis (compare also section (e) Methodology below).

8. **The valuation of project carbon benefits requires the assignment of a dollar value per ton of carbon, which is a difficult exercise, given the recent collapse of global carbon markets.** In this context, the market price of carbon does not reflect the social value of carbon storage of forests. Yet, using very conservative estimates, the shadow carbon price is assumed at US$1 per tC. Using a variety of valuation methods and modeling techniques[56] economists have

[54] Data from IDEAM (2014), as recorded in BD GEF Tracking Tool.
[55] Assuming a degradation of carbon stock due to disturbance of forest, agricultural production, and different ecosystems other than closed forests.
[56] See, for example, the Yale Forum on Climate Change.

arrived at a range of different values. For example, the United States Government puts the figure at around US$32, while other studies give a range between US$15 and US$74. Given the uncertainty about the correct shadow price and the need to conduct a conservative economic assessment of Project benefits, the shadow price is constantly kept at US$1 per tC, whereas the storage potential of the three ecosystems is subject to sensitivity analysis of minus 20 percent and minus 50 percent.

9. **Carbon storage values of tropical forests are different from climate regulation benefits.** Climate regulation benefits are additional values provided by forest ecosystems. For a case study in Cameroon, TEEB (2009) states that associated values range between US$842 and US$2,265 per hectare per year (ha/year). Pearce *et al.* (2001) state values for the same service to range from US$360 to US$2,200 per ha/year. However, as the current assessment focuses on carbon storage benefits only, these values are not considered in the analysis.

(b) Existence Values

10. **Estimates related to the "existence value" associated with preservation (non-use) of tropical forests show a wide variety of values in the literature.** The studies carried out tend to be based upon contingent valuation in rich countries where people appear to be willing to pay for the costs of preserving natural species and places. Horton et al. (2003), use a contingent valuation study that is applied to the specific case of the willingness to maintain conservation units in Amazonia detected among a sample of people in the United Kingdom and Italy. Two possible conservation scenarios are presented, based on conservation values of 5 percent and 20 percent. The study identifies an annual value in the form of an additional tax in each country, and not a single fixed value to be allocated by an international fund. The average value estimated, combining the samples in both countries, was US$50 per ha/year for 5 percent of the area of Amazonia, and US$67 per ha/year for 20 percent conservation. When the order of the questions was inverted (first 20 percent, followed by 5 percent) the average estimates changed to US$36 per ha/year and US$50 per ha/year, respectively. Referring to the same study, TEEB (2009) estimates existence values at US$43 per ha/year.

11. **According to Kubiszewski *et al*. (2011), there is considerable variability in ecosystem service values delivered by different land cover types.** On a per hectare basis, inland wetlands are estimated to provide the highest annual values with US$14,183 per ha/year, out of which water provision and "regulating services" made up the largest share with US$11,988 per ha/year. For forests, water provision and regulating services were estimated at US$6,686 per ha/year. In comparison, Pearce (2001) states watershed benefits for tropical forests at a range of US$15 to US$850 per ha/year. At the other end of the value spectrum, grasslands and orchards provide the lowest annual values, with US$1,548 per ha/year and US$1,200 per ha/year, respectively.

12. **Pearce et al. (2001) summarizes targeted and site-specific estimation as global aggregates do not take into account local variations.** For tropical forest values, values related to genetic information range between US$0 and US$3,000 per ha/year; for climate benefits, values range between US360 and US$2,200 per ha/year; and for existence values between US$2 and US$12 per ha/year (although they state that for unique areas, this value could increase to US$4,400 per ha/year).

13. **As the Horton et al. (2003) study is the only assessment of existence value for the Amazon, this economic is using these values as guidance for this simulation.** While the US$43 per ha/year stated by TEEB (2009) is used as the base value for tropical forests ecosystem in the PA, this value is discounted to US$10 per ha/year for savannah and shrublands, as well as for the surrounding zone. Furthermore, a sensitivity analysis is applied by making benefit adjustments of -20 percent and -50 percent to analyze impacts on overall results if existence values were significantly decreased. Due to numerous uncertainties related to the assumptions, the value produced by the study is considered to be a lower bound estimate.

(c) Watershed Values

14. **Given the important role of tropical forests in the Amazon with respect to hydrological functions, watershed values are the third and last category of benefit values included in the quantitative economic assessment.** Another reason for including watershed values in this assessment is that they are clearly distinguishable from the other two value categories, which is important for avoiding double counting of benefits. For example, TEEB (2009) states the economic value of intact tropical forests as US$6,120 per ha/year, which is significantly higher than any of the values assumed in this assessment (however, it is not fully clear which values are considered in TEEB's assessment).

15. **Pearce (2001) values watershed benefits for tropical forests at a range between US$15 and US$850 per ha/year, with the higher-bound value applying to tropical forests.** Consequently, a differentiation of benefit values is applied according to the three ecosystems within the core area and the surrounding zone. For the tropical forest area, a base value of US$50 per ha/year was applied; for the savannah and shrublands, a US$25 per ha/year value was applied, and for the surrounding zone, a US$15 per ha/year was applied. As for the other benefit values, sensitivity analysis of benefit reductions of -20 percent and -50 percent was applied.

16. **Watershed value is the only value category where the area of wetlands is included in the assessment.** Kubiszewski *et al.* (2011), state annual values of inland wetlands at US$14,183 per ha/year, out of which water provision and "regulating services" made up the largest share with US$11,988 per ha/year. With the focus on the latter, US$11,988 is applied for this economic assessment. However, since this is a very high value that could potentially overshadow other Project benefits, an assessment excluding these benefits is also conducted and results are separately stated in the results section.

(d) Project costs

17. Project costs are approximated using the investment costs of the Project totaling US$45.85 million. A total Project duration of 5 years was assumed, with a linear disbursement of Project investments resulting in annual costs of about US$8 million. These allocations are used for the cost calculations in the analysis.

(e) Methodology

18. **A threshold analysis identifying the break-even point where the Project's net benefits equal net costs is applied.** Sensitivity analysis is applied for the key simulation parameters, notably discount rate, benefit assessment, and the inclusion or exclusion of water body-related benefits. Quantitative results will be contrasted with qualitative benefits to arrive at overall project feasibility.

19. **A "with-" and "without-" Project situation is used for estimating incremental benefits generated by the Project.** The incremental difference between the "with-" and "without-" Project situation is simulated in deforestation increments of 0.1 percent, 0.2 percent and 0.5 percent. It is assumed that due to the Project, the deforestation rate in the Project area is lower compared to the national average—and ideally zero. According to national assessments cited in recent REDD+ documentation (UN-REDD, 2013), average deforestation rates in Colombia at the national level are about 0.5 percent annually. Therefore, the difference between the "with-" and "without-" Project situation is simulated in possible deforestation increments. For example, a 0.1 percent increment indicates very low project impacts, as the difference between the national average and the Project situation is rather small. In contrast, the 0.5 percent increment assumes a zero deforestation scenario compared to the national average. Net Present Value (NPV) and Benefit-Cost Ratio (B/C-Ratio) are used as criteria to assess the economic feasibility of the Project.

20. **A 15-year period is assumed to assess the economic feasibility of the Project.** While Project costs are only assumed for the first five years of the Project, according to the projected disbursements, benefits are assumed to be generated beyond the lifetime of the Project. To harmonize project benefits and costs through the calculation of a present value of costs and benefits, a discount rate needs to be determined. Given the often significant impact of the choice of the discount rate on economic analysis outcomes, and the common difficulty in determining discount rates reflecting economic discounting behavior, a sensitivity analysis is applied considering discount rates of 5 percent, 10 percent, and 20 percent.

21. **In addition to testing the impact of different discount rates on simulation results, other sensitivity analyses are applied that account for possible variations in key input parameters to test the robustness of simulation results.** First of all, changing Project impacts are simulated by applying increment variations in the deforestation rate of 0.1 percent, 0.2 percent, and 0.5 percent for the "with" and the "without-" Project situation, representing increasingly Project success: at the 0.1 percent increment, the Project would only achieve a 0.1 percent increment, whereas at the 0.5 percent increment, a higher achievement is seen. Next, simulation results are tested against changing benefit values. Although all assumed benefit values are already lower-bound estimations, focus on three core benefit categories only, and are only applied for the core Project area, benefit reductions of minus 20 percent and minus 50 percent are tested.[57] Finally, two sets of simulations are run—one including the economic benefit value of water bodies, and one without it. As discussed above, the very high value derived from the literature for associated economic values demands a test as regards its impact on overall project outcome. This set of

[57] As discussed above, benefit values associated to carbon storage.

sensitivity assessments enables a comprehensive analysis of the economic robustness of the Project *vis-à-vis* changing or differentiated value parameters.

(f) Results

22. Simulation results are summarized in tables 6.1 through 6.3, which represent different deforestation increments between the "with-" and "without-" Project scenario. Each table shows the NPV and BCR for different discount rates and benefit variations, both differentiated by including or excluding the benefit values associated with wetland conservation within the core PA.

Table 6.1 Results for Project impacts at 0.1 percent deforestation increment

	With Wetlands Discount Rates						**Without Wetlands Discount Rates**					
Benefit	5%		10%		20%		5%		10%		20%	
Variations	**NPV***	**BCR**	**NPV**	**BCR**	**NPV**	**BCR**	**NPV**	**BCR**	**NPV**	**BCR**	**NPV**	**BCR**
0%	18.0	1.48	2.4	1.07	-9.5	0.63	3.5	1.09	-6.8	0.79	13.8	0.46
-10%	15.9	1.43	1.1	1.04	-10.1	0.61	1.4	1.04	-8.0	0.75	14.4	0.44
-20%	13.9	1.37	-0.2	1.00	-10.7	0.58	-0.6	0.98	-9.3	0.71	15.0	0.42
-50%	7.8	1.21	-4.0	0.88	-12.5	0.51	-6.7	0.82	-13.2	0.60	16.7	0.35

*NPV: all values stated in US$ million.

23. **Overall, results show positive simulation outcomes for the Project, thus confirming economic feasibility.** Only for situations in which combined input parameters are set at very "extreme" values in terms of Project impacts, does the analysis yield negative results. For example, this is the case at 10 percent discount rate (and higher), excluding wetland benefit values, and only assuming a Project impact of 0.1 percent of deforestation reduction increment between the "with" and "without-" Project scenarios (table 6.1). When wetland benefits are included, discount rates of 10 percent still yield positive results, except for benefit value reductions of minus 20 percent and minus 50 percent.

Table 6.2 Results for Project impacts at 0.2 percent deforestation increment

	With Wetlands Discount Rates						**Without Wetlands Discount Rates**					
Benefit	5%		10%		20%		5%		10%		20%	
Variations	**NPV***	**BCR**	**NPV**	**BCR**	**NPV**	**BCR**	**NPV**	**BCR**	**NPV**	**BCR**	**NPV**	**BCR**
0%	72.8	2.95	37.2	2.14	6.5	1.25	43.9	2.18	18.9	1.58	-1.9	0.92
-10%	68.8	2.84	34.6	2.06	5.3	1.21	39.9	2.07	16.3	1.50	-3.1	0.88
-20%	64.7	2.74	32.1	1.98	4.1	1.16	35.8	1.96	13.7	1.42	-4.3	0.83
-50%	52.5	2.41	24.3	1.75	0.6	1.02	23.6	1.64	6.0	1.19	-7.8	0.69

*NPV: all values stated in US$ million.

24. Increasing the incremental Project impact to a deforestation reduction equivalent to 0.2 percent compared to the "without-Project" scenario improves simulation results significantly

(table 6.2). Only at high discount rates of 20 percent, for the situation where no wetland benefits are included, does the simulation yield negative results. In other scenarios, even a reduction of benefit values by 50 percent —for which the baseline values are already conservative—continue yielding positive results, even when no wetland-related benefit values are included.

25. **The last set of simulations applies an incremental difference of 0.5 percent deforestation between the "with-" and "without-"Project situation (table 6.3).** This situation mirrors a situation where the PA would reduce deforestation to zero if the national deforestation average is used as a reference. However, given the previous inaccessibility to the area, the current non-existence of infrastructure, and possible increased development dynamics in the area without the creation of the PA, deforestation rates may in fact be much higher than national averages. Furthermore, PAs have frequently been identified as effective means to slow down or stop deforestation. Therefore, this scenario seems realistic as regards the Project framework. The simulated benefits are still believed to be lower-bound since the full Project area is not considered in the simulation and many values have been estimated conservatively for the simulation.

Table 6.3 Results for Project impacts at 0.5 percent deforestation increment

	With Wetlands Discount Rates						Without Wetlands Discount Rates					
Benefit Variations	5%		10%		20%		5%		10%		20%	
	NPV*	**BCR**	**NPV**	**BCR**	**NPV**	**BCR**	**NPV**	**BCR**	**NPV**	**BCR**	**NPV**	**BCR**
0%	234.7	7.30	140.2	5.29	54.1	3.10	163.4	5.38	94.9	3.91	33.2	2.29
-10%	224.7	7.03	133.8	5.10	51.2	2.99	153.4	5.11	88.5	3.71	30.2	2.18
-20%	214.7	6.76	127.4	4.90	48.2	2.87	143.4	4.85	82.1	3.52	27.3	2.06
-50%	184.6	5.95	108.3	4.32	39.4	2.53	113.3	4.04	63.0	2.93	18.4	1.72

*NPV: all values stated in US$ million.

Discussion

26. **This *ex-ante* economic efficiency analysis conducted for the Project results in positive economic impacts to be achieved by the Project**. The results of the quantitative simulations are also robust across a range of sensitivity analyses assuming significant changes in discount rates and key simulation parameters notably benefit vale parameters. Throughout the analysis, it was emphasized that benefit assumptions were always done conservatively, using lower-bound values, especially as regards non-market benefits, such as watershed and carbon benefits, but also as regards existence values.

27. **The quantitative analysis was also strictly limited to values that can be clearly attributed to the Project**. The assessment focused only of the core project area encompassing the PA and its surrounding zone, and it did not take into account possible areas outside this core zones where additional positive impacts might be achieved. Moreover, the assessment did not take into account benefits accruing beyond the Project site that may result from improved capacity to manage PAs in the Amazon and beyond in Colombia.

28. **Analyzing the Project impacts in the broader economic context of Colombia implies that the Project will pilot and catalyze important development momentum for the sustainable management of natural resources in the Amazon region beyond the specific project.** Given the increasing pressure on natural resources (e.g. though ranching, mining, and population pressure) and growing ecosystem stress through climate change, the Project investments and associated achievements are highly relevant in today's context. The existence and ecosystem values generated by the Amazon rainforest are of outmost importance for the region's economic, social, and environmental stability and incremental for global, regional, and local weather and climate regulation.

29. **Though not included in the assessment, probably one of the most important impacts of the proposed Project relate to the capacity building of government institutions at central and regional levels.** Enhanced capacity of government institutions will improve public service delivery, thus leading to numerous benefits and positive economic impacts. Given the ongoing challenges faced in natural resources management—not least due to climate change—improvements in the functioning of public institutions cannot be underestimated, particularly in a "with-" and "without-" Project scenario. Enhanced functioning of government institutions should also facilitate the implementation of future projects and investments that can build on this Project's envisioned achievements. Similar considerations apply to knowledge generation and management to be achieved by the proposed Project.

30. **In summary, based on this economic evaluation, it is concluded that the proposed Project will result in significant positive development impacts.** The consideration of only a few of those impacts in the quantitative analysis sufficed to yield positive economic results. The assessment focused only on part of the area the Project is anticipated to create impacts and did not include other secondary impacts, such as broader capacity building. This demonstrates that investments in biodiversity conservation in the Amazon rainforest contribute significantly to the economic development ambitions of countries such as Colombia, since they generate and safeguard important direct environmental services that are important at local, regional, and global levels.

Annex 7: Map of Project – MAP IBRD 40963