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Document of
The World Bank

Report No: ICR0000722

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(WBTF-24939)

ON A

GLOBAL ENVIRONMENTAL FACILITY TRUST FUND GRANT

IN THE AMOUNT OF SDR 7.7 MILLION
(US$ 10.00 MILLION EQUIVALENT)

TO THE

REPUBLIC OF PERU

FOR A

INDIGENOUS MANAGEMENT OF PROTECTED AREAS IN THE PERUVIAN AMAZON (GEF) PROJECT

November 19, 2007

Sustainable Development Network
Bolivia, Ecuador, Peru and Venezuela Country Management Unit
Latin America and the Caribbean Region

CURRENCY EQUIVALENTS
(Exchange Rate Effective January 15, 2001)

Currency Unit	=	New Soles
1.00	=	US$ 0.29
US$ 1.00	=	New Soles 3.5

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AIDESEP	Interethnic Association for the Development of the Peruvian Rainforest	M&E	Monitoring and Evaluation
CAS	Country Assistance Strategy	MTR	Midterm Review Mission
CI	Conservation International	MSP	Sustainable Management Project
CONAM	National Environmental Council	NGO	Non-Governmental Organization
CONAP	National Amazon Confederation of Peru	NPA	Natural Protected Areas
CPS	Country Partnership Strategy	NPAC	Natural Protected Area Management Committee
CR	Communal Reserve		
DGANPFS	General Directorate of Natural Protected Areas and Wildlife Fauna	NPV	Net Present Value
ECA	Administration Contract Executors		
ECOPURUS	Contract Administrator for Purus Communal Reserve	PAD	Project Appraisal Document
ECOSIRA	Contract Administrator for El Sira Communal Reserve	RCP	Purus Communal Reserve
ERR	Economic Rate of Return	RCS	El Sira Communal Reserve
FGCPC	Peru Canada Countervalue (Trust) Fund	PDF	Project Preparation and Development Facility
GEF	Global Environment Facility	PDPIA	Indigenous and Afro-Peruvian Peoples Development Project
GIS	Geographic Information System	PIMA	Indigenous Management of Protected Areas in the Amazon (GEF) Project
GoP	Government of Peru	PIU	Project Implementation Unit
IANP	Intendancy for Natural Protected Areas	PROFONANPE	Peruvian Trust Fund for National Parks and Protected Areas
ICR	Implementation Completion Report	PY	Project Year
IDF	Institutional Development Framework	SINANPE	National System of Protected Areas
IGV	General Sales Tax		
ILI	Intensive Learning Implementation Completion and Results Report	PSNR	Pacaya-Samiria National Reserve
ILO	International Labor Organization	TTL	Task Team Leader
INDEPA	National Institute for Development of Andean, Amazonian and Afro-Peruvian People	WWF	World Wildlife Fund
INRENA	National Institute of Natural Resources	ZCC	Zonal Coordinating Committee
IRR	Internal Rate of Return	ZRAP	Alto Purus Reserved Zone
ISR	Implementation Status Report	ZRG	Güepi Reserved Zone
ITTO	International Tropical Timber Organization	ZRSC	Santiago-Comaina Reserved Zone
IUCN	The World Conservation Union		

Vice President:	Pamela Cox
Country Director:	Carlos Felipe Jaramillo
Sector Manager:	McDonald Benjamin
Project Team Leader:	Maria Elena Castro
ICR Team Leader:	César Flores/Maria Elena Castro

PERU

INDIGENOUS MANAGEMENT OF PROTECTED AREAS IN THE PERUVIAN AMAZON

CONTENTS

A. Basic Information

Country:	Peru	Project Name:	Indigenous Management of Protected Areas in the Peruvian Amazon (GEF) Project
Project ID:	P065200	L/C/TF Number(s):	WBTF-24939
ICR Date:	11/21/2007	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	GOVERNMENT OF PERU
Original Total Commitment:	USD 10.0M	Disbursed Amount:	USD 10.0M
Environmental Category: C		**Global Focal Area: B**	
Implementing Agencies: INRENA			
Cofinanciers and Other External Partners:			

B. Key Dates

Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	02/10/1999	Effectiveness:	12/19/2001	11/26/2001
Appraisal:	04/10/2000	Restructuring(s):		
Approval:	02/27/2001	Mid-term Review:	12/15/2005	11/29/2004
		Closing:	12/31/2006	05/31/2007

C. Ratings Summary

C.1 Performance Rating by ICR

Outcomes:	Satisfactory
Risk to Global Environment Outcome	Moderate
Bank Performance:	Satisfactory
Borrower Performance:	Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance

Bank	Ratings	Borrower	Ratings
Quality at Entry:	Moderately Satisfactory	Government:	Moderately Satisfactory
Quality of Supervision:	Satisfactory	Implementing Agency/Agencies:	Satisfactory
Overall Bank Performance:	Satisfactory	**Overall Borrower Performance:**	Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Implementation Performance	**Indicators**	**QAG Assessments (if any)**	**Rating**
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA):	Satisfactory
Problem Project at any time (Yes/No):	Yes	Quality of Supervision (QSA):	None
GEO rating before Closing/Inactive status	Satisfactory		

D. Sector and Theme Codes

	Original	Actual
Sector Code (as % of total Bank financing)		
Central government administration	64	64
General agriculture, fishing and forestry sector	9	9
Other social services	27	27
Theme Code (Primary/Secondary)		
Biodiversity	Primary	Primary
Indigenous peoples	Primary	Primary
Other environment and natural resources management	Secondary	Secondary
Participation and civic engagement	Primary	Primary

E. Bank Staff

Positions	At ICR	At Approval
Vice President:	Pamela Cox	David de Ferranti
Country Director:	Carlos Felipe Jaramillo	Isabel M. Guerrero
Sector Manager:	McDonald P. Benjamin	John Redwood
Project Team Leader:	Maria E. Castro-Munoz	Pierre Werbrouck
ICR Team Leader:	Maria E. Castro-Munoz	
ICR Primary Author:	Cesar Francisco Flores	
	Keiko Ashida Tao	
	Olympia Beatriz Icochea	

F. Results Framework Analysis

Global Environment Objectives (GEO) and Key Indicators(as approved)

The objective of the project is to increase the sustainability of biodiversity conservation in the Peruvian Amazon through the involvement of Indigenous Communities in the management of new and existing Protected Areas. This will be achieved by: (i) establishing, categorizing and promoting the participatory indigenous management of five protected areas; (ii) promoting economically, socially and environmentally sustainable investments by indigenous grassroots organizations; (iii) developing and implementing a participatory monitoring and evaluation system for the project areas and the National Natural Protected Areas System (SINANPE) as a whole; and (iv) strengthening the institutional and technical capacity of INRENA and indigenous organizations to sustainably manage the protected areas and their resources. </>

GEF Global Objective: the conservation and sustainable utilization of important forest ecosystems in the Peruvian Amazon region through the establishment of protected areas to be co-managed by indigenous people.

This project supports Operational Programs 3 (Forests Ecosystems) and 2 (Freshwater Ecosystems)

Revised Global Environment Objectives (as approved by original approving authority) and Key Indicators and reasons/justifications

The PDO was not modified, however, during the project#s midterm review indicators were adjusted for the following reasons: In the case of the first indicator, the project had developed additional instruments to enhance indigenous peoples# participation in the comanagement of protected areas. The second indicator was adjusted because; (i) the baseline database with socioeconomic and biodiversity indicators had not been completed and the biodiversity monitoring and evaluation system was expected to be ready by the end of the project; (ii) the lack of this baseline would limit the definition of specific indicators that could measure the stopping of biodiversity loss; and (iii) the indicator on biodiversity loss as stated had limitations in terms of measurability and attribution. Therefore, the performance indicators were adjusted in the following manner to better assess achievement of the development objective:

(a) Indigenous people comanage protected areas: Indigenous participation in comanagement will be assessed by their participation in the PAMC and in other comanagement instruments created during the project, including communal reserves, and surveillance committees, and by the number of indigenous populations using these mechanisms.

(b) Enhanced conservation of biodiversity: The project objective of improving the conservation of forest ecosystems in the Peruvian Amazon will be measured by the expansion of categorized and legally protected natural protected areas and the establishment of conservation systems, as defined by the IUCN, for the protection of zones with endangered and/or endemic species.

(c) Positive environmental impacts from sustainable use of natural resources and related activities: Improvement of the sustainable utilization of forest ecosystems would be assessed by the environmental impacts of bioinvestment projects. Specific indicators formulated for this purpose were: reduction in soil erosion, increase in carbon capture, increase in hectares of reforestation, and repopulation of hydrobiological species.

These indicators focus on the three main outcomes encompassed in the development objective: (a) indigenous peoples# participation in the comanagement of protected areas: (b) the sustainable use of forest ecosystems in the Peruvian Amazon; and (iii) the conservation actions that will have a positive impact on the stability, size, and effective protection of the biological richness of the natural protected areas under the project. These indicators taken together permit a reliable assessment of whether the PDO was satisfactorily achieved.

Two additional GEO Indicators were addedd to reflect these changes.

(a) GEO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Five Master Plans including management plans completed for the five NPA; Categorization of three reserved zones completed			
Value (quantitative or Qualitative)	There was not specific studies about natural resources and no conservation strategy	Completion of Master Plans and management plans for the five NPA		Five Master Plans including conservation mangement completed. Categorization of Purus, Santiago Comaina and Gueppi completed
Date achieved	12/15/2000	06/30/2006		12/22/2006
Comments (incl. % achievement)	100%			
Indicator 2 :	Indigenous organization participating in NPA Management Committees in the five target areas			
Value (quantitative or Qualitative)	Consultation completed but no management committees were actually established	Indigenous organizations are participating in PA planning through Management Commitees	Three communal reserves created and managed by indigenous	Indigenous organizations in NPA management through Protected Management Committees and

			communities	directly managing the 3 communal reserves created under the project.
Date achieved	03/30/2001	12/16/2005	11/22/2006	12/22/2006
Comments (incl. % achievement)	100%			
Indicator 3 :	Sustainable use of natural resources by indigenous communities			
Value (quantitative or Qualitative)	There was not any such activity	142 communities benefiting from bioinvestment projects		43 bioinvestment projects benefiting 200 communities completed
Date achieved	02/28/2001	04/30/2001		05/31/2007
Comments (incl. % achievement)	140.8%			
Indicator 4 :	Enhanced conservation of biodiversity measured by expansion in the SINANPE			
Value (quantitative or Qualitative)	4.99 million of hectares as reserved zones	4.99 million hectares in reserved zones categorized	4.99 hectates in reserved zones categorized and incorporated in the SINANPE	3.5 million hectares incorporated as 2 national parks (IUCN II) and 3 communal reserves (IUCN VI) In ZR Gueppi: National Park Gueppi 203,882 ha and two Communal Reserves: Huimeki (142,833 ha); AidoPai (248,095) are yet to be approved.
Date achieved	04/30/2001	04/30/2001	11/30/2004	05/31/2007
Comments (incl. % achievement)	70% of has categorized as national parks (2) and communalreserves (3) incorporated in the SINANPE			
Indicator 5 :	Positive environmental impacts from sustainable use of natural resources and related activities through bioinvestment projects			
Value (quantitative or Qualitative)	No base line	Not defined		Reduction in soil erosion: 34,465 tons; increase in carbon capture: 2,969 tons; 1,273 ha reforested; deforestation prevented in 18,664 ha;

				sustainable use of 775 ha of surface waters resulted in 100% repopulation of native species
Date achieved	04/30/2001	04/30/2001		05/31/2007
Comments (incl. % achievement)	These positive impacts were not identified at preparaation; values were estimated at closing of the project.			

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	15 planning documents for the five NPA			
Value (quantitative or Qualitative)	Management Plan for Pacaya Samiria	15 Planning documents prepared	Categorization of three Reserved Zones completed and three Master Plans prepared.	18 Planning documents prepared including: three categorization reports and 3 Master Plans (PNAP, RCP, RCS), 1 Resource Management Plan (RNPS), 1 Research Plan (RNPS), 5 Diagnostic Plan, 2 Zoning Plans (ZRG, RCS), 3 Monitoring & Evaluation Plans
Date achieved	12/18/2001	04/30/2001	11/30/2004	12/29/2006
Comments (incl. % achievement)	120%			
Indicator 2 :	Establishment of PA Management committees and community survellaince teams			
Value (quantitative or Qualitative)	No PA management committees existes	Surveillance contracts signed and facilities in place; 200 indigenous representatives trained		258 indigenous communities trained for participation in PAMC and five surveillance contracts signed and operating.

Date achieved	04/30/2001	12/16/2005		12/28/2006
Comments (incl. % achievement)	129% Additionally, the following outputs were achieved: 15 community volunteer parks agreements signed; 50 natural resources management groups established.			
Indicator 3 :	Preinvestments studies completed and agreed with communities			
Value (quantitative or Qualitative)	none existed	40 bioinvestment projects executed		43 boinvestments completed benefiting 200 communities
Date achieved	04/30/2001	12/16/2005		05/31/2007
Comments (incl. % achievement)	107.5%			

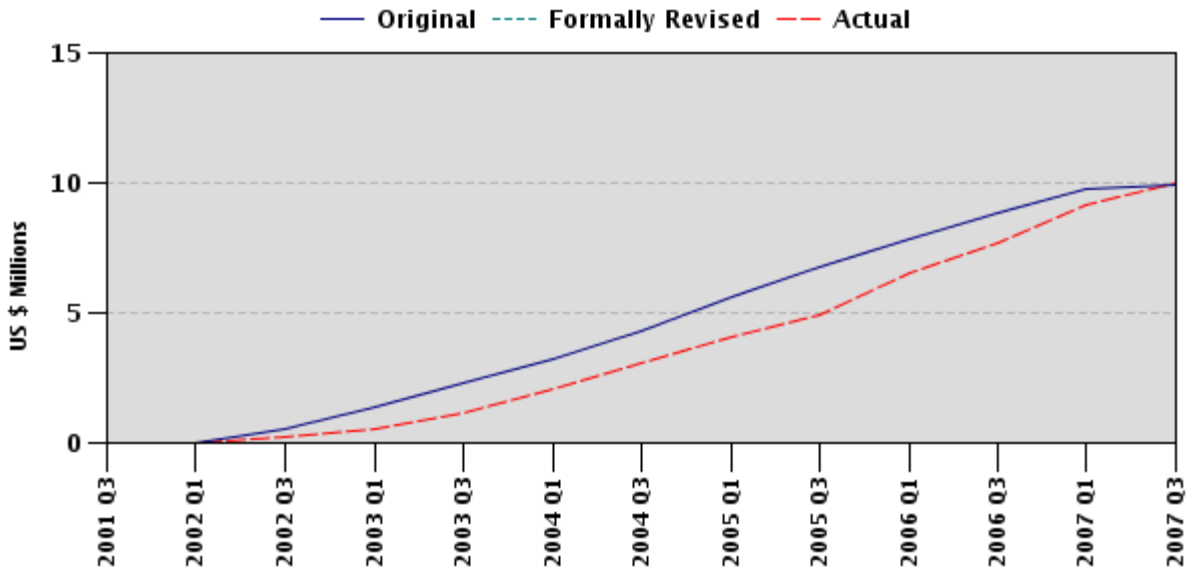
G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	GEO	IP	Actual Disbursements (USD millions)
1	07/23/2001	Satisfactory	Satisfactory	0.00
2	12/07/2001	Satisfactory	Unsatisfactory	0.00
3	02/25/2002	Satisfactory	Unsatisfactory	0.25
4	05/28/2002	Satisfactory	Satisfactory	0.34
5	08/14/2002	Satisfactory	Satisfactory	0.56
6	11/06/2002	Satisfactory	Satisfactory	0.81
7	06/20/2003	Satisfactory	Unsatisfactory	1.31
8	12/24/2003	Satisfactory	Unsatisfactory	2.54
9	06/17/2004	Satisfactory	Satisfactory	3.50
10	12/20/2004	Satisfactory	Satisfactory	4.69
11	04/27/2005	Satisfactory	Satisfactory	5.54
12	09/17/2005	Satisfactory	Satisfactory	6.52
13	03/27/2006	Satisfactory	Satisfactory	7.69
14	10/23/2006	Satisfactory	Moderately Satisfactory	9.17
15	05/21/2007	Satisfactory	Satisfactory	10.00

H. Restructuring (if any)

Not Applicable

I. Disbursement Profile



1. PROJECT CONTEXT, DEVELOPMENT OBJECTIVE AND DESIGN

This GEF operation was designed to address crucial factors affecting conservation of the Peruvian Amazon Region. It proposed a participatory conservation model to respond to indigenous organizations' demands for participation in the management of protected areas in that region. It also helped to strengthen the institutional framework for conservation and provided the financial resources to establish the participatory model and institutionalize its tools, as explained below.

1.1 Context at Appraisal

a. Country and Sector Background: At the time of project preparation, 1998–2001, Peru had made important progress on environmental conservation, despite high poverty incidence and institutional and political instability. During this period, a coherent policy framework for biodiversity conservation and protected areas management was consolidated, including: the Biodiversity Law; the Protected Areas Law and its bylaw; and the Master Plan for the National System of Protected Areas (SINANPE). This was the result of continuous efforts, many of them supported by the GEF and the World Bank, and some specifically intended to reverse the trend of biodiversity loss of the Peruvian Amazon Region.

b. Institutional framework: Several crucial agencies for environment protection were established at this time, such as: (i) the National Environmental Council (CONAM), a central policy and coordinating agency and the national GEF focal point; (ii) the Peruvian Trust Fund for National Parks and Protected Areas (PROFONANPE) in charge of administering and channeling financial resources to the management of protected areas and buffer zones; and (iii) the Directorate of Natural Protected Areas of the National Institute of Natural Resources (INRENA), with the mandate of administering the country's National System of Protected Areas (SINANPE).

The creation of the Technical Secretariat of Indigenous Affairs, under the Ministry of Women and Human Development, was an important step to enhance participation in development of indigenous peoples. This Technical Secretariat led preparation of the Indigenous and Afroperuvian Peoples Development (PDPIA) project aimed at strengthening their organizations; the Interethnic Association for the Development for the Peruvian Amazon (AIDESEP) played an important role.

Despite the progress achieved, Peru was spending less than US$50 in conservation per km^2, of protected area which represented 39% of Mexico's expenditures and only 12% of those of Brazil and was highly dependent on external funding. Moreover, the newly created agencies needed support to strengthen their capacities and gain skills to achieve their goals.

***c. Biodiversity Conservation and Natural Resource Management*:** Conservation of protected areas of the SINANPE at the time of project preparation was not fully operational. Of the five National Protected Areas (NPAs) under the project only one, Pacaya-Samiria had been established as a national reserve and had made progress in preparing conservation plans; El Sira has been established as a communal reserve during project preparation but lacked a master plan; three areas, Güeppi, Purus, and Santiago-Comaina, were "reserved zones," and needed categorization and conservation plans. This situation created two major issues: (i) lack of legal

security for conservation purposes; and (ii) lack of secure land rights for communities within those areas since it was not possible to issue land titles.

d. Indigenous Legal Framework: In 1994, Peru ratified the ILO Convention on Indigenous and Tribal Peoples, establishing the GoP's commitment to protect the rights of indigenous peoples, i.e., access to their land and control over natural resources. Further, in 2001 during consultations carried out to approve the bylaw of the Natural Protected Areas Law, the GoP agreed to: (i) respect community rights, including lands titled and rights acquired prior to the establishment of NPAs; (ii) allow tenure regularization of community lands within protected areas and buffer zones once an agreement on categorization was reached; (iii) acknowledge their values and protect their cultural heritage and traditional productive systems; and (iv) encourage indigenous organizations and community leaders to become members of the NPA Management Committees. More importantly, the new regulations established a mandatory consultation process to define categories in the Master Plan and allowed indigenous organizations to manage communal reserves.

***e. The Project in the CAS*:** The Indigenous Management of Protected Areas in the Amazon GEF Project (PIMA) was in alignment with the Peru Country Assistance Strategy (CAS) discussed on July 22, 1997 (16796-PE) and the Country Assistance Strategy Progress Report of March 20, 2001. The CAS was focused on increasing equality and improving the access of the poor to development opportunities, increasing human capital, and integrating market infrastructure and the full rights and opportunities of private ownership. The project fit in this framework by promoting equal rights for indigenous people in the management of protected areas and better use of natural resources to enhance their livelihoods.

f. Consistency with GEF Strategy Priorities*:* Peru ranks among a handful of mega-biodiverse countries in the world. The Peruvian Amazon Region in particular is one of the most important repositories of biological diversity on the planet. The GEF was designed to contribute to the establishment of a long-term protection strategy for globally important ecosystems consistent with the overall GEF Operational Strategy; specifically, it supported Operational Programs 3 (Forest Ecosystems) and 2 (Freshwater Ecosystems.). The five target protected areas extend over pristine forests housing many species of global importance and some that are threatened. The project's conservation activities also targeted biodiversity of the Ucayali, Pachitea, Angusilla, Purus, Curanja, Comaina, Cenepa, Santiago, and Marañón Rivers. The project was also consistent with the GEF Strategic Priority 1: catalyzing the sustainability of protected area systems by supporting the financing of INRENA and strengthening the capacity of indigenous peoples to participate in the management of protected areas.

Within this context, a GEF operation was both timely and relevant to promote capacity building and institutional development for the introduction of a participatory approach to conservation of biodiversity protected areas in the Peruvian Amazon Region with the involvement of indigenous communities.

1.2 Original Project Development Objective (PDO) and Key Indicators (as Approved)

The project-development objective at appraisal was:

- To improve the conservation and sustainable utilization of forest ecosystems in the Peruvian Amazon through the involvement of indigenous communities in the management of Project Protected Areas.

The key indicators proposed to assess the achievement of the PDO were:

- Indigenous people comanage protected areas in the five target zones through their participation in the corresponding Protected Areas Management Committees.
- Biodiversity loss, as measured by monitoring indicators, is stopped in the five target areas.

1.3 Revised PDO and Key Indicators (as approved by the original approving authority), and reasons/justification

The PDO was not revised; however, some adjustments were made to measure key indicators at the Midterm Review as explained in section F above. The alternative indicators are the following:

(a) Indigenous people comanage protected areas: Indigenous participation in comanagement will be assessed by their participation in the Protected Areas Management Committees and in other comanagement instruments created during the project including, communal reserves and surveillance committees as well as by the number of indigenous populations using these mechanisms.

(b) Enhanced conservation of biodiversity: The project objective of improving the conservation of forest ecosystem in the Peruvian Amazon will be measured by the expansion of the categorized and legally protected natural protected areas and the establishment of conservation systems, as defined by the IUCN, for the protection of zones with endangered and/or endemic species.

(c) Positive environmental impacts from sustainable use of natural resources and related activities: Improvement of sustainable utilization of the forest ecosystems would be assessed by the environmental impacts of the bioinvestment projects. Specific indicators formulated for this purpose were: reduction in soil erosion, increase in carbon capture, increase in hectares of reforestation, and repopulation of hydrobiological species

These indicators were incorporated in the project's Monitoring and Evaluation System to measure progress towards its development goal. PIU Quarterly Reports and ISR in the Bank followed the same structure.

1.4 Main Beneficiaries, Original and Revised

The intended main beneficiaries were the indigenous communities within the five protected areas under the project—Pacaya-Samiria, Santiago-Comaina, Purus, Güeppi, and El Sira—comprising a total of 7,677,679 hectares equivalent to 6 percent of the Peruvian territory. The target population mainly included the following indigenous peoples of the Amazon: Kukama, Kukamiria (Pacaya-Samiria); Ashaninka, Yanesha, Shipibo-Conibo (El Sira); Cashinabua, Sharanahua, Culina, Mastanahua, Amahuaca, Asháninka, Chaninahua, Yine (Purus); Awajun, Huampis (Santiago-Comaina); Kichuas, Huitotos, Secoyas or Airo Pai (Güeppi). It was estimated that the project will benefit 300 mostly indigenous communities and some *mestizo* communities, comprising 120, 000 inhabitants. The National Natural Resources Institute (INRENA) would also benefit because the project was designed to strengthen its technical and institutional capacity. The project's beneficiaries remained the same until closing date.

1.5 Original Components (As Approved)

Component 1: Participatory Biodiversity Conservation (US$4.308 million, corresponding to 43.1% of GEF donation).

The objective of this component was to promote the participation of indigenous people in the establishment, categorization, and management of the five protected areas identified by the project. A key assumption in this component is that by increasing indigenous participation in the management of protected areas, the effectiveness of conservation will be assured in the long term. This component comprises the following subcomponents:

1.1. Creation and Categorization of Protected Areas
1.2. Strengthening Participatory Mechanisms
1.3. Indigenous Peoples' Training in Participatory Mechanisms and Methods for Protected Areas Management
1.4. Provision of Infrastructure and Equipment for Protected Areas
1.5. Strengthening of Field Teams and Zone Coordination Committees

Component 2: Sustainable Uses of Biodiversity (US$3.112 million, corresponding to 31.1% of GEF donation).

This component was designed to provide alternatives to the unsustainable use of resources within the protected areas. Based on the assumption that economically and ecologically sound activities in the buffer zone of protected areas will relieve pressure from the core area, this component sought to identify and carry out activities aimed at increasing income based on the forest and freshwater biodiversity. Thus, the project anticipated the following subcomponents:

2.1 Management Plans for Titled Indigenous Land
2.2 Communal Natural Resource Use Contract
2.3 Demand and Market Studies
2.4 Biodiversity Investments Subgrants

Component 3: Monitoring and Evaluation System (US$1.283 million, corresponding to 12.8% of GEF donation).

The objective was to design and implement a participatory monitoring and evaluation system for the project areas. In addition, this system was expected to serve as the basis for the entire National Natural Protected Areas System (SINANPE). This tool should be based on participatory mechanisms and will be the key component to assess whether a significant biodiversity loss occurred in the target areas. This component contains the following subcomponents:

3.1 Biological and Socioeconomic Baselines and Databases
3.2 Biological and Socioeconomic Monitoring
3.3 Area Management Monitoring
3.4 Training, Technical Assistance, and Operational Support

Component 4: Project Implementation (US$1.297 million, corresponding to 12.9% of GEF donation).

This component was aimed at strengthening INRENA's institutional and technical capacity to include indigenous peoples in the sustainable management of protected areas and their natural resources. The subcomponents include:

4.1 Project National Coordination Mechanisms
4.2 Project Special Implementation Unit
4.3 Technical Assistance
4.4 Project Monitoring

1.6 Revised Components

Components were not revised during execution.

1.7 Other Significant Changes

Implementation Arrangements: The project experienced five relevant changes that required an adjustment of its strategy and activities to achieve the Project Development Objective:

a. PDPIA Cancellation. The Indigenous and Afro-Peruvian Peoples Development Project 2001–2004 (PDPIA) was a Bank-financed LIL project aimed at: strengthening indigenous and Afro-Peruvian communities and organizations. This loan comprised activities to complement project Components 1 (Participatory Biodiversity Conservation) and 2 (Sustainable Uses of Biodiversity) by financing the strengthening of the organizational capacity of the indigenous organizations involved in the management of the communal reserves proposed in two of the five areas under the GEF project: El Sira and Santiago-Comaina. However, PDPIA closed early in 2004 without satisfactorily achieving its Project Development Objective, thereby reducing the planned contribution from this source from US$5 million to only about US$1 million.

b. Reduced Funds from "Other Sources". During the design phase, it was anticipated that US$3.603 million would be obtained from a variety of sources including: (i) other international aid agencies, (ii) nongovernmental organizations (NGOs), and (iii) local and regional governments. These contributions did not materialize for several reasons: (i) because some agencies that participated in project preparation were not allowed under Bank rules to participate in implementation, they therefore withdrew their contributions; (ii) some NGOs reduced their anticipated contributions to conduct their activities separately while maintaining close coordination with project staff; and (iii) the changes in administration of some regional and local governments reduced their contributions to the project. This reduction was compensated with savings in implementation through changes in implementation arrangements, the contribution of the Peru-Canada Fund to finance bioinvestment projects, and additional resources from the GoP.

c. Project Institutional Rearrangements. To respond to the reduction in anticipated funds and to better address the lack of institutional capacity of community organizations and administrative limitations in INRENA, the implementation strategy and planned activities were rearranged in the following ways:

- *Decentralization*: The original plan of hiring a single firm in Lima to be in charge of executing Component 2 (Sustainable Uses of Biodiversity) was rejected because either the participants did not comply with the required capacity or proposals were far more costly than expected. Therefore, the decision was to decentralize technical assistance to each protected area. This alternative reduced overhead and traveling costs, and made it possible to use local services and consultants, thus facilitating consultation and technical assistance to community organizations for the execution of bioinvestment projects.

- *External Administration*: With the purpose of circumventing bureaucratic processing and of supplementing experience, INRENA signed an agreement with PROFONANPE to act as its administrative partner in charge of handling the project's funds, contracts, and acquisitions. This partnership allowed the central project team to focus on major project activities, thus delegating more functions to local project teams. This agreement contributed to a more efficient use of funds.

- *Local partnerships*: Construction in remote areas of the Amazon proved to be difficult and expensive to execute through national commercial firms. The alternative to build planned infrastructure in partnership with local communities resulted in significant savings, enhanced ownership, and contributed to improve relationships with local communities that benefited from these works.

These actions allowed the implementing agency to overcome the shortcomings posed by the reduction in anticipated funds, and contributed to building local capacity and empowering local communities that played a more active role in project execution.

d. Change in denomination of GEF Trust Fund: The grant change from SDR to US dollars instructed by GEF took a year to be ratified by the GoP(between 2003-2004) because of the changes in the Ministry of Foreign Affairs; the change was ratified on December 28th, 2004. This delay affected the flow in disbursement of funds.

e. Extension of closing date: The Bank granted the project a closing date extension from December 31, 2006 to May 31, 2007, to allow a full disbursement of the GEF grant. A progress review carried out at the end of September 2006 indicated that most project activities would be completed before the closing date. However, the execution of community subprojects and the construction of the community surveillance centers were experiencing some delays. By granting the extension, the communities fulfilled activities that represented a small amount of the grant but were critical for their goals and self-esteem. By the closing date of May 31, all these activities with the exception of one project have been completed and their goals had been achieved; all grant resources were disbursed by the end of the grace period on September 30, 2007.

2. KEY FACTORS AFFECTING IMPLEMENTATION AND OUTCOMES

2.1 Project Preparation, Design, and Quality at Entry

The Fourth Quality at Entry Assessment (April 2001) rated the overall quality at entry as satisfactory based on the following factors:

a. Consistency. The project was properly aligned with the development stage and needs of the Peruvian environmental sector. Its objectives and strategy were fully consistent with the 1997 CAS objectives; the defined activities were consistent with ongoing and planned projects in the country, thus achieving synergies. It also responded to GEF priorities.

b. Soundness of the background analysis. The project design built on technical studies and a consultation process funded by the GEF Project Preparation and Development Facility (PDF) Block B grant comprising: (i) biological diagnoses for the five protected areas; (ii) a comprehensive social assessment including a public consultation based on field surveys, workshops, and field reconnaissance. These studies contributed to ratification of the choice of protected areas in terms of their biodiversity conservation and social feasibility.

c. Participatory Design. The PDF Block B grant financed a broad consultative and participatory process that included representatives from INRENA and the Ministry of Women and Human Development. The two major Amazonian indigenous federations (Interethnic Association for the Development of the Peruvian Rainforest–AIDESEP and the National Amazonian Confederation of Peru–CONAP) participated actively. Regional and local indigenous organizations, as well as national and local NGOs, also contributed to project design. The process helped to gain more precision concerning protected area coverage, timing, local actors, and interested parties with regard to final categorization, resulting in the selection of target areas for project implementation. The project also established a Steering Committee comprising the indigenous federations AIDESP and CONAP, national and international NGOs, as well as representatives of key government agencies.

Although this ICR recognized these positive features, with hindsight it identifies the following areas in which further anticipation and discussion at entry point could have facilitated project implementation and further contributed to the project's success:

- The scope and complexity of the project proved to be a real challenge for INRENA which was experimenting with a new conservation paradigm based on participation. Although a Project Implementation Unit (PIU) was created to address this issue, it was difficult to reconcile long-established practices in INRENA with the proposed PIU's assigned functions. This issue was overcome by incorporating specialized staff in the PIU, and by Bank support through an institutional specialist and overall technical assistance during implementation.

- Indigenous organizations consulted during preparation expressed their desire to ensure forest integrity and their willingness to participate in its conservation. However, this goal was sometimes perceived as being opposed to their rights over ancestral land, particularly with regard to the concept of indigenous territory, which is not a legally recognized concept in Peru and could not be resolved under the scope of the project. The establishment of communal reserves helped to address this issue.

- It was indeed difficult to find the right mix of technical and social capacity to carry out key studies; this difficulty delayed project implementation. This was particularly the case of categorization, preparation of the biodiversity monitoring and evaluation system, hard to measure project indicators, staffing of the PIU, as with the centralized approach envisioned at the outset.

- During preparation, the lack of counterparts fund was identified as a risk; however, mitigation measures were not enough to address this issue, which in fact caused delays during implementation.

Therefore, this ICR rates quality at entry as moderately satisfactory for the above-explained reasons.

2.2 Implementation

Project implementation suffered during the first two years due to various external factors and other influences that could not have been fully anticipated or that lacked adequate mitigation measures in the design phase.

a. **Disagreements with national indigenous organizations:** Project implementation had to address indigenous organizations' claims about the following matters: (i) categorizing protected areas; (ii) land rights; and (iii) involvement in project management. The PIU with the support of the IANP, and in some cases of the Bank, engaged in intensive negotiations to respond to this claims within the legal and institutional frameworks of the project.

- *Categorization:* Categorization of the reserved zones was strongly influenced by demands for land rights and control over natural resources. A process of continued negotiations headed by the Director of the PIU and a proactive role by the Bank as a mediator helped to finalize categorization successfully in the three reserved zones in the project. Where it was not possible to reach an agreement, the area remained as a "reserved zone," as in the case of the proposed communal reserve of Santiago Comaina (Cordillera Campankis).

- *Land rights*: AIDESEP also championed the claims for indigenous territory, a concept not recognized under Peruvian legislation. The Peruvian ombudsman *(Defensoría del Pueblo)* was invited to facilitate negotiations between AIDESEP and the IANP about these issues; the Bank team also participated and offered several solutions. An agreement was reached on a roadmap for negotiation; and while it was not fully applied, it kept the conflict from escalating.

- *Participation in project management*: AIDESEP stopped participating in the Steering Committee, and asked to: (i) stop the project and transfer it to INDEPA, and (ii) introduce project management mechanisms that were not foreseen in the agreement with the Peruvian Government. Because these demands could not be met, the Bank team offered instead to: (i) reinitiate community consultations to reach agreements on the categorization process; (ii) increase the decision-making power of indigenous organizations by setting up an Indigenous Unit that would operate separate from the Steering Committee; and (iii) carry out actions to speed the titling of communal lands. Although an agreement was reached about these issues, it was put on hold due to changes in AIDESEP's leadership. This position was not embraced by other regional and local

organizations that continued to support the project. CONAP, the other national indigenous federation, also maintained its support and contributed its own evaluation of the project. The Bank and the PIU maintained informal dialogue with AIDESEP and respected its leadership.

b. **Institutional capacity.** From the start it was difficult to staff the PIU. The institutional assessment carried out at the midterm evaluation showed that key staff in the PIU, such as the environmental and social specialists, lacked sufficient experience to implement the project's activities. Therefore, with IANP's endorsement of this assessment, most of the PIU's staff was replaced. With a capable new director at the helm of the PIU, a new team in place, and implementation agreements reached at midterm, project execution gained pace and disbursement that had been lagging in previous years increased.

c. **Institutional instability.** The design and implementation phases of PIMA coincided with the changes in national administrations. This is an unusual turnover rate for projects of this type. During project preparation, the project faced the sudden end of the Fujimori administration and had to begin dialogue with President Paniagua's transition government. Implementation was mostly carried out under President Toledo and was completed under President Alan Garcia's administration. By the time the project ended, INRENA had had four changes of General Chiefs and Protected Areas Managers. Moreover, two of the protected areas are on the country's borders: one with Ecuador and the other with Colombia. Therefore, the Ministry of External Affairs was involved in the clearance process for categorization and in the endorsement of the grant agreement. This instability complicated negotiations with indigenous organizations, in particular for categorizing the three "reserved zones[1]."

d. **Difficulties in institutional coordination.** The involvement of PROFONANPE as project administrator sped up grant processing but also brought new challenges in defining working procedures with the PIU and the IANP. It took a while to reach a common understanding in order to make the system flow. PROFONANPE proved to be a responsible administrator that followed Bank procedures and helped to maintain quality standards. However, this arrangement was not sufficient to overcome long-established cumbersome public administration procedures; for instance in contracting auditors, a process that—despite many efforts—always experienced delays.

e. **Lack of counterpart funds.** During the first two years of implementation, the GoP did not allocate sufficient counterpart funds thus causing delays in execution. Counterpart funds were later obtained from the Peru-Canada Fund and from savings in the payments of regional taxes that were returned to the project; this process secured funds but required annual ratifications. At the end of the project, with the support of the Ministry of Agriculture, the project accessed budget resources to pay for staff and operations in NPA.

f. **Violence in target sites.** Organized bands dealing with illegal mahogany logging affected the execution of activities in some areas of Pacaya-Samiria, Purús, and Güeppí. Unarmed park rangers were outnumbered by armed gangs. This threat brought a certain degree of insecurity among local project personnel and community surveillance groups. It took a while for the local

[1] Zona Reservada is a term in Peruvian legislation that lack a definition of conservation categories.

teams and the IANP to recover the communities' trust and for law enforcement to restore order and reinitiate project activities.

2.3 Monitoring and Evaluation (M&E) Design, Implementation, and Utilization

a. **Biodiversity M&E**. The Monitoring and Evaluation activities under Component 3 aimed to assess how project intervention would influence biodiversity conservation in the target sites. The design included environmental and social indicators, incorporating traditional knowledge of local communities that participated actively in design and preparation. The delays in categorization, the difficulties in contracting a suitable firm, and the initial lack of counterpart resources affected the establishment of the M&E System in the five areas. However, the process was completed for Pacaya-Samiria, and Güeppi, including a baseline study, biodiversity and social indicators, as well as a first monitoring report for each one of these areas. The designed electronic program was established in INRENA and staff received training to manage its consolidation and expansion.

b. **Project M&E System**. In accordance with project design, the Monitoring and Evaluation System would measure progress in implementation using the project's logical framework matrix and its performance indicators by component and activities. As explained before, the project's outcome indicators were adjusted at MTR. The project was using several mechanisms to monitor progress in activities and outputs: (i) annual operating plans with detailed landmarks and timetables; (ii) progress reports that were regularly presented at Steering Committee meetings to monitor performance; and (iii) regional meetings with local beneficiaries to check the progress of activities under Component 2 (Sustainable Use of Biodiversity). At the time of the MTR, these evaluation processes were formalized including the use of the revised indicators; a full time specialist was hired to manage it. Quarterly reports were produced ever since to track project progress and to update ISR. At the end of the project, the PIU prepared its evaluation report, using the above-mentioned indicators.

2.4 Safeguard and Fiduciary Compliance

The project complied with World Bank safeguard policies as identified in the PAD: (i) OP 4.04 Natural Habitats, (ii) OP 4.36 Forestry, (iii) OPN 11.03 Cultural Property, and (iv) OP 4.20 Indigenous Peoples (since the project was prepared before this policy changed to OP 4.10.

a. **Environmental safeguards:** The project was designed to improve biodiversity conservation and sustainable use of forest resources in five biologically sensitive areas. The technical studies prepared to select these NPA helped to identify their biodiversity wealth and established their importance for global conservation purposes.

Natural Habitats and Forestry: Compliance with these policies was ensured through preparation of Master Plans and Management Plans for the five NPA under the project. The project also established two national parks and two communal reserves under IUCN Protection II and VI, respectively.

Proposed activities based on natural resource use were carefully designed to avoid resource depletion and negative impacts. Component 3 (Monitoring and Evaluation System) was intended to support this effort by identifying social and biodiversity indicators to measure progress in conservation.

b. **Social safeguards:** The project's core strategy was to incorporate indigenous people in the establishment and management of five new protected areas, following a participatory approach under the principle of informed decision making.

Indigenous peoples: The project's design took into account safeguard previsions for indigenous peoples as indicated in OP 4.20, which was in place at the time of project design. A social assessment was carried out to identify the principal socioeconomic and cultural backgrounds of indigenous peoples and an extensive consultation was carried out. Because the overwhelming majority of beneficiaries were indigenous, no separate Indigenous Peoples Plan was prepared; instead, the entire project design took into account this fact. The principle of free, prior, and informed consultation was maintained throughout implementation. Indigenous peoples actively participated in all activities under the project.

Cultural assets: The project incorporated into its design the protection of cultural assets as part of the respect for the rights of the indigenous population. In the case of the Amazon, cultural assets and sacred sites usually coincide with areas of biodiversity wealth, water catchments, and other natural resources vital to survival in the rainforest. These resources were thus protected in conservation planning. A multicultural perspective was also incorporated to bring traditional knowledge and indigenous' perspectives into the conservation and sustainable use of natural resources.

c. **Fiduciary Compliance:** The project complied with fiduciary regulations as shown by semiannual audit reports. The IANP complied with all recommendations resulting from the Bank's audit review. However, due to procedures established by the National Office of the Comptroller *(Contraloría)* to select auditors, the submission of these reports was usually completed after the established date of June 30. For the final audit, it was agreed to present a single audit comprising the periods of January 1 to December 31, 2007 and the extension period from January 1 to May 31, 2007. The audits delays, although not directly linked to the executing agency, were a constant source of concern during implementation. The expertise brought by PROFONANPE, thanks to its involvement with other GEF projects, was an important factor in satisfactorily achieving this compliance.

2.5 Post-Completion Operation/Next Phase

The IANP prepared a sustainability program comprising three steps: (a) arrangements to ensure that the project continues to operate after completion and maintains its achieved goals; (b) a program to consolidate the participatory conservation model, extending it to other protected areas in the Amazon; and (c) preparation of a second operation focused on communal reserves.

a. Continuation: These arrangements are to ensure that all project goals are supported so that their intended outcomes can be achieved; they comprise: (i) budget provision to complement actions carried out under the project such as equipment of facilities, and assistance to communal reserves by supporting their management contracts; (ii) budget to ensure continuity of NPA staff and resources for their operation; (iii) agreements with international NGOs and environmental organizations for community-based subprojects to continue and expand; and (iv) provision of technical assistance to local staff and communities so that they can have access to grants from donors and regional and municipal financing.

b. Consolidation Program*:* This program is expected to be carried out over a period of one and a half years from the closing of this project at an estimated cost of US$1.5 million, with the following objectives:

- Disseminate lessons learned and project results among grassroots organizations, NGOs, and governmental levels (national, regional, and local) involved in the management of protected areas.
- Reinforce IANP's capacity to implement the participatory model for comanaging protected areas and institutionalize this approach in the SINANPE.
- Consolidate public-private partnerships that can boost the application of the participatory conservation model to attract financial resources to support indigenous comanagement of these protected areas.

c. Follow up: INRENA has indicated its intention to seek financing for building on the positive outcomes of PIMA, specifically for the consolidation and expansion of communal reserves. In addition, INRENA proposes to access funding to institutionalize the comanagement model through: (i) dissemination of lessons learned on participatory conservation and rural development; (ii) training and sharing of experiences of INRENA staff and other public officials, community leaders, and social and environmental experts; and (iii) preparation of a participation program to support the SINANPE.

3. ASSESSMENT OF OUTCOMES

3.1 Relevance of Objective, Design, and Implementation

The protection of the Amazonian ecosystems remains a priority objective of Peru's environmental agenda to preserve its biodiversity richness and to protect the habitat of many of its indigenous populations. The conservation of its natural patrimony is also deemed critical to mitigate the threats generated by global climate change. Reduction of the deforestation rate and restoration of the forest landscape are two of Peru's commitments under the United Nations Framework Convention on Climate Change. Support for these commitments is reflected in the current Country Partnership Strategy (CPS) for the Republic of Peru (2007–2011). The CPS also maintains the priorities of preserving biodiversity and reducing the deforestation rate. Although it does not focus explicitly on indigenous issues, it remains committed to meeting the basic needs of the excluded rural population.

The project's main design feature has been the introduction of a comanagement system based on stakeholders' participation in the conservation of protected areas. INRENA is committed to consolidating and expanding the Participatory Conservation Model that the project has generated, mainly to the other protected areas in the Peruvian Amazon.

The main features of the participatory model developed under the project include: (i) a participatory monitoring and evaluation (M&E) system; (ii) the establishment of communal reserves to be managed by indigenous organizations under management contracts; (iii) preparation of Master Plans using participatory methods; (iv) the execution of bioinvestment projects directly by community organizations; and (iv) the establishment and official recognition of community surveillance groups for the sustainable use and conservation of ecosystems. INRENA has already prepared a program to replicate the model in other areas, focusing on communal reserves with a mix of public funds and contributions from international donors. Moreover, INRENA plans to continue working on the development of tools and institutional arrangements to consolidate the comanagement of protected areas. This approach also provides an opportunity to contribute to improving living conditions of the indigenous and poor rural populations in protected areas. Therefore, the PIMA project was and continues to be highly relevant to GoP's objectives and the Bank's strategy for Peru.

3.2 Achievement of Project Development Objective

The achievement of the overall objective is rated Satisfactory. The GEF completed the majority of its activities and succeeded in improving the conservation and sustainable use of forest ecosystems in the Peruvian Amazon through the involvement of indigenous communities in the management of new and existing protected areas.

As previously mentioned, the original outcome indicators for measuring achievement of the PDO were limited in terms of their measurability, and in the case of biodiversity conservation there were limitations in terms of realism and attribution. However, there is sufficient evidence that the project's overall global objective has been achieved, as explained below.

a. Indigenous people comanage protected areas: As a result of the project, 120,000 indigenous and local populations and other stakeholders in the five protected areas are participating in the comanagement of protected areas through the following mechanisms and activities:

Establishment of Participatory Mechanisms:

- *Protected Areas Management Committees* (PAMC): PAMC are consultative groups that provide advice on the management of protected areas. These PAMC have been established in each of the five target areas and include representatives of all indigenous organizations under their jurisdiction.

- *Communal Reserves*: Indigenous communities organized as Contract Executors (*Ejecutores de Contrato de Administración*, ECA) manage communal reserves through administration contracts with INRENA, in which they commit to apply Master Plan guidelines for the sustainable use of natural resources. ECOSIRA, the ECA created to manage El Sira Communal Reserve (CR), has signed this contract and is presently executing it. This CR comprises 616,413.41 hectares and has around 13,000 indigenous people. ECOPURUS, established to manage the CR Purus, has prepared its Master Plan and signed the administration contract. Purus CR comprises 210,033 ha and 1,000 indigenous peoples who are the direct beneficiaries.

- *Natural resources management contracts*: Through these contracts indigenous communities can sign formal agreements with INRENA to use natural resources in a small-scale, sustainable manner and receive technical assistance. By the time the project ended, 50 local groups had signed such contracts and were operating in the Pacaya-Samiria National Reserve (PSNR) to ensure its sustainable management.

- *Community surveillance systems:* Five community surveillance systems have been established; one in each one of NPA in the project, giving indigenous peoples the capacity to oversee illegal activities in those areas. INRENA has officially recognized the authority of these groups and has provided them with an official ID.

Skills and Experience for Participation Developed

- *Participation in categorization and planning*: Through extensive consultation with indigenous communities and often difficult negotiations, the project categorized three reserved areas: Güeppi, Santiago-Comaina, and Purus, comprising 3.5 million hectares that now have legal protection for conservation. This process also allowed land titles to

be issued to communities within their boundaries and buffer zones, a constant request by indigenous peoples. Master Plans for communal reserves and national parks were all planned through consultation, taking into account the traditions, cultural background, and priorities of indigenous peoples.

- *Strengthening Indigenous Organizations' Capacity*: To construct a positive negotiation environment, the project put in place mechanisms to strengthen indigenous participatory capacity: (i) 107 internships for communal leaders to travel and evaluate the experience of indigenous people with other protected areas (Manu National Park and Pacaya-Samiria National Reserve), and (ii) 5 public awareness campaigns to increase support for environmental issues.

- *Participatory Monitoring and Evaluation System:* Indigenous populations were actively involved in the design of the Participatory M&E System to measure biodiversity conservation that was developed in the Pacaya-Samiria National Reserve. This helped to build into the system their priorities and demands for the management of these protected areas. The process comprised: (i) workshops with the local population to identify and select social and biological indicators; (ii) establishment of monitoring patrols carried out with the assistance of local people, which created positive interaction between the project's field staff and local indigenous groups; and (iii) consultation to validate the system.

- *Project Management*: The two national federations of indigenous organizations of the Amazon participated in the Steering Committee. Two indigenous professionals appointed by these federations acted as their liaisons and as advisors to the director of PUMA in the PIU. Indigenous promoters who spoke the local languages worked in the field. Three NPA directors and some of their technical staff were also indigenous, which facilitated the building of mutual trust.

b. Enhanced Conservation: As a result of the project the National System of Protected Areas has expanded as follows: (i) categorization of three reserved areas: Güeppi, Santiago-Comaina, and Purus; (ii) the creation of the two national parks: Alto Purus and Cordillera del Condor, which added 2.6 million hectares under IUCN Category II to SINANPE; and (iii) the creation of three communal reserves: Purus, El Sira, and Tuntanait, which added 0.9 million hectares protected under IUCN Category VI. In Güeppi, one national park and two communal reserves have been proposed and are awaiting final approval by the GoP. This will expand SINANPE by an additional 0.6 million hectares, 34% under IUCN Category II and the rest to IUCN Category VI.

Natural Protected Area	Categorization	Under protection IUCN Category II (hectares)	Under protection IUCN Category VI (hectares)
Alto Purus	Alto Purus National Park	2,510,694.00	
	Purus Communal Reserve		210,033.00
El Sira	El Sira Communal Reserve		616,413.41
Santiago-Comaina	Ichigkat Muja Nacional Para (Cordillera del Cóndor Mountain Chain *[Cordillera]*)	88,477.00	
	Tuntanait Communal Reserve		94,967.68
Total		2,599,171.00	921,414.09

Moreover, as result of these categorizations three biodiversity priority zones in the SINANPE now have full protection: Zone 20–El Sira Mountain Chain, Zone 28–Alto Purus, and Zone 2–Cordillera del Condor including over 400 endemic species and at least 3 species in danger of extinction. For example, the El Sira and Purus communal reserves and the Alto Purus National Park host endemic species of birds, amphibians, reptiles, fish, bears, and mammals. These protected areas also include at least 11 types of forests and hotspots of tropical Andean biodiversity.

Conservation efforts comprised five categorization processes and preparation of 15 planning documents: master plans, resource management plan, research plan, diagnostic plan, zoning plan and monitoring and evaluation plans; the sustainable use of natural resources was promoted through 14 management plans for titled indigenous land; one resource-use contract; 50 resource-use agreements; and 15 minor activity-use grants. In addition, the participatory M&E System was established, comprising: 5 compendiums of biodiversity conservation and socioeconomic conditions; evaluation protocols and standards; and five biological databases with GIS layers included. The M&E system for Pacaya-Samiria and Güeppi was completed, including software package, baseline studies, and annual reports on monitoring of biological and socioeconomic indicators. Annual reports on monitoring of area management effectiveness were prepared for the five areas under the project. All these activities included training and technical assistance to beneficiaries and project staff.

c. Sustainable use of natural resources: The sustainable use of natural resources has had a positive impact on conservation as proved by preliminary results from the 43 investment interventions in 200 communities comprising 8,258 direct beneficiaries. The 22 forestry-related projects for reforestation and forest management are having a positive effect on reducing soil erosion and carbon capture. According to project estimates, an annual reduction in soil erosion of 34,465 tons and an increasing carbon capture of 2,969 tons will be achieved as a result of these projects; 1,273 hectares were reforested and the deforestation of 18,664 hectares was prevented. In addition, the 20 hydrobiological resource projects have prevented unsustainable extraction from 775 hectares of surface waters and contributed over 100% to repopulation of species; beneficiaries in the 200 indigenous communities involved have learned and implemented different conservation practices such as forest management, expansion of hydrobiological resources, and ecofriendly agriculture. Some of these practices are very likely to be replicated due

to their positive economic benefits, and would prevent the local population from overexploiting other natural resources.

To implement the biodiversity investment projects, 220 preinvestment studies were carried out, including 87 market plans and technical assistance through direct visits and workshops for the 200 communities; moreover, three regional workshops were carried out to analyze best practices and lessons learned from these experiences.

In addition to abovementioned outcomes, INRENA has increased its capacity to comply with its mandate of conducting the sustainable conservation of natural resources. INRENA now has legal tools and operational mechanisms to promote comanagement of protected areas with the participation of the indigenous population, such as PAMC established in the five protected areas and the Special Regime for the Administration of Communal Reserves which can be considered an intercultural product because it allows indigenous organizations to manage communal reserves located on traditional indigenous lands under the SINANPE. Moreover, the IANP has gained experience by directly engaging in discussions about conservation with indigenous organizations at various levels and adopting the participatory conservation model.

Participatory Conservation Model

- A participatory and intercultural design of legal instruments, protocols, and institutional arrangements that allow indigenous peoples to participate in the categorization of NPA, conservation plans, and natural resource management plans;
- Institutional strengthening of indigenous communities and grassroots organizations through training, technical assistance, sharing of experiences, and scholarships for selected indigenous leaders;
- The development of a social network at the local level including: community promoters, local surveillance groups, resource management units, and contract execution units for the communal reserves;
- The design and implementation of community-based productive subprojects identified, prioritized, and executed by the communities according to their skills and experience (pertinent projects);
- The establishment of communal reserves, taking into account the culture and traditions of indigenous organizations; and
- Preparation of Master Plans and Management Plans from the perspective of indigenous peoples, taking into account their priorities for conservation and natural resources management.

3.3 Efficiency

The economic analysis conducted suggests that the PIMA project has generated positive economic impacts without incurring high cost on the conservation of natural resources of the target areas and to the lives of the local indigenous groups who play an important role in the conservation of those protected areas. The total cost of the project was US$15.8 million (S/. 50.56 million) and was able to achieve its objectives at a lower cost due to savings and adjustments in implementation. These adjustments offset the reduction in anticipated co-financing during the

project implementation (See Section 6.7). However, through implementation re-arrangements set up during and after the MTR it was possible to achieve the PDO with cost-savings.

Pertaining to the sustainable production grants, the cost of the total investment was S/ 3.99 millions while the benefits were multifold, as can be seen in Table 13.

Table 13: Summary of Tangible Benefits of the PIMA Project

Benefit	Component	Amount
Legal protection of Purus National Park as IUCN Category II	Component 1	2.5 million ha
Legal protection of Indigenous Reserves as IUCN Category VI	Component 1	826,500 ha
Estimated avoided deforestation	Component 2	18,777 ha
Carbon sequestration	Component 2	2,969 t/CO_2e/year or 38,001 S/./year
Decrease of erosion	Component 2	34,465 t/year or 172,327 S/./year
Freshwater ecosystems under sustainable management	Component 2	329 ha or 3.86 million fish
Demand for thatching met by increased production of palm leaves	Component 2	402 houses/year
Increased productivity under agroforestry systems (30 ha)	Component 2	2.82 times more than monoculture

In terms of profitability of the sustainable production activities, it was not possible to obtain enough data for a formal economic analysis. However, the NPV and IRR of two sample sub-projects show that those sub-projects are economically viable. The NPV of reforestation of Shebon palm after 20 years would be $56,469.67 and the IRR is 15%. The NPV of agroforestry systems at 20 years would be $367,201.53 and the IRR is 30%; other successful sub-projects show the potential of increasing production. These investment grants proved to be a positive financial incentive to involve indigenous peoples in the comanagement of the protected areas and to reduce pressures on their natural resources.

The scope of this economic analysis is constrained for several reasons: (i) incremental costs were used instead of NPV or ERR at project appraisal; (ii) no adequate economic data were collectable for Components 1 and 3, thus making it difficult to obtain the project's full benefits; (iii) only two sustainable production subprojects could provide sufficient data for a formal cost-benefit analysis; (iv) the full benefits of the sustainable production activities could not be measured because the activities started only toward the end of the project; and (v) the economic benefits of the sustainable production activities were mostly for self-consumption. Annex 3 provides further details on the analysis.

3.4 Justification of Overall Outcomes Rating

This ICR rates the overall outcomes as Satisfactory.

The project satisfactorily achieved its development objective and most of its anticipated outputs. The project was and remains relevant for strengthening sustainable biodiversity conservation efforts in Peru by consolidating the SINANPE and involving indigenous participation in its comanagement. The project institutionalized indigenous participation by introducing an indigenous perspective on conservation processes: categorization, development of conservation

planning tools, and mechanisms for the comanagement of protected areas. The project contributed to improved sustainable conservation by expanding the SINANPE; providing legal protection to endangered and endemic species in biodiversity hot spots and introducing sustainable development practices with positive effects on the environment. Finally, both INRENA and indigenous communities have enhanced their capacity to carry out comanagement of protected areas. The experience gained by the project can serve as a basis to incorporate indigenous participation in other protected areas within the Peruvian Amazon and other protected areas in the country. The model can also be expanded to other GoP agencies working on rural development and involving indigenous peoples. Moreover, all these outcomes were achieved efficiently at low cost for the conservation of natural resources of the target areas and for the livelihoods of the local indigenous groups.

3.5 Overarching Themes, Other Outcomes, and Impacts

Poverty alleviation: The project did not directly intend to achieve this goal. However, through the execution of sustainable biodiversity projects involving 200 communities, the project generated jobs and incomes that would not have been created without the project, directly benefiting 1,757 families and 8,258 people in the five target areas. These projects also helped to improve family nutrition, food security, and the integration of communities in existing market chains, such as those for organic coffee, fish, medicinal plants, and timber. According to the efficiency assessment, the expected income to be generated from these activities in the first year after project implementation is US$550,000.

Gender Issues: Within the limits established by indigenous culture, the project promoted affirmative actions to increase women's empowerment by encouraging women's participation in project committees, facilitating their attendance at training sessions, and promoting a more equitable gender composition within indigenous grassroots organizations. The project promoted processes to overcome indigenous women's difficulties in reading and speaking Spanish. In the case of productive activities, the project promoted gender equity in participation; as a result, many women occupied treasurers' positions because they were acknowledged to have exceptional talent for handling and controlling the funds received.

Institutional Development: The project has introduced new institutional arrangements for participatory biodiversity conservation in Peru through the establishment of the abovementioned Participatory Conservation Model which developed indigenous communities' skills and INRENA's institutional capacity.

3.6 Summary of Findings of Beneficiary Surveys and/or Stakeholder Workshops

Beneficiary surveys: Four such surveys were conducted in four of the target sites during the last quarter of 2006. These surveys were intended to systematize the project's lessons learned regarding the participatory model and project execution in general. The surveys comprised a total of 177 persons: about 140 (79%) were project beneficiaries and the rest were other stakeholders including members of grassroots organizations, local and regional authorities, and NGO experts. Overall, the surveys showed positive judgment on implemented strategies and results. Beneficiaries confirmed the positive effect of project tools on biodiversity conservation: encouraging local participation, training, strengthening community organization, and providing ecologically sound alternatives to the inadequate use of natural resources.

Stakeholders' workshops: Three workshops were held: one each in Pacaya-Samiria and Güeppi (December 2006) and a third in El Sira (March 2007). These workshops brought together representatives of beneficiaries, their grassroots organizations, local and regional authorities,

social researchers, and NGOs linked to target areas. Most of the participants were also members of their respective Protected Area Management Committees. These workshops aimed at assessing project results, impacts and lessons learned; 48 persons attended the Pacaya-Samiria workshop; 38 in Güeppi; and 43 in El Sira. In Pacaya-Samiria, the workshop highlighted the benefits of a State-civil society partnership, particularly with local communities. It highlighted the fact that Communal Surveillance Systems are an adequate tool to improve biodiversity conservation. In Güeppi it was pointed out that the inclusion of indigenous peoples' perspectives in the categorization of protected areas, although a time-consuming process, produces better results because it creates solid constituencies for the Protected Areas. In the case of El Sira, the participants emphasized that conservation of natural resources is a priority for local communities in the Communal Reserve. Participants also pointed out that a transparent flow of information from project staff to the communities is an effective way to build mutual trust.

4. ASSESSMENT OF RISK TO DEVELOPMENT OUTCOME

Rating: Moderate

The social and institutional endorsement by INRENA and indigenous communities and the legal and institutional tools developed under the projects are the main legal, social, and financial basis to ensure the benefits of the PDO:

- *Legal framework*: The GoP has approved the Special Regime of Communal Reserves, comprising institutional arrangements, regulations, and protocols for indigenous communities to manage communal reserves. This is an alternative to promote conservation, acceptable to both the indigenous organizations and INRENA;

- *Social endorsement*: The project has been able to build a wide social base among indigenous communities and their grassroots and regional organizations that support its continuation and expansion; The establishment of ECOSIRA and ECOPURUS and the signing of their management contracts are concrete outcomes that have gained overall endorsement by indigenous leaders and national and international NGOs;

- *Financial security*: The IANP has succeeded in procuring financial resources from government sources to consolidate the accomplished results. These resources will cover basic staff and recurring costs in the project's five targeted protected areas and will consolidate productive projects. Several international NGOs are contributing to the continued execution of community-based subprojects.

However, the rating is moderate because the model requires further support to be fully institutionalized. INRENA, community organizations, and other institutions involved in comanagement require additional institutional strengthening and resources. It may also be difficult for the GoP to commit the necessary budget to consolidate, and expand the model. Yet, the most important challenge is to balance the interest of conservation against the strong economic incentives for mining and oil exploitation in the Amazon.

5. ASSESSMENT OF BANK AND BORROWER PERFORMANCE

5.1 Bank

(a) Bank Performance in Ensuring Quality at Entry

Rating: Moderately Satisfactory

The Bank's overall performance during identification, preparation, and appraisal of the project was moderately satisfactory. Project design and preparation comprised an intensive consultation process with the indigenous population and other stakeholders. Preparation took into account CAS and GEF priorities and ensured compliance with safeguard policies. The Bank offered timely support to INRENA to meet minimum institutional arrangements for project execution. However, the lack of an institutional assessment during project preparation, limited mitigation measures to overcome identified risks, and design flaws in monitoring and evaluation arrangements caused difficulties in project implementation and supervision. Although the risks were rightly identified, their impacts were not fully assessed in the following cases: (i) indigenous peoples' perspective about land rights which caused delays in categorization; and (ii) the creation of a PIU, which was adequate to supplement INRENA but insufficient to overcome long-established public sector practices. Monitoring and evaluation based on difficult to measure indicators, generated problems in tracking achievement of development objective.

(b) Quality of Supervision

Rating: Satisfactory

Supervision during project implementation was conducted mainly by the project team in Washington with the support of the field team in Lima. INRENA, the executing agency, had little experience working with the Bank; therefore, close monitoring and assistance were necessary. However, the changes in TTL (three times) caused some lags in supervision during the transition periods. During the first two years supervision focused on solving institutional issues and contractual processing, including the establishment and staffing of the PIU, the contracting of consulting firms to conduct categorization, the preparation of the biodiversity M&E system, and the search for a firm to oversee execution of Component 2. During this phase the Bank also had to address INRENA's lack of experience in managing a GEF operation and promoted the involvement of PROFONANPE to supplement this capacity. It also promoted institutional changes that encouraged the Steering Committee to replace the Executive Director.

The Midterm Review mission (MTR) carried out between November 29 and December 10, 2004 provided the opportunity to address the factors affecting project implementation. The mission incorporated several Bank specialists in various fields and international experts in participatory conservation who were in charge of similar projects in Mexico and Colombia. This team helped to perform a thorough assessment of project implementation, comprising: (i) for the first time during implementation, field visits to the five NPA under the project to gather firsthand information about project implementation; (ii) a full review of financial and technical implementation; (iii) an institutional assessment of central and field staff and coordination procedures; and (iv) an international workshop with specialists from Mexico, Colombia, and Peru to share experiences, discuss execution issues, and propose recommendations to improve project implementation.

On the basis of the MTR's findings and its experts' recommendations, the Bank carried out several actions that helped to boost planned activities in Components 1 and 2. Specifically, the MTR promoted:

- *Changes in institutional arrangements*: An institutional assessment during the MTR identified three major issues affecting project implementation: (i) the lack of capacity and cohesion in PIU staff; (ii) deficient coordination between field staff and the PIU, and between the PIU and the IANP; and (iii) communication problems that created conflicts among the staff. With the help of a Bank institutional specialist, who organized two workshops with all the parties, functions and tasks were clarified, staff that was causing problems was replaced, and an improved communication system was established. A few months later, results began to show.

- *Improved indigenous participation*: The MTR was an opportunity to meet with local, regional, and national organizations, and respond to their claims to improve indigenous peoples' participation, including: (i) further consultation about categorization; (ii) arrangements for greater decision making in project management; (iii) a more active role for the two indigenous liaisons; (iv) improved training and support for indigenous students to complete studies and share experiences; and (v) full support to carry out consultation about the bylaw *(Regimen Especial)* to make communal reserves operational. Later, several similar agreements were added to continue improving indigenous participation; while there was not always a full agreement, the project gained indigenous peoples' respect and support. At the end, most indigenous organizations were supportive of the project and requested its continuation.

- *Adaptation of bioinvestment projects*: After a closer assessment carried out by local project teams, the MTR decided that it was necessary to adapt subprojects and make them more responsive to the socioeconomic situation and organizational capability of indigenous communities. Accordingly their contributions were reduced from 50% to 10–25%; feasibility and market studies involved an intensive consultation with communities to ensure ownership.

- *Decentralized management of bioinvestment projects:* Implementation of bioinvestment projects was decentralized, bringing consultants to directly work with the communities reducing overhead and traveling costs. Indigenous promoters who speak the local languages were incorporated facilitating training and consultation and capacity building at the local level.

- *Contractual issues*: The contracts to carry out two of the most important tasks — categorization and design of the Biodiversity M&E System—had to be restructured in order to address implementation issues, mainly those linked to communities' participation. The Bank supported negotiations and cleared the process to speed completion. An agreement to simplify the contracting of infrastructure construction was also put in place with the help of PROFONANPE.

- *Counterpart funds*: The MTR participated in meetings with officials in the MEF and Ministry of Agriculture to ensure the availability of counterpart funds. The Bank's participation facilitated the decision to allocate resources from the Peru-Canada Fund to the project and the reimbursement of the IGV (value-added tax) to be used in the project as counterpart funds.

- *Project M&E*: At the MTR several agreements were reached to make the project M&E functional, including hiring a full-time professional with suitable qualifications to be responsible for preparation of quarterly reports on progress in implementation; these reports incorporated adjusted performance indicators to better measure progress in achieving the development objective (see Section F). A quarterly report system was established to inform the Bank about progress in implementation.

- *Intensified supervision*: Bank supervision intensified to ensure compliance with all agreements reached; institutional and operational specialists continued to provide technical assistance; other specialists were brought in to provide advisory support as necessary. All missions included field visits, meetings with indigenous organizations, and participation in Steering Committee meetings. The Bank also provided advice on financial and procurement matters by a specialist in Lima and an independent external evaluation on procurement matters was also completed.

(c) Justification of Rating for Overall Bank Performance

Rating: Satisfactory

The Bank was able to overcome shortcomings in project preparation by reaching strategic agreements with the PIU to speed project implementation and provide ongoing support through intensified supervision, which allowed the project to achieve its development objective and disburse the grant in full. The most relevant aspects of Bank performance are the following:

Specialized support: The Bank accompanied the implementing agency throughout project execution, providing assistance in technical and procedural matters. It also brought international experience to successfully establish the participatory conservation model with the support of an international expert who assisted the PIU in this task. The project team also helped to prepare closing financial reports, project evaluation, and the sustainability program.

Promoting dialogue: The Bank facilitated dialogue among the major stakeholders, helping to overcome implementation obstacles. All missions comprised visits to the national indigenous organizations which always received a copy of the Aide-Memoire. Field trips helped to develop trust and partnership with local and regional organizations that were critical actors in project implementation. By being responsive to indigenous organizations' demands, the Bank gained their respect and helped to maintain dialogue even in difficult moments.

Flexibility: The project helped the implementing agency to overcome cumbersome administrative processes and to join the team in discussions with other government agencies when necessary. No-objections were granted promptly. At completion, the Bank granted a closing date extension that made it possible to achieve project objectives and fully disburse the grant.

5.2 Borrower

(a) Government Performance

Rating: Moderately Satisfactory

Government performance during project implementation was mixed, influenced by the changes in administration and the high turnover in officials, which created instability in key areas linked to the project such as indigenous peoples and conservation policies.

The lack of institutional coordination and the cumbersome procedures, as well as insufficient support to INRENA in general and to the project specifically, affected project implementation, particularly during the initial years. Main issues affecting implementation were: (i) the inconsistent availability of budgetary and counterpart resources; (ii) complex regulations about contractual procedures; and (iii) auditing regulations that caused delays in audit preparation. However, in the final years of implementation the Ministry of Economy and Finance allowed the use of funds from the Peru–Canada Fund; the Ministry of Agriculture helped find alternative sources to allocate regular budget resources for NPA's staff and operation and additional funds to continue execution of the project's main activities. The Peruvian Ombudsman's Office *(Defensoría del Pueblo)* also maintained a vigilant and supportive role during most of the negotiations with the indigenous organizations; its participation and evaluation statements ensured respect for indigenous rights and an objective perspective that helped to continue implementation.

(b) Implementing Agency Performance

Rating: Satisfactory

Despite institutional limitations in terms of financial and human resources and insufficient government support and recognition, INRENA was able to carry out the project until completion. The IANP provided technical advice on environmental matters and was able to obtain institutional support from high-level management in INRENA. The establishment of a Project Implementation Unit (PIU) within the IANP was appropriate because it helped bring the expertise lacking in INRENA. The PIU, originally conceived as a small coordination unit, grew to face unforeseen challenges in project implementation. However, it took a while for the PIU to be fully accepted as an integral part of the IANP, causing the abovementioned coordination problems. The incorporation of PROFONANPE as the administrative agency supplemented INRENA's capacity and helped to speed grant processing; however, it also added to the complexities of the institutional framework. Coordination and communication difficulties were eventually resolved with Bank support.

The quality of the PIU's staff and the incorporation of indigenous professionals were very positive. The incorporation of an experienced, well-regarded anthropologist as head of the PIU, helped to build mutual understanding with the IANP and facilitated dialogue with indigenous organizations. The incorporation of two professionals of indigenous descent as liaisons with indigenous organizations and the appointment of three NPA directors of indigenous descent were also positive steps. The participation of these indigenous professionals helped to consolidate mutual trust and promote intercultural dialogue throughout the project.

Decentralization of activities to the field, under Component 2 (Sustainable Uses of Biodiversity), also required some adaptation. However, it helped the PIU to build an operational platform capable of operating with indigenous groups in remote places. It is important to highlight that the central project team and the zone teams undertook a facilitation role in the intercultural dialogue among the IANP, the indigenous people, and the environmental sector. The experience and capacity of field teams were critical to the successful completion of this component.

The IANP and the central project team in the PIU responded with professionalism to implement a challenging project; the experience of their field staff in previous participatory processes in other protected areas was critical to achieve a positive outcome. Project execution was a true learning experience that strengthened the IANP's capacity to interact with indigenous people and build a model suitable for replication in other NPAs.

(c) Justification of Rating for Overall Borrower Performance

Ranking: Satisfactory

INRENA overcame initial difficulties and institutional constraints and was able to establish basic agreements with other government agencies to obtain counterpart resources and institutional support for project execution. From the design to implementation phases, both the IANP and the project team in the PIU and in the field demonstrated commitment and technical proficiency to complete projected activities and outputs. Positive achievements gained the support of some government institutions such as the Ministry of Agriculture that included the project as a best-practice example in its 2006 report and helped INRENA to overcome irregular government support to conservation activities.

6. LESSONS LEARNED

Constructing a model for participatory conservation of protected areas was a new experience for INRENA and the GoP. In fact, the project helped to change the prevailing conservation paradigm based mainly on the establishment of national parks and sanctuaries with reduced or no human intervention. The inclusion of indigenous peoples incorporated traditional knowledge in conservation efforts providing important lessons that enriched INRENA's capacity to interact with indigenous peoples in the management of protected areas. These experiences are also useful for other countries facing similar environmental challenges.

The Social Approach to Conservation

The project proved that communities' participation is positive for biodiversity conservation, which was its original principle. Indeed, communities were a driving force during project execution through a participation process that encouraged co-responsibility and intercultural dialogue. This bottom-up approach built on local capacity, promoted community empowerment and established a social network that supervised and controlled results. Indigenous peoples' response to this approach was very positive because, in their own words, they felt treated like equals.

The Participatory Conservation Model

The project demonstrated the feasibility of combining conventional conservation with an indigenous conception of protected areas as their living environment. The participatory conservation model achieved this through:

a. An integrated approach to comanagement: The project designed, tested, and implemented the tools for communities' participation in all stages of conservation:

- *Advisory bodies*: Indigenous representatives participate in the five NPA Management Committees established under the project;
- *Participation in Categorization*: Categorization comprised an extensive consultation with indigenous communities to incorporate their perspectives and priorities about land and natural resources use;
- *Participatory Management Planning*: Communities also participated in the preparation of Master Plans comprising a conservation strategy under an intercultural approach that was discussed in each community and approved in their general assemblies;

- *Community surveillance*: Community surveillance groups were established to monitor NPA and received training, facilities, and IDs issued by INRENA as members of the conservation teams; and
- *Participatory Biodiversity M&E System*: The participatory M&E system was based on an innovative approach that: (i) incorporated socioeconomic data and cultural patterns about biodiversity use and land occupation; and (ii) were jointly prepared with local communities who contributed with their traditional knowledge and facilitated field research.

As shown in beneficiaries' surveys, this approach promoted project ownership and contributed to the success of the activities and their sustainability. Participation also functioned as a social control mechanism that helped to ensure the good use of project resources and distribution of their benefits.

b. Bioinvestment Projects. This a concept developed under the project that demonstrated that combining the sustainable use of natural resources with the enhancement of community livelihood generated a positive synergy to conservation that results in positive environmental impacts. The use of consultation processes helped to select options that incorporated local knowledge and ensured adaptation to community's needs. The project provided in situ technical assistance and training to enable indigenous organizations to directly implement the project, which was in itself, an invigorating exercise that helped to build local capacity and social control mechanisms to ensure the good use of resources and distribution of benefits.

c. Communal reserves a breaking point in conservation: The struggle about conservation of natural resources and land rights in protected areas found in communal reserves an alternative acceptable to indigenous peoples and the GoP. Indigenous communities, legally integrated as ECAs, directly managed their communal reserves through Administration Contracts to implement Master Plans approved by the community assembly. This management process is fully described in the bylaw on the operation of Communal Reserves *(Regimen Especial)* agreed by consensus of all indigenous organizations through a consultation process organized under the project and legally approved by the GoP.

Training and capacity building as empowerment tools

The project showed that comanagement required enabling indigenous communities by building their capacity to directly execute activities affecting their livelihoods. Training under the project responded to this demand and has been a key element in the development of the comanagement model because: (i) it is an instrument that has helped to strengthen and empower people to achieve social change; (ii) it was promoted as an intercultural dialogue in which both sides learned from each other; and (iii) it was custom-made to adapt to local capacity and cultural background. The training process was applied on permanent basis in stages that moved along with project implementation to support main activities under the project; (iv) it helped communities to identify, prioritize, and execute community-based subprojects; (v) it promoted the exchange of experiences that helped to overcome fears about conservation strategies; and (vi) it helped indigenous students to complete their education and become an asset for their communities and their organizations. Overall, this effort contributed to the creation of indigenous social capital.

Intercultural dialogue in building understanding and consensus

The project verified that intercultural dialogue was a positive approach to build a common understanding between indigenous peoples and the project team. The experience showed that the rules of engagement and the way in which this dialogue takes place were as important as the matters under discussion. The cultural dialogue as tested and executed in the project had the

following basic conditions: (i) mutual respect: between the parties: (ii) willingness to reach mutual understanding, (iii) equity in the information exchange, (iv) abandonment of all forms of imposition or violence, and (v) transparency. Some learning experiences that contributed to project success are the following:

- Indigenous organizations play different roles and have different priorities; therefore, incentives and negotiation mechanisms should be adapted accordingly;
- Consultation is a common practice among indigenous communities; therefore, project activities should allow time for this process to take place and be flexible to incorporate changes as necessary;
- Bringing neutral actors to mediate in difficult negotiations can help to avoid or minimize conflicts and keep dialogue open in difficult negotiations;
- Building trust and mutual respect is the only way to overcome years of neglect and ignorance about indigenous peoples' rights and culture; and
- Dialogue is an open-ended exercise that should adapt to ongoing changes in leaderships and priorities.

Institutional capacity is critical to project success

The difficulties experienced in the first years of project implementation demonstrated the need to address institutional constraints and prepare upfront an institutional strengthening program. Although the establishment of the PIU and the incorporation of PROFONANPE helped to overcome INRENA's lack of expertise in certain areas, it also created some coordination problems. The adjustment took time and distracted the project's attention from other important tasks. The main lesson here is that the plan for appropriate institutional arrangements merits major attention during the design phase of the project.

7. COMMENTS ON ISSUES RAISED BY BORROWER/IMPLEMENTING AGENCIES/PARNERS

The borrower through the Executing Agency INRENA provided the following comments:

English Summary

Ratings: The Borrower agreed with all the ratings in the ICR

Main Comments:

- The Borrower agreed overall with the draft ICR particularly that the project achieved satisfactorily its objectives and made the following remarks:
- Despite project design flaws the executing team managed to complete all project tasks in which the role of field staff was crucial;
- Participatory approach was challenging because each PA involved around four different indigenous peoples with their own language and culture. Therefore participation was a time-consuming and costly exercise;
- PROFONANPE involvement in project administration was positive but costly and could not solve all the bureaucratic processes, thus causing delays in implementation.

- The borrower requested to highlight the quality and experience of field staff that worked directly with the communities and continue to operate now financed by regular budget;

- They concurred that decentralization of bioinvestment project was a factor that facilitated implementation and reached goals;

- Finally INRENA recommended incorporating in the ICR indigenous organizations and other beneficiaries' requests to continue and expand the project activities through a follow up operation.

Original Comments in Spanish

Se realizó la revisión del documento de "Implementation Completion Report" (ICR) presentado por el equipo del Proyecto Participación de comunidades nativas en el Manejo de Áreas Naturales Protegidas de la Amazonía Peruana INRENA-GEF/ Banco Mundial se presentan los siguientes comentarios y recomendaciones:

Ratings Sumary

Estamos de acuerdo con la calificación expresada en el documento satisfactoria en la calificación correspondiente al Performance del ICR; moderadamente satisfactoria para el como la detallada para el Banco y el Borrower en la correspondiente al Quality at entry y satisfactoria para lo correspondiente a la calidad de la supervisión y de la agencia ejecutora teniendo en cuenta que este proyecto ha logrado los objetivos propuestos y tiene resultados que serán están siendo replicados en el SINANPE y se saco adelante un proyecto que tuvo algunas fallas en el diseño y varios problemas en la implementación que el equipo de trabajo del proyecto y en especial el personal de campo de las áreas protegidas logró.

- **Ejecución del proyecto**

En lo referente a cumplimiento de objetivos del proyecto, el ICR expresa el cumplimiento de los diferentes objetivos propuestos y los cambio que se hicieron, por ello se recomienda remarcar que el proyecto no solo tuvo una alta participación indígena, sino que la población involucrada en el desarrollo del proyecto no es culturalmente homogénea y que cada área natural protegida tiene relación con al menos cuatro grupos étnicos con idiomas y cultura diferentes. Aquí también debemos reconocer que el diseño del proyecto no tuvo en cuenta que los procesos participativos son costosos y llevan mucho tiempo

Dentro de los arreglos institucionales que tuvo el proyecto PIMA y la administración externa se destaca que fue una decisión acertada ya que pudo facilitar algunos procedimientos administrativos especialmente para el desarrollo de concursos de nivel internacional, y contratación de consultores; sin embargo se tuvo dificultades burocráticas, la logística de campo, la supervisión de construcciones y contratación de consultores para el trabajo en el campo, en especial con la transferencia de fondos que retrasó la ejecución de actividades con las comunidades, ello sumado a los altos costos administrativos.

EL ICR rescata la evolución histórica de la ejecución del proyecto que el inicio no fue satisfactorio y como se hicieron los cambios adecuados en la unidad central del proyecto.

Es importante precisar la experiencia de la mayoría del personal de campo de las ANP: Jefes de ANP, profesionales y guardaparque, que estuvieron presentes desde el inicio hasta el final de la ejecución del proyecto y que a la fecha continúan.

Con respecto a la adaptación de los proyectos de bioinversión, el cambio propuesto durante la ejecución del proyecto se logró la promoción y fortalecimiento del manejo y uso de recursos manteniendo los usos y costumbres de la población local dando mejor eficiencia en su comercialización y generación de recursos económicos.

Se recomienda que se incluya en el documento las diferentes solicitudes de los beneficiarios del proyecto que lo enfatizaron con sus representantes en las dos últimas reuniones del Comité Directivo en el que solicitan al INRENA que continúe con proyecto y se apoye a las actividades como las desarrolladas en el PIMA que les ha permitido el desarrollo de capacidades para integrarse al desarrollo sustentable del país.

Finalmente en las reuniones de trabajo se han comentado las precisiones correspondientes a las nominaciones de lugares, instituciones y redacción del documento.

Dirección de Operaciones
Intendencia de Áreas Naturales Protegidas

Lima, noviembre 2007

Annex 1. Project Costs and Financing

(a) Project Cost by Component (in USD Million equivalent)

Components	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
PARTICIPATORY BIODIVERSITY CONSERVATION	**9.24**	**8.34**	**90.24**
SUSTAINABLE UTILIZATION OF BIODIVERSITY	**7.75**	**3.44**	**44.42**
MONITORING AND EVALUATION SYSTEMS	**2.00**	**1.12**	**56.20**
PROJECT IMPLEMENTATION (MANAGEMENT)	**3.76**	**2.9**	**77.02**
Total Baseline Cost	**22.75**	**15.8**	**69.45**
Unallocated			
Total Project Costs	**22.75**	**15.8**	**69.45**

(b) Financing

Source of Funds	Type of Cofinancing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
GEF		10.00	10.00	100.00
INRENA*	Counterpart	3.14	1.64	52.15
WORLD BANK**		5.00	0.95	19.00
OTHER***	Parallel	3.60	2.84	79.02
BENEFICIARIES	Counterpart	1.01	1.37	36.42
Total Project Cost		**22.75**	**15.8**	**69.45**

Annex 2. Outputs by Component

Component 1: Participatory Biodiversity Conservation

Although it faced some initial difficulties, the project managed to successfully conduct a set of activities that promoted indigenous participation in the categorization, establishment, and management of selected protected areas. Table 1 shows relevant outputs achieved compared to those committed in the original design. Additional notes complement information provided in the table.

Table 1: Relevant outputs achieved for Component 1		
	Original Outputs	Actual Achieved Output
1.1 Creation and Permanent Categorization of Protected Areas		
a) Preparation of planning documents	**15** planning documents (Master Plans, Public Use Plans, and Management Plans) for one new Protected Area (El Sira); three Reserved Zones (Santiago-Comaina, Güeppi, and Purus) and one National Reserve (Pacaya-Samiria)	**18** Planning documents: 3 Master Plans (PNAP, RCP, RCS), 1 Resource Management Plan (RNPS), 1 Research Plan (RNPS), 5 Diagnostic Plan, 2 Zoning Plans (ZRG, RCS), 3 Monitoring & Evaluation Plans, **3** categorization documents completed (ZRG, ZRSC, ZRAP)
b) Legal establishment of protected areas	**1** new protected area established (El Sira) in PY1; 3 Reserved Zones categorized in PY2 (Santiago-Comaina, Güeppi, and Purus)	**3** new protected areas[1] (El Sira Communal Reserve, Purús National Park, and Purús Communal Reserve)
1.2 Strengthening Participatory Mechanisms		
a) Establishment of PAMC	**3** PAMC established by PY2, **5** PAMC by PY4; representatives of **200** indigenous communities trained for participation in PAMC	**5** PAMC established; 4 of them currently working **258** indigenous communities trained for participation in PAMC
b) Establishment of community-based protected areas surveillance system	**2** protected areas surveillance contracts signed and system operating by PY3	**5** Community Surveillance Systems operating in 5 Natural Protected Areas. **15** community surveillance agreements signed (for volunteer park guards) **50** management groups established with surveillance responsibilities in Pacaya-Samiria
c) Public Awareness and Environmental Education	**5** public awareness campaigns implemented by PY5	**5** Public awareness campaigns implemented
d) Analysis of Best Practices and Lessons Learned	**4** regional workshops held by PY5	**3** regional workshops implemented[2] (Güeppí, Pacaya-Samiria, and El Sira)
1.3 Indigenous People Training in Participatory Mechanism		
	126 scholarships for indigenous leaders implemented by PY5	**48** Scholarships for two courses in productive activities **129** members of the units in charge of productive projects trained in workshops **7** scholarships to indigenous students for university studies
	126 internships implemented by PY5	**107** internships to Manu National Park and Pacaya-Samiria National Reserve[3]
1.4 Provision of local Infrastructure		
	5 park management facilities	**9** park management facilities provided: 3 main headquarters built; 2 main headquarters and 4 sub-headquarters rented
	6 interpretation centers	**1** interpretation center[4] for children implemented in Santiago-Comaina
	13 park control posts	**9** park control posts built: 4 in Pacaya-Samiria, 1 in Güeppí, 1 in Santiago-

		Comaina; 3 in cooperation with indigenous communities (2 in Sira, 1 in Purús)
	Minor infrastructure built or refurnished	**4** minor infrastructures built or refurnished in Güeppí, Sira, and Santiago-Comaina
	5 indigenous community centers built	None[5]
	Trails maintained, equipment purchased	Transport, communication, and camping equipment for the **5** target sites
1.5 Strengthening of field Project Teams and Zone Coordinating Committees		
	Local INRENA teams strengthened to implement project activities and local participatory mechanism in place with permanent indigenous participation	**5** Local INRENA staff strengthened and five Zone Coordinating Committees established and operating. These committees were later assumed by PAMC

[1] A relevant output associated with the creation of these Communal Reserves is the legal approval of the "Special Regime for the Management of Communal Reserves," which established the operational and institutional arrangements for comanaging this type of protected areas in the Peruvian Amazon.
[2] The fourth workshop (Purús) was not carried out due to a temporary shortage of personnel in the area. The IANP anticipates holding this workshop in 2007 as part of the follow-up activities.
[3] Travel expenses to Manu National Park and Pacaya-Samiria were higher than the budget anticipated during the design phase. Thus, the number of grantees was lower than original planned.
[4] During implementation, the project realized that Interpretation Centers were appropriate only if located in major cities to promote tourism. Tourism activities were nonexistent or scarce in the project sites, making it irrelevant to locate the centers in these areas. However, building in nearby major cities required land acquisition which was not considered in the original budget.
[5] To construct infrastructure for private organizations with public funds (in this case communities), this activity needed to be designated as a donation. Project personnel tried to make the necessary changes to make these donations possible but the procedures were too cumbersome to be accomplished during the project cycle.

Component 2: Sustainable Uses of Biodiversity

The project succeeded in promoting alternatives to the unsustainable use of resources within the protected areas. The communities showed a high degree of reliability and efficiency in controlling the funds. The evaluation performance indicates that 23 of the 43 subgrants (54%) were successfully completed in the implementation phase. Table 2 shows relevant outputs. Additional notes complement information provided in the table.

Table 2: Relevant outputs achieved for Component 2

	Original Outputs	Actual Achieved Output
2.1 Management Plans for Titled Indigenous Land		
	15 plans prepared, 10 implemented by PY4	**14** Plans prepared 10 under implementation. **Note: 9** of these plans were designed and implemented by WWF-Peru which is carrying out activities in the Purús site. The project prepared the remaining 5 plans (Sira: timber and no timber forest products; Pacaya-Samiria: fish management and timber forest products), of which one is being implemented.
2.2 Community Natural Resource Use Contracts		
	60 contracts awarded by PY5	**1** contract for resource use[1] (fishery management) **15** use grants awarded for minor activities proposed through the Parks in Perils project **50** resource use grant agreements signed. These agreements allow resource use along with a commitment for surveillance of illegal activities.
2.3 Demand and Market Studies		
	50 market and demand studies carried out by PY5	**87** market plans included in the pre-investment studies
2.4 Biodiversity Investment Sub-grants		
a) Pre-Investment studies	**220** pre-investment studies implemented between PY2 and PY4	**220** pre-investment studies completed
b) Investment Sub grants	**123** sub grants awarded by PY4, 50% successfully implemented by PY5	**200** community subprojects through 43 interventions. They were grouped to benefit from scale economies. Evaluation shows that 23 of these interventions were successfully implemented
c) Technical Assistance	**100** technical assistance contracts implemented by PY5	**200** communities have received technical assistance through direct visits and one-day workshops delivered by the project field personnel and independent consultants
d) Analysis of Best Practices and Lessons Learned	**Four** Regional workshops implemented by PY5	**3** Regional Workshops Implemented[3] (Güeppí, Pacaya-Samiria, and El Sira)

[1] The output of 60 contracts was established in the absence of specific regulations for the law of natural protected areas. During implementation, the abovementioned regulation was approved, indicating that the contracts required payment for usage rights; this was only possible at a high production scale which was met exceptionally in certain cases (Pacaya-Samiria). For this reason, the project decided to use "resource use grant agreements" and "resource use grant for minor activities" instead of "contracts."
[2] The original design planned for 123 sub grants for individual communities. Since the demand was higher than anticipated and there were communities pursuing similar objectives, some formed associations to conduct one project. Thus, the final number of sub grants was 43, covering 200 communities.
[3] The fourth workshop (Purús) was not carried out due to a temporary shortage of personnel in the area. IANP anticipates holding this workshop in 2007 as part of the follow-up activities.

Component 3: Monitoring and Evaluation System

This component allowed the design of a Participatory Monitoring and Evaluation System to track changes in ecosystems and targeted species. The applied method has been validated in Güeppi and Pacaya-Samiria. The participatory nature increases indigenous involvement in the management of protected areas. Table 3 presents relevant outputs; additional notes complement information provided in the table.

Table 3: Relevant outputs achieved for Component 3		
	Original Outputs	Actual Achieved Output
3.1 Analysis of Biodiversity Conservation and Socioeconomic Conditions		
	Compendium of secondary information for five areas in PY1 and biological and socioeconomic indicators	**5** compendiums prepared by the consulting consortium STCP–AB SUSTENTA
3.2 Biological and Socioeconomic Databases		
	Evaluation protocols and standards and analytical tools in PY1	**1** document (2 volumes) that assesses protocols and analytical tools prepared
	GIS data layer formats and fauna and flora maps in PY1.	**5** biological databases with GIS layers included
	Baseline studies prepared in PY1	**2** studies performed in 2 areas (ZRG and RNPS). Optimum use was made of resources, concentrating the studies on two areas.
	1 Web site developed and maintained in PY1	**1** software package prepared and installed in 2 protected areas[1]: Güeppí, and Pacaya-Samiria. The interface with the World Wide Web is not yet connected
3.3 Monitoring of Biological and Socioeconomic Indicators		
	5 annual status reports of acceptable quality prepared	**2** annual reports prepared for Güeppí, and Pacaya-Samiria.[2]
3.4 Monitoring of Area Management Effectiveness		
	5 annual status reports of acceptable quality prepared	**5** annual reports prepared. Indicators show progress in management.
3.5 Training and Technical Assistance		
	Workshops and persons/months of technical assistance	**4** workshops conducted and around **5** persons/months of technical assistance in the developed methodology.

[1] It should be pointed out that the project created and uploaded a Web page, which is located within INRENA's Web site. For monitoring purposes, a software package was developed to handle monitoring data and perform basic queries. This program does not yet have a public World Wide Web interface because IANP considers this a final step in the M&E for the entire national system. At this stage the software is being implemented in each of the sites connected through INRENA's Intranet.

[2] The complete development of activities could not be accomplished in all five sites. The M&E was fully applied only in Güeppi and Pacaya–Samiria. In the other sites (Santiago-Comaina, Purus, and Sira) the activities launched for this component interfered with the ongoing categorization activities (workshops, focus groups, local leaders traveling continuously to Lima). In addition, some violent responses emerged in Santiago-Comaina due to disagreements and misunderstandings during the categorization process. Due to these problems and difficult access, focus was placed on only two sites.

Component 4: Project Implementation

After overcoming initial delays and resolving institutional constraints, the project achieved operational mechanisms to allow INRENA to implement the planned activities. Table 4 describes relevant outputs; additional notes supplement information provided in the table.

Table 4: Relevant outputs achieved for Component 4

	Original Outputs	Actual Achieved Output
4.1 Project National coordination mechanisms		
	Steering Committee has provided leadership for project implementation	The committee was established; 21 sessions were held and provided leadership to the project.
4.2 Project Special Implementation Unit (SIU)		
	SIU established at the DGANPFS level, staffed with highly qualified people and operating adequately	The SIU was established within IANP (former DGANPFS) and 5 Field Project Teams were established in each of the target sites
4.3 Technical Assistance		
	DGANPFS has enhanced capacity to address legal, social/indigenous, and promote gender equity in the management of protected areas management as well as its M&E capacities	IANP has enhanced its legal skills and its capacity to address social and intercultural issues. The inclusion of International Labor Organization (ILK) Convention 169 in IANP's practices is noteworthy.

Annex 3: Economic and Financial Analysis

Indigenous Management of Protected Areas in the Peruvian Amazon Project

Introduction

This annex aims to analyze the economic impacts of the Indigenous Management of Protected Areas in the Peruvian Amazon (PIMA) Project. The main objective of the project was to increase the sustainability of biodiversity conservation through the involvement of indigenous communities in the management of new and existing protected areas in the Peruvian Amazon Region. The project aimed to achieve this objective by: (i) establishing, categorizing, and promoting the participatory management of five protected areas; (ii) promoting economically, socially, and environmentally sustainable investments by indigenous grassroots organizations; (iii) developing and implementing a participatory monitoring and evaluation system for the project areas; and (iv) strengthening the institutional and technical capacity of INRENA and indigenous organizations to manage the protected areas and their natural resources in a sustainable manner. The target areas are (1) El Sira Reserve Zone, (2) Güeppi Reserve Zone, (3) Purus Reserve Zone, (4) Santiago-Comaina Reserve Zone, and (5) Pacaya-Samiria National Reserve.

The project was organized in four components to implement these actions: (i) *Participatory Biodiversity Conservation* ($4.83 million, 48.3% of GEF funding), including creation and categorization of protected areas and strengthening participatory mechanisms; (ii) *Sustainable Use of Biodiversity* ($1.74 million, 17.4%), including management plans for titled indigenous lands, communal natural resource use contracts, studies, and biodiversity investment subgrants; (iii) *Monitoring and Evaluation System* ($0.99 million, 9.9%), including biological and socioeconomic baselines and databases, biological and socioeconomic monitoring, area management monitoring, training assistance, and operational support; (iv) *Project Implementation* ($2.43 million, 24.3%), including project national coordination mechanisms, project special implementation unit, technical assistance, and project monitoring. These components were not restructured during execution.

Scope of Analysis

The extent of the economic analysis for the project is limited for several reasons. First, as normally done for GEF projects, an incremental cost analysis was used in designing the project. Therefore, neither net present value nor economic rate of return was estimated at project appraisal. Second, no economic data were collected for Components 1 and 3. Third, only two investment subprojects were able to provide enough data for a formal cost-benefit analysis. Fourth, since the project implementation was largely affected by the cancellation of cofinancing, the investment subprojects did not start until the fourth year of the project implementation. Therefore, results of the investment could not be sufficiently observed by the end of the project. Fifth, because most local indigenous peoples live on subsistence agriculture and fishing and are not easily accessible to large markets, their income from market transactions is negligible. Therefore, the estimated benefits from the subprojects include the value of all products whether they are consumed by themselves or sold at markets to gain money.

The economic analysis presented in this annex focuses mainly on the results of the biodiversity investment grants under Component 2. Although limited, some cost and benefit data were

collected during the project. Those data and the qualitative information on the results of other components helped to draw a conclusion on the performance in achieving the intended benefits.
The expected benefits from the investment component presented in the Project Appraisal Document were as follows:

- use of natural resources in project areas by over 300 indigenous communities for their own benefit; and
- increase in the income of 100 indigenous groups through natural resource biodiversity investments.

Biodiversity investment grants financed local investments which were identified during preparation and selected based on the subsequent pre-investment studies. Two hundred and twenty project concepts were identified by the local groups through the pre-investment studies. Among those appraised by the Field Project Teams, 200 community subprojects grouped in 43 interventions were approved by the Zonal Coordinating Committee (ZCC) and financed by grants on average of US$20,000 each; those 200 communities were the beneficiaries. The project proponents were required to provide cofinancing of about 30% of total costs, which were mostly in-kind contributions from the local communities. The project also provided technical assistance for those 43 investment subprojects to implement the proposed activities.

Baseline Economic Activities

The beneficiaries of the 43 investments are the local indigenous peoples who have lived in the forest for generations. The baseline activities of these people are mainly slash-and-burn agriculture, hunting of animals in the forest, and fishing in nearby rivers, typically for their subsistence. The excess products are sold for their clothing and food, and in some cases for their children's education. Data on the size of these economic activities are not available. It is reported that in some locations local people extracted mahogany and sold it for S/. 100 per tree.[2] However, most of the communities are not easily accessible to commercial markets. Therefore, the income from agriculture, hunting, and fishing was not considered a significant source of income. The baseline economic data provided later under the financial analysis includes the value of all the products that are consumed among themselves and sold at local markets.

Agriculture

The indigenous groups typically slash and burn forests to obtain fertile lands to cultivate produce such as yucca, potatoes, peanuts, and corn in communal farms called "chacras." They also collect fruits while clearing forests. After three to four years, the fertility of soil declines naturally. The people then move to a new location and repeat the slash-and-burn agriculture. Some of the indigenous groups also plant fruit trees such as cacao, different kinds of palm trees, and coffee in permanent locations in their territory. The harvests are mainly for their consumption.

[2] Capítulo Peruano de la Plataforma Interamericana de Derechos Humanos Democracia y Desarrollo, Año 1, Nº 7 Agosto 2005.

To give an idea of the size of agricultural production in the Department of Amazonia, the 1997 data of Condorcanqui Province where the Santiago-Comaina Reserve Zone is located, are as follows: Among annual crops, yucca and plantains represented 83.8% of the cultivated area and the rest were yellow corn and rice. The gross value of yucca production was S/. 10.58 millions, with a productivity of 10 ton/ha. With regard to perennial crops, cacao occupied 1,200 ha.

Hunting

Hunting has been another important activity for the indigenous groups, almost exclusively done by men. They hunt small- to medium-sized forest animals such as armadillo, agouti, deer, squirrel, olingo, peccary, and birds. These are mostly for their subsistence, but some are traded for money. Traditionally their hunting instrument was a blowgun with poison on the tip of the arrow. But colonizers and merchants brought firearms such as rifles and shotguns which were exchanged with forest products. Consequently, more animals are killed, placing the survival of some native species at risk.

Fishing

Fish has been another important source of protein for indigenous peoples. Men and women participate in fishing using arrows, fishing nets, harpoons, long-lining, diving, and traps. South American catfish, sábalo (*Salminus hilarii*), silver dollar, and tambaqui are their main catches. These are mostly for their subsistence and are an important source of protein.

Cost

The total amount of the grants to the activities carried out by the indigenous communities under Component 2 is S/. 2,810,273. It was initially planned to require a matching contribution of 50% for each subproject. However, the project decided after a closer assessment carried out at the midterm review that it should be reduced substantially. Labor costs form the bulk of the costs. It is assessed that a total labor cost of S/. 1,177,046 was invested in the implementation of the 43 projects. Therefore, the total cost for the investment subprojects was S/. 3,987,319.

Economic Benefits

Table 1 shows the extent of the areas that the project achieved to obtain legal protection status under the Peruvian law. The deforestation rate in the target protected areas and surrounding areas was estimated at 31,281 ha/year. Without the project, the legal status of protection would have not been secured, pending an approval by the Peruvian Ministerial Council.

The project contributed to prepare the critical documentation for the establishment of the new protected areas and for their sustainable management with the participation of the local populations. These documents include master plans, resource management plans, research plans, diagnostics, zoning studies, and monitoring and evaluation plans. As a result two national parks, Alto Purus comprising 2.5 million ha and Ichigkat Muja (Cordillera del Condor) with 88,477 hectares are now legally protected as IUCN Category II and three Communal Reserves totaling 921,414 ha are protected as IUCN Category VI. The basic infrastructure and the personnel for managing these protected areas are secured with the support of the project. Most importantly, the legal designation of the indigenous reserves gave tremendous incentives and a sense of security for the local indigenous groups to protect the area and use in a sustainable manner the natural resources that they depend on.

Table 1: Target Areas and the Extent of Benefits Generated

Area	IUCN Category	Surface	Estimated Deforestation	Estimated Avoided Deforestation*	Beneficiaries
		ha	ha/year	Ha	family
Purus Communal Reserve	VI	202,033	820	181	96
Alto Purus National Park	II	2,510,694	10,193	-	-
Pacaya-Samiria Native Reserve	VI	2,080,000	8,445	2,083	359
Gueppi Reserved Zone	VI	652,971	2,651	155	188
El Sira Communal Reserve	VI	616,413	2,503	15,675	424
Santiago-Comaina Reserved Zone	VI	1,642,567	6,669	683	275
TOTAL		**7,704,679**	**31,281**	**18,777**	**1,342**

*As a result of the investment subprojects under Component 2.
PIMA/IANP, April 2007.

Avoided Deforestation

Among the 43 grants for the sustainable use of natural resources, 22 were related to reforestation and forest management for the sustainable use of forest resources. As a result, it is estimated that the deforestation of 18,777 ha was avoided through these subprojects (see Table 1.) The avoided deforestation in the target areas is estimated by the following method: 1) for palms, the area equals the size of the natural area that contains the same volume of trees that are planted or managed under the subprojects; 2) for tree species, the timber volume projected in 20 years is divided by the reference value of 8 m^3/ha for the volume extracted for local consumption and for profit.

These forests provide benefits in different ways: habitat for wild species, foods, medicinal plants, and timber and nontimber products. The deforestation rate of the target areas was 31,281 ha per year before the PIMA project. The rapid deforestation led to fewer goods and services provided by the forests on which the local communities have relied for centuries. For example, white-lipped peccaries (*Tayyassu pecari*) are one of the major protein sources for the local indigenous people. Losing a forest area of 31,281 ha means that a habitat for 312 white-lipped peccaries could have been lost.

Carbon Sequestration

Table 2 shows the estimated carbon content sequestered by the forests managed and expanded under the subprojects, which totals 2,969 tons of CO_2, equivalent per year. With a price of US$4.00 per ton and an exchange rate of S/. 3.20, the total value of carbon sequestration is estimated at 38,001 S/./year. The carbon sink is calculated by multiplying the mean annual increment (MAI) expressed in m^3/ha/year by a conversion factor. If the conversion factor is 0.45 and the MAI is 7.89 m^3/ha/year, the sequestered carbon is 3.55 ton/ha/year. The value of the conversion factor is based on the article by forester Auberto Ricse Tembladera titled “Reservas de Carbono en los Bosques Altos del Género Eucalyptus en el Valle del Mantaro.” MAI varies over years; thus the quantity of sequestered carbon varies. In addition, the estimation of MAI depends on the species, the number of trees per ha, and the quality of sites observed. But these subprojects started only one year or so before the data was collected. No study has been done to define the conversion factor for the tree species handled in the subprojects; this analysis employed the factor that forester Ricse used in his article.

Table 2: Estimated Carbon Sink Created by the Forest Subprojects

PNA/Project	Community	Re-forested Area ha	Managed Area ha	Total Area Ha	Carbon sink created ton/year	Value of carbon captured S/./year
National Reserve Pacaya Samiria		**110**	**250**	**360**	**421.1**	**5,390.3**
Reforestation with Shebon (Scheelea branchyelada) in Leoncio Prado Native Community	Leoncio Prado	20	-	20	71.0	909.3
Management and sustainable commerce of Aguaje (Mauritia flexuosa) in Parinari Native Community	Parinari	-	250	250	3.0	38.4
Reforestation with native species in Sana Isabel de Yumbaturo Native Community	Santa Isabel	20	-	20	55.4	709.5
Management of Cocha Iña Yuapa in San Antonio Native Community	S. Antonio	10	-	10	17.3	221.7
Reforestation of native species in Yarina Community	Yarina	20	-	20	108.0	1,382.4
Reforestation with Shebón (Scheelea branchyelada) in Sucre Native Community	Sucre	20	-	20	71.0	909.3
Reforestation with native species in Santa Rita de Castilla	S. Rita de Castilla	20	-	20	95.3	1,219.8
El Sira Communal Reserve		**500**	**275**	**775**	**2,386.7**	**30,549.8**
Production and commercialization of local products in Alto Ucayah	Alto Ucayali	10	25	35	113.8	1,457.1
Management plan of forests in Medio Ucayali	Medio Ucayali	203	-	203	1,671.9	214,013.0
Reforestation with timber and non-timber species in Bajo Ucayali	Bajo Ucayali	23	-	23	237.7	3,043.2
Management of ornamental fish in Bajo Pachitea	Bajo Pachitea	20	-	20	144.8	1,853.3
Medicinal plants in Alto Pachitea	Alto Pachitea	10	100	110	7.5	224.4
Fishfarms in Alto Picis	Alto Pichis	120	-	120	9.8	125.2
Reforestation of timber and non-timber species Medio Pichis	Medio Pichis	72	-	72	126.2	1,615.4
Medicinal plants in Bajo Pichis	Bajo Pichis	10	150	160	17.5	224.3
Improvement of productive process of coffee agroforestry systems and its commercialization in Gran Pajonal	Gran Pajonal	32	-	32	47.3	605.3
Purús Communal Reserve		**22**	**0**	**22**	**32.1**	**410.5**
Implementation of artisan workshop and improvement of communal farms in San Bernardo Community	S. Bernardo	4	-	4	6.3	80.4
Improvement of communal farms in Balta Community	Balta	9	-	9	12.9	165.0
Improvement of communal farms in Pankirentsy Community	Pankirentsy	9	-	9	12.6	161.0
Santiago Comaina Reserved Zone		**50**	**0**	**50**	**101.0**	**1,292.6**
Reforestation with timber and non-timber species in Bajo Morona	Morona	50	-	**50**	101.0	1,292.6
Güeppí Reserved Zone		**30**	**0**	**30**	**28.0**	**358.2**
Agro forestry Systems in Miraflores and Nueva Ipiranga	Miraflores	20	-	**20**	23.0	294.1
Agro forestry Systems in Tres Fronteras	Tres Fronteras	10	-	**10**	5.0	64.1
Total		**712**	**525**	**1237**	**2,968.9**	**38,001.4**

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Soil Erosion

Increased forest areas and the proper management of the forests contributed to a substantial decrease in soil erosion in the area. The estimated volume of the avoided erosion was 34,465 tons annually. In the calculation, the erosion map developed by INRENA[3] and the Universal Soil Loss Equation (USLE) were used. The formula is provided as follows:

E = R * K * LS * C * P

Where:

E = Volume of soil loss
R = Rainfall-runoff erosivity factor
K = Soil erodibility factor
L = Slope length factor
S = Slope steepness factor
C = Cover management factor
P = Conservation practice factor

Valuing that soil of similar characteristic costs about 5 S/./ton, local farmers saved 172,327 S/./year. This is an important change not only for local agricultural production, but also for the survival of the forests. Local farmers typically cultivate in a cleared land which loses fertility after three to four years. The farmers then abandon the land and move to burn more forests to continue their farming production. The reforestation and forest management activities reversed this vicious cycle and consequently achieved not only direct environmental impacts but also economic benefits for local farmers.

Table 3: Estimated Reduction of Soil Erosion

PNA/Project	Community	Re-forested Area Ha	Managed Area ha	Total Area Ha	Reduction of soil erosion ton/year	Value in reduction of soil erosion S/./year
National Reserve Pacaya Samiria		**110**	**250**	**360**	**4,145.1**	**20,725.4**
Reforestation with Shebon (Scheelea branchyelada) in Leoncio Prado Native Community	Leoncio Prado	20	-	20	924.5	4,622.5
Management and sustainable commerce of Aguaje (Mauritia flexuosa) in Parinari Native Community	Parinari	-	250	250	24.1	120.2
Reforestation with native species in Sana Isabel de Yumbaturo Native Community	Santa Isabel	20	-	20	273.7	1,368.6
Management of Cocha Iña Yuapa in San Antonio Native Community	S. Antonio	10	-	10	606.4	3,032.0
Reforestation of native species in Yarina Community	Yarina	20	-	20	220.0	1,100.1
Reforestation with Shebón (Scheelea branchyelada) in Sucre Native Community	Sucre	20	-	20	1,212.8	6,064.1

[3] http://www.inrena.gob.pe/biblioteca/data_de_biblioteca/docs/mapas_peru_ambiental/biblidigital_0105.htm

Reforestation with native species in Santa Rita de Castilla	S. Rita de Castilla	20	-	20	883.5	4,417.8
El Sira Communal Reserve		**500**	**275**	**775**	**26,441.1**	**132,205.6**
Production and commercialization of local products in Alto Ucayah	Alto Ucayali	10	25	35	1,533.3	7,666.4
Management plan of forests in Medio Ucayali	Medio Ucayali	203	-	203	2,710.7	13,553.7
Reforestation with timber and non-timber species in Bajo Ucayali	Bajo Ucayali	23	-	23	397.5	1,987.6
Management of ornamental fish in Bajo Pachitea	Bajo Pachitea	20	-	20	1,171.1	5,855.4
Medicinal plants in Alto Pachitea	Alto Pachitea	10	100	110	1,102.2	5,510.8
Fishfarms in Alto Pichis	Alto Pichis	120	-	120	6,020.1	30,100.6
Reforestation of timber and non-timber species Medio Pichis	Medio Pichis	72	-	72	7,935.5	39,677.6
Medicinal plants in Bajo Pichis	Bajo Pichis	10	150	160	1,102.2	5,510.8
Improvement of productive process of coffee agro forestry systems and its commercialization in Gran Pajonal	Gran Pajonal	32	-	32	4,468.6	22,342.8
Purús Communal Reserve		**22**	**0**	**22**	**532.3**	**2,661.3**
Implementation of artisan workshop and improvement of communal farms in San Bernardo Community	S. Bernardo	4	-	4	76.2	381.2
Improvement of communal farms in Balta Community	Balta	9	-	9	265.4	1,327.1
Improvement of communal farms in Pankirentsy Community	Pankirentsy	9	-	9	171.5	857.7
Santiago Comaina Reserved Zone		**50**	**0**	**50**	**1,756.8**	**8,784.1**
Reforestation with timber and non-timber species in Bajo Morona	Morona	50	-	**50**	1,756.8	8,784.1
Güeppí Reserved Zone		**30**	**0**	**30**	**1,590.0**	**7,950.2**
Agro forestry Systems in Miraflores and Nueva Ipiranga	Miraflores	20	-	**20**	1,060.0	5,300.1
Agro forestry Systems in Tres Fronteras	Tres Fronteras	10	-	**10**	530.0	2,650.1
Total		**712**	**525**	**1237**	**34,465.3**	**172,326.6**

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Overextraction of Native Fish Species

Table 4 shows the ecological impact of the aquatic resources subprojects. A total area of 16.48 ha is dedicated for fish farming and 329 ha for natural water ponds under management. These areas are important to address over-extraction of fish species in natural water habitats. Managing these fish farms and ponds would be equivalent to giving up extraction of native fish species in an area of 775.4 ha. It is estimated from the volume of production of fish farms and the density of fish population in natural water habitat. Assuming that the average fish population density is 1 fish per 2 m^2, it implies that 3.86 million fish in natural habitat are spared.

Table 4: Extent of Reduced Extractive Activities of Fish

PNA/Project	Community	Fish Farm (ha)	Managed Natural Pond (ha)	Total Area (ha)	Reduced Extractive Activities (ha)
National Reserve Pacaya Samiria (Total)		**1.0**	**236.0**	**237.0**	**261.0**
Management of Taricaya in Nuevo San Jan Community	Nuevo San Juan		26.0	26.0	30.0
Management of Aquatic Resources Arahuana-Taricaya in Nueva York Community	Nueva York		80.0	80.0	82.6
Management of Aquatic Resources Nueva Esperanza Native Community	Nueva Esperanza		55.0	55.0	56.8
Management of Cocha Iña Yuapa in San Antonio Native Community	S. Antonio	1.0		1.0	12.0
Management of Taricaya in Juancito Community	Juancito		20.0	20.0	23.0
Management of Aquatic Resources Arahuana-Taricaya in Bretaña Community	Bretaña		55.0	55.0	56.8
El Sira Communal Reserve (Total)		**0.15**	**-**	**0.15**	**3.1**
Management of aquarium fish in Bajo Pachitea	Bajo Pachitea	0.006			0.8
Fish farms in Alto Pichis	Alto Pichis	0.14			2.3
Purús Communal Reserve (Total)		**-**	**10.4**	**10.4**	**10.0**
Management of Aquatic Resources for Self-consumption in Gastabala	Gastabala		5.6	5.6	5.4
Management of Aquatic Resources for Self-consumption in San Marcos	San Marcos		4.7	4.7	4.6
Santiago Comaina Reserved Zone (Total)		**33.0**	**-**	**33.0**	**397.6**
Implementation of Fish Faram in Río Santiago.	Santiago	2.4		2.4	21.6
Management of Aquatic Resources in Reservoir in el Alto and Medio Morona	Morona	2.5		2.5	22.5
Implementation of Fish Farms in el Cenepa.	Cenepa	3.8		3.8	34.0
Implementation of Reproduction Center for Native Fish in Mamayaque de la Cuenca del Cenepa	Cenepa	20.0		20.0	280.8
Implementation of Fish Farms in Medio Marañón.	Marañon	2.1		2.1	18.9
Implementation of Fish Farms in Domingusa.	Domingusa	2.2		2.2	19.8
Güeppí Reserved Zone (Total)		**1.4**	**83.0**	**84.4**	**103.8**
Management of Taricaya for Repopulation in Nueva Esperanza and San Martín	N. Esperanza y San Martín		43.0	43.0	49.5
Management of Aquatic Resources Arahuana in Sta Teresita, Tejada, Nvo Peneya, Libertad and Zambelín	M,PN,B,PV		20.0	20.0	**21.0**
Management of Aquatic Resources Arahuana in Mashunta, Pto Nuevo, Belén and Puerto Veliz	ST,T,NP,L,Z	0.3	20.0	20.3	**23.3**
Management of Aquatic Resources Gamitana in Nueva Angusilla, Soplin Vargas and Bellavista	N.A., S.V., y B.	1.1		1.1	**9.9**
Total		**16.5**	**329.4**	**345.8**	**775.4**

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Production and Income

Of the 43 grants implemented, 23 are reported to be successfully executed. Productivity and benefit generated by each subproject are assessed at the end of the project. Most local indigenous peoples live on subsistence agriculture and fishing and are not easily accessible to large markets; thus, their income from market transactions is negligible. Therefore, the benefit data provided in the subsequent sections include the total value of their production, both for their self-consumption as well as the excess sold at local markets.

Considering that the majority of these subprojects started in the fourth year of project implementation, the full effect of the investment is yet to be captured. Some may see more effects of the activity later as products mature over the years. The results are discussed separately by type of activity, i.e., forest-related production, aquatic resources production, and ecotourism and handicraft production.

Forest-related Productive Activities

There are 23 subprojects related to reforestation and forest management activities. (One did not provide enough data on the result.) Before the project, the average income of those who participated in forest-related subprojects was assessed at 1,655 S/./year/household with the highest being 4,950 S/./year/household. A study was done by the project's consultant to assess the income from these subprojects in 20 years (10 years in case of ecotourism and handicrafts projects). The income after 20 years was calculated by estimating the total increase in production over 20 years and averaged out by year. The detailed cost data were provided only for two subprojects. Therefore, an appropriate cost benefit analysis is not available for all subprojects. To explain the extent of the undertaking, the change in production and income is provided in Table 5.

The average annual production in 20 years is estimated at 6,015 S/./household with the highest being 28,700 S/./household. Nontimber products such as palm leaves and fruits will be harvested only several years from now. In the baseline, the production of medicinal plants was very modest. Through processing and proper packaging, medicinal plants have a good chance of generating high revenue. The subprojects with Shebón palm plantations in Sucre and Leoncio Prado will be generating benefits after seven years when the palm trees mature and offer full-grown leaves for thatching. (This subproject is further analyzed in the later section.) The area where a single crop was cultivated showed very low productivity. A traditional production crop such as coffee caused a major loss of fertility and erosion. When it is combined with trees in an agroforestry system, these problems are reduced and productivity increases over the years.

Table 5: Incremental Income per Household from Forest subprojects

Subproject	Community	Number of House-holds	Pro-duction Unit	Baseline Pro-duction	Estimated Production in 20 years	Baseline Income (S/./year/ household)	Estimated Income in 20 years (S/./year/ household)
National Reserve Pacaya Samiria		**151**				**1,575**	**3,252**
Reforestation with Shebon (Scheelea branchyelada) in Leoncio Prado Native Community	Leoncio Prado	16	palm	500.0	6,840.0	2,500	5,105
Management and sustainable commerce of Aguaje (Mauritia flexuosa) in Parinari Native Community	Parinari	40	bag	3,750.0	7,645.0	1,500	2,830
Reforestation with native species in Santa Isabel de Yumbaturo Native Community	Santa Isabel	17	m3/year	61.6	123.2	1,882	3,323
Management of Cocha Iña Yuapa in San Antonio Native Community	S. Antonio	35	m3/year	19.2	38.5	397	864
Reforestation of native species in Yarina Community	Yarina	17	m3/year	120.0	240.0	1,882	5,130
Reforestation with Shebón (Scheelea branchyelada) in Sucre Native Community	Sucre	9	palm	500.0	6,840.0	4,444	9,077
Reforestation with native species in Santa Rita de Castilla	S. Rita de Castilla	17	m3/year	105.8	211.8	1,176	2,388
El Sira Communal Reserve		**389**				**1,871**	**8,713**
Production and commercialization of local products in Alto Ucayali	Alto Ucayali	50	m3/year	169.8	339.9	417	995
Management plan of forests in Medio Ucayali	Medio Ucayali	50	m3/year	1,883.8	3,769.7	3,248	9,604
Reforestation with timber and non-timber species in Bajo Ucayali	Bajo Ucayali	35	m3/year	370.1	740.4	650	1,727
Management of ornamental fish in Bajo Pachitea	Bajo	30	m3/year	50.4	100.8	1,188	3,090

	Pachitea						
Medicinal plants in Alto Pachitea	Alto Pachitea	30	ton	4.4	44.0	2,870	28,699
Fish farms in Alto Pichis	Alto Pichis	50	m3/year	10.8	21.6	3,010	4,229
Reforestation of timber and non-timber species Medio Pichis	Medio Pichis	30	m3/year	163.4	326.9	3,600	8,520
Medicinal plants in Bajo Pichis	Bajo Pichis	50	ton	6.4	64.0	2,505	25,046
Improvement of productive process of coffee agroforestry systems and its commercialization in Gran Pajonal	Gran Pajonal	64	qq	160.0	640.0	255	1,969
Purús Communal Reserve		**167**				**550**	**1,859**
Implementation of artisan workshop and improvement of communal farms in San Bernardo Community	S. Bernardo	79	m3/year	7.0	14.0	190	2,304
Improvement of communal farms in Balta Community	Balta	29	m3/year	14.3	28.6	1,307	1,798
Improvement of communal farms in Pankirentsy Community	Pankirentsy	59	m3/year	14.0	28.0	660	1,293
Santiago Comaina Reserved Zone		**50**				**1,928**	**3,923**
Reforestation with timber and non-timber species in Bajo Morona	Morona	50	m3/year	136.5	273.0	1,928	3,923
Güeppí Reserved Zone		**30**				**4,950**	**11,557**
Agroforestry Systems in Miraflores and Nueva Ipiranga	Miraflores	20	m3/year	25.6	51.0	4,950	13,959
Agroforestry Systems in Tres Fronteras	Tres Fronteras	10	m3/year	5.5	11.0	4,950	6,755
Total		**787**				**1,655**	**6,015**

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The following economic analysis is based on the limited data from the two types of subprojects under the investment component: one that aims at the reforestation of Shebón palms (*Scheelea brachyelada*) and another that incorporates agroforestry systems in fruit production. The cost and benefit data are collected by the project's forester during the project.

Shebón Palm Plantation

Two subprojects in the Pacaya-Samiria Native Reserve aim at the reforestation of Shebón palms (*Scheelea branchyelada*). The area of reforestation is 20 ha for each subproject. The locations are in the Leoncio Prado Native Community and the Sucre Native Community. Shebón palms mature in seven years to start yielding leaves and fruits for consumption. The data here take into consideration only the benefits generated with leaves for thatching. Table 6 shows the number of leaves yielded over 20 years.

Table 6: Production of Shebón Palm (*Scheelea brachyelada*) Leaves

Year	Number of Trees Planted	Survival Factor	Number of Survived Trees	Number of Leaves per Tree	Total Number of Leaf Yield Annually
1	8,000	0.9	7,200	-	-
2	7,200	0.95	6,840	-	-
3	6,840	1	6,840	-	-
4	6,840	1	6,840	-	-
5	6,840	1	6,840	-	-
6	6,840	1	6,840	-	-
7	6,840	1	6,840	8	54,720
8	6,840	1	6,840	13	88,920
9	6,840	1	6,840	18	123,120

10	6,840	1	6,840	22	150,480
11	6,840	1	6,840	22	150,480
12	6,840	1	6,840	22	150,480
13	6,840	1	6,840	22	150,480
14	6,840	1	6,840	22	150,480
15	6,840	1	6,840	22	150,480
16	6,840	1	6,840	22	150,480
17	6,840	1	6,840	22	150,480
18	6,840	1	6,840	22	150,480
19	6,840	1	6,840	22	150,480
20	6,840	1	6,840	22	150,480
Total	138,320		137,160	281	1,922,040

Núñez, D; Galindo, M. July 2004. Lima, Peru

On average, an 8m x 9m house requires 750 Shebón leaves for thatching. Starting in Year 10, the production capacity of a 20 ha plantation will cover 201 houses per year (150,480 leaves/750 per house). With the indigenous population of 12,000 people in the area, it is assumed that there are 3,000 households, 5% of which need thatch maintenance (150 houses). The estimated growth of houses is 3% (90 houses). Thus, the total number of houses in need of thatch maintenance is estimated at 240. With the Shebón plantation, it is estimated that 83% of the local demand for thatching can be met.

The estimated cost and benefit of the Shebón plantation in 20 ha is provided in Table 7.

Table 7: Cost and Benefit of Shebón (Scheelea brachyelade) Plantation (20 ha)

Year	Maintenance Cost	Cost for Harvesting (Labor, Transport)	Tax	**Total Annual Cost**	Amount of Leaf Yield	Price of Leaf	**Annual Income**
	S/./year	S/./year	S/./year	**S/./year**	leaf/year	S/./leaf	**S/./year**
0	-48,372.47		-	**-48,372.47**		-	**-**
1	-9,386.00		-	**-9,386.00**			**-**
2	-9,386.00		-	**-9,386.00**			**-**
3	-9,386.00		-	**-9,386.00**			**-**
4	-9,386.00		-	**-9,386.00**			**-**
5	-9,386.00		-	**-9,386.00**			**-**
6	-9,386.00		-	**-9,386.00**			**-**
7	-17,812.88	-8,426.88	-8,609.74	**-34,849.50**	54,720	0.85	**46,512.00**
8	-23,079.68	-13,693.68	-15,750.70	**-52,524.06**	88,920	0.85	**75,582.00**
9	-28,346.48	-18,960.48	-22,891.66	**-70,198.62**	123,120	0.85	**104,652.00**
10	-32,559.92	-23,173.92	-28,604.42	**-84,338.26**	150,480	0.85	**127,908.00**
11	-32,559.92	-23,173.92	-28,604.42	**-84,338.26**	150,480	0.85	**127,908.00**
12	-32,559.92	-23,173.92	-28,604.42	**-84,338.26**	150,480	0.85	**127,908.00**
13	-32,559.92	-23,173.92	-28,604.42	**-84,338.26**	150,480	0.85	**127,908.00**
14	-32,559.92	-23,173.92	-28,604.42	**-84,338.26**	150,480	0.85	**127,908.00**
15	-32,559.92	-23,173.92	-28,604.42	**-84,338.26**	150,480	0.85	**127,908.00**
16	-32,559.92	-23,173.92	-28,604.42	**-84,338.26**	150,480	0.85	**127,908.00**
17	-32,559.92	-23,173.92	-28,604.42	**-84,338.26**	150,480	0.85	**127,908.00**
18	-32,559.92	-23,173.92	-28,604.42	**-84,338.26**	150,480	0.85	**127,908.00**
19	-32,559.92	-23,173.92	-28,604.42	**-84,338.26**	150,480	0.85	**127,908.00**
20	-32,559.92	-23,173.92	-28,604.42	**-84,338.26**	150,480	0.85	**127,908.00**
Total	-532,086.63	-295,994.16	-361,900.75	**-1,189,981.54**	1,922,040.00		**1,633,734.00**

Núñez, M.; Bravo M. July 2004. Lima. Revised by, Núñez M., December 2005. Lima

The costs for harvesting reflect the labor cost of 328 S/./day and a total of S/.3,502 for transportation. The maintenance costs assume a base cost of 890 S/./ha.

If the reforestation was fully implemented, the NPV of reforestation of Shebón palm on each of these community lands after 20 years would be $56,469.67 at 10% discount rate and the IRR is 15%.

Agroforestry Production System

There are three subprojects that aim to incorporate agroforestry systems: two are in the Güeppi Reserve Zone and one in the Purus Communal Reserve. Data were collected for the subproject in Miraflores/Nueva Ipiranga in Güeppi, whose objective is to increase the productivity of orchards by introducing an agroforestry production system. The area of cultivation is 20 ha. Table 8 shows the estimated benefits from the yields of each fruit over the years. Again, the estimated benefits are the value of the products if these were sold at markets. Most of the products are consumed locally for subsistence.

Table 8: Income from Agroforestry Fruits Production Systems in Miraflores and Nueva Ipiranga (20 ha)

Year	Guanábana (*Annona muricata*) S/.	Avocado S/.	Lemon S/.	Mandarin S/.	Star Fruits S/.	Cacao S/.	Guava S/.	Borojó (*Borojoa patinoi*) S/.
0								
1								
2								
3						6,600	3,000	13,500
4	4,808	18,750	1,375	1,440	600	6,600	6,000	13,500
5	7,692	25,000	3,299	3,456	1,400	6,600	9,000	13,500
6	10,577	50,000	6,415	6,720	3,000	6,600	9,000	13,500
7	13,462	75,000	8,247	8,640	5,700	6,600	9,000	13,500
8	15,385	100,000	12,829	13,440	8,000	6,600	9,000	13,500
9	15,385	100,000	12,829	13,440	9,400	6,600	9,000	13,500
10	15,385	100,000	12,829	13,440	10,800	6,600	9,000	13,500
11	15,385	100,000	12,829	13,440	12,200	6,600	9,000	13,500
12	15,385	100,000	12,829	13,440	13,600	6,600	9,000	13,500
13	15,385	100,000	12,829	13,440	13,600	6,600	9,000	13,500
14	15,385	100,000	12,829	13,440	13,600	6,600	9,000	13,500
15	15,385	100,000	12,829	13,440	13,600	6,600	9,000	13,500
16	15,385	100,000	12,829	13,440	13,600	6,600	9,000	13,500
17	15,385	100,000	12,829	13,440	13,600	6,600	9,000	13,500
18	15,385	100,000	12,829	13,440	13,600	6,600	9,000	13,500
19	15,385	100,000	12,829	13,440	13,600	6,600	9,000	13,500
20	15,385	100,000	12,829	13,440	13,600	6,600	9,000	13,500
	236,538	1,468,750	186,113	194,976	173,500	118,800	153,000	243,000

According to the estimate by the project's forester, the productivity of the agroforestry system shown above is 2.82 times more efficient than plantain monoculture. Moreover, the agroforestry subprojects plan to sell wood materials starting in Year 20. The estimated income from the wood sales is shown in Table 9.

Table 9: Income from Wood Sales in Agroforestry Systems in Miraflores and Nueva Ipiranga (20ha)

Year	Cedar	Granadillo (*Platymiscium pinnatum*)	Leche caspi (*Brosimun utile*)	Tornillo (*Cedrelinga catenaeformis*)	Total
	S/.	S/.	S/.	S/.	S/.
0-19	-	-	-	-	-
20	8,120	5,580	1,080	3,510	18,290
Total	8,120	5,580	1,080	3,510	18,290

Based on these production data, the benefits from the agroforestry systems are estimated. Table 10 shows the estimated net benefits.

Table 10: Costs and Benefits of Agroforestry Systems in Miraflores and Nueva Ipiranga (20 ha)

Year	Annual Cost	Economic Benefit from Yields	Economic Benefit from Wood	Total Economic Benefit	Gross Benefit	Tax	**Net Benefit**
	S/.	S/.	S/.	S/.	S/.	S/.	**S/.**
0	-58,255.3	-	-	-	-58,255.3		**-58,255.3**
1	-25,536.0	-	-	-	-25,536.0		**-25,536.0**
2	-25,536.0	-	-	-	-25,536.0		**-25,536.0**
3	-25,536.0	23,100.0	-	23,100.0	-2,436.0		**-2,436.0**
4	-25,536.0	53,072.2	-	53,072.2	27,536.2	8,260.9	**19,275.4**
5	-25,536.0	69,947.2	-	69,947.2	44,411.2	13,323.4	**31,087.9**
6	-25,536.0	105,811.5	-	105,811.5	80,275.5	24,082.6	**56,192.8**
7	-25,536.0	140,148.8	-	140,148.8	114,612.8	34,383.8	**80,229.0**
8	-25,536.0	178,753.7	-	178,753.7	153,217.7	45,965.3	**107,252.4**
9	-25,536.0	180,153.7	-	180,153.7	154,617.7	46,385.3	**108,232.4**
10	-25,536.0	181,553.7	-	181,553.7	156,017.7	46,805.3	**109,212.4**
11	-25,536.0	182,953.7	-	182,953.7	157,417.7	47,225.3	**110,192.4**
12	-25,536.0	184,353.7	-	184,353.7	158,817.7	47,645.3	**111,172.4**
13	-25,536.0	184,353.7	-	184,353.7	158,817.7	47,645.3	**111,172.4**
14	-25,536.0	184,353.7	-	184,353.7	158,817.7	47,645.3	**111,172.4**
15	-25,536.0	184,353.7	-	184,353.7	158,817.7	47,645.3	**111,172.4**
16	-25,536.0	184,353.7	-	184,353.7	158,817.7	47,645.3	**111,172.4**
17	-25,536.0	184,353.7	-	184,353.7	158,817.7	47,645.3	**111,172.4**
18	-25,536.0	184,353.7	-	184,353.7	158,817.7	47,645.3	**111,172.4**
19	-25,536.0	184,353.7	-	184,353.7	158,817.7	47,645.3	**111,172.4**
20	-25,536.0	184,353.7	18,290.0	202,643.7	177,107.7	53,132.3	**123,975.4**
Total	-568,975.3	2,774,677.9	18,290.0	2,792,967.9	2,223,992.6	700,726.8	**1,523,265.9**

If the agroforestry production systems were fully implemented, the NPV of these subprojects at 20 years would be $367,201.53 at a 10% discount rate, and the IRR is 30%. The results seem very high. This may be because the products are consumed locally and the various costs such as cost for transportation to markets are not taken into consideration.

Aquatic Resources Activities

Increased productivity of fish is important for the local community not only in terms of obtaining protein and improving their diet, but also as a potential income source. The size of investments is relatively small. Most of the fish are consumed locally. An excess of these fish is sold locally and becomes a source of income. In the case of tiger peacock bass (*lossum bicirrhosum*), these are aquarium fish and sold to buyers who export them.

The baseline productivity of aquatic resources was 152,260 kg in total for all the participating communities, and the average baseline income was 335.8 S/./household. The productivity in 20 years is estimated to increase 2.8 times. As in the case of forest management activities, the income after 20 years was calculated by estimating the total increase in production over 20 years and averaged out by year. In general, fish farms that utilize the natural pond system generated greater income. There were five of such fish farms in the Pacaya-Samiria Reserve which reproduce native fish species. In the case of the subprojects in Bajo Pachitea of the El Sira Communal Reserve to produce aquarium fish, the actual productivity was 12.6 kg/year in a 60m^2 pond and the baseline income was 420 S/./household. It has a potential to increase income even more over the years if its access to a larger market is secured. It uses a floating cage to culture the fish, thus the environmental impact to the local ecology is minimal. Another successful case was in Mamayaque-Canepa of the Santiago Comanina Reserve Zone where fry fish and adult fish of native species are produced for commercial purposes at a reproduction center. The potential for growth is very high.

Table 11: Impacts of Aquatic Resources Subprojects

PNA/Project	Community	Number of Household	Baseline Productivity (kg/yr)	Estimated Productivity in 20 years (kg/year)	Baseline Benefits (S/./yr household)	Estimated Benefits in 20 years (S/./year/ household)
National Reserve Pacaya Samiria		**255.0**	**96,555.4**	**194,946.4**	**474.8**	**764.5**
Management of Taricaya in Nuevo San Jan Community	Nuevo San Juan	26.0	12,480.0	22,381.3	480.0	1,107.1
Management of Aquatic Resources Arahuana-Taricaya in Nueva York Community	Nueva York	40.0	32,000.0	65,026.4	800.0	2,084.9
Management of Aquatic Resources Nueva Esperanza Native Community	Nueva Esperanza	66.0	22,000.0	44,705.7	433.3	880.6
Management of Cocha Iña Yuapa in San Antonio Native Community	S. Antonio	35.0	75.4	911.0	11.1	134.3
Management of Taricaya in Juancito Community	Juancito	10.0	8,000.0	17,216.4	800.0	2,040.4
Management of Aquatic Resources Arahuana-Taricaya in Bretaña Community	Bretaña	78.0	22,000.0	44,705.7	507.7	1,202.9
El Sira Communal Reserve		**80.0**	**159.6**	**346.2**	**159.0**	**4.3**
Management of aquarium fish in Bajo Pachitea	Bajo Pachitea	30.0	12.6	10.2	420.0	2.0
Fish farms in Alto Pichis	Alto Pichis	50.0	147.0	336.0	2.5	40.3
Purús Communal Reserve		**62.0**	**5,180.0**	**10,722.7**	**320.9**	**172.9**
Management of Aquatic Resources for Self-consumption in Gastabala	Gastabala	38.0	2,810.0	5,942.9	221.8	782.0
Management of Aquatic Resources for Self-	San Marcos	24.0	2,370.0	4,779.8	477.8	995.8

consumption in San Marcos						
Santiago Comaina Reserved Zone		**500.0**	**16,485.0**	**148,365.0**	**232.8**	**296.7**
Implementation of Fish Faram in Río Santiago.	Santiago	50.0	1,200.0	10,800.0	170.4	1,533.6
Management of Aquatic Resources in Reservoir in el Alto and Medio Morona	Morona	100.0	1,250.0	11,250.0	87.5	787.5
Implementation of Fish Farms in el Cenepa	Cenepa	50.0	1,885.0	16,965.0	264.2	2,377.7
Implementation of Reproduction Center for Native Fish in Mamayaque de la Cuenca del Cenepa*	Cenepa	200.0	10,000.0 2,000.0	90,000.0 302,000.0	350.0	535.0
Implementation of Fish Farms in Medio Marañón.	Marañon	50.0	1,050.0	9,450.0	155.4	1,398.6
Implementation of Fish Farms in Domingusa.	Domingusa	50.0	1,100.0	9,900.0	162.8	1,465.2
Güeppí Reserved Zone		**145.0**	**33,879.9**	**75,648.5**	**550.2**	**521.7**
Management of Taricaya for Repopulation in Nueva Esperanza and San Martín	Nueva Esperanza y San Martín	49.0	17,200.0	37,015.3	421.2	971.5
Management of Aquatic Resources Arahuana in Sta Teresita, Tejada, Nvo Peneya, Libertad and Zambelín	M,PN,B,PV	36.0	8,000.0	16,256.6	666.7	1,655.1
Management of Aquatic Resources Arahuana in Mashunta, Pto Nuevo, Belén and Puerto Veliz	ST,T,NP,L,Z	44.0	8,129.9	17,426.6	705.0	1,354.2
Management of Aquatic Resources Gamitana in Nueva Angusilla, Soplin Vargas and Bellavista	N.A., S.V., y B.	16.0	550.0	4,950.0	257.8	2,320.3
Total		**1,042.0**	**152,259.9**	**430,028.8**	**335.8**	**1,030.1**

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*Fry fish production (unit= # of fry fish)

Ecotourism and Handicrafts

Although there were only five subprojects in this category, the activities were generally successful. The average baseline income was 615 S/./household. The income after 10 years was calculated by estimating the total increase in production over 20 years and averaged out by year. In Santa Margarita of the Purus Communal Reserve, artisan boats were produced by men in addition to cotton fabric and hammocks produced by women. These boats have created a great demand from nearby communities of Brazil and have a potential to further increase income. In San Bernardo of the Purus Communal Reserve, the activity uses communal farms *(chacras)* to produce wood products such as boats and oars. In Nueva Cajamarca in the Pacaya Samiria Native Reserve, the main products are fabric made from natural cotton and necklaces made with seeds.

There are only two ecotourism projects, both in the Pacaya Samiria Native Reserve. These areas have already seen demands for ecotourism due to their scenic beauty and rich biodiversity. The total number of tourists in both areas increased from 475 to 1,375. This increase was made possible by the increased capacity to accommodate more tourists in the newly constructed lodge, with solar-powered electricity and the provision of sanitary services.

Table 12: Impacts of Ecotourism and Handicrafts Subprojects

subproject	Community	Number of House-holds	Unit	Baseline Productivity	Estimated Productivity in 10 years	Baseline Income (S/./yr/ household)	Estimated Income in 10 years (S/./yr/ Household)
R.N. PACAYA SAMIRIA		**67**				**974**	**3,216**
Community Ecotourism in Lagunas	Lagunas	18	Tourist/ year	340	891	894	894
Artisan Crafts in Nuevo Cajamarca	Nuevo Cajamarca	11	Product/ year	700	1,420	3,545	3,545
Community Ecotourism in San Martin del Tipishca	S. M. Tipishca	38	Tourist/ year	135	484	266	266
R.C. EL SIRA		-				-	-

R.C. PURUS		**100**				**374**	**519**
Implementation of artisan workshop and improvement of communal farms in San Bernardo Community	S.Bernardo	79	Product/ year	158	449	399	399
Implementation of artisan workshop in Santa Margarita Community	Sta. Margarita	21	Product/ year	162	331	280	280
Z.R. SANTIAGO COMAINA		-				-	-
Z.R. GUEPPI		-				-	-
Total		**167**				**615**	**1,601**

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Efficiency

With regard to sustainable production grants, the cost of the total investment was S/. 3.99 millions while the benefits were multifold. It is estimated that the deforestation of 18,777 ha is avoided by introducing sustainable forest management systems. The deforestation rate was 31,281 ha per year before the PIMA project. The estimated carbon content sequestered by the forests managed and expanded under the subprojects totals 2,969 tons of $CO_{2,}$ equivalent per year. Increased forest areas and proper forest management contributed to a substantial decrease in soil erosion in the area. The estimated volume of the avoided erosion was 34,465 tons annually. With a price of US$4.00 per ton and an exchange rate of S/. 3.20, the total value of carbon sequestration is estimated at 38,001 S/./year.

Two successful examples of the subprojects demonstrated that the investments are worthwhile. The NPV of Shebón palm reforestation after 20 years would be $56,469.67 and the IRR is 15%. The NPV of agroforestry systems at 20 years would be $367,201.53 and the IRR is 30%. The results may seem high. However, considering the size of the baseline economic activities and the effect of the investments on the well-being of the local people, even a small return is worthwhile. Considering that soil of similar characteristic costs about 5 S/./ton, local farmers saved 172,327 S/./year.

With reference to the efficiency of the entire project, the total project cost was US$15.8 million (S/. 50.56 million). The project team considered several alternatives at the time of appraisal. Compared to these alternatives, it can be concluded that the project was able to achieve its objectives without incurring a huge cost. Some alternatives were (i) establishing protected areas only under the strictest management regimes, and (ii) a series of GEF medium-sized projects to support activities within the protected areas. By choosing the comanagement of the protected areas, the project avoided displacing the indigenous peoples who reside in the target areas and reduced the pressures over natural resources in the area by offering the alternative of subprojects executed at buffer zones. The decentralization of technical assistance and training, as well as local supervision by ZCC in execution of community subprojects, as opposed to central management from Lima reduced costs considerably; clustering community subprojects by type and region, also produced scale economies.

To face the significant reduction in anticipated cofinancing (see Section 6.7.) at MTR implementation arrangements were modified to reduce costs through(i) decentralization of the activities to the field teams of INRENA in the target zones, using the resources already installed locally and hiring local services for the assessments and studies, (ii) the development of

productive subprojects to utilize existing experiences, instead of investing in new products that require intense research and special assessments, and(iii) clustering community subprojects by type of activity and proximity among communities to gain scale economies

Conclusion

As presented in the previous section on efficiency, the economic analysis, although limited, suggests that the PIMA project has generated positive economic impacts with the least possible cost to the conservation of natural resources of the target areas and to the lives of the local indigenous groups who play an important role in the conservation of these protected areas.

Table 13: Summary of Tangible Benefits of the PIMA Project

Benefit	Component	Amount
Legal Protection of Purus National Park as IUCN Category II	Component 1	2.5 million ha
Legal Protection of Indigenous Reserves as IUCN Category VI	Component 1	826,500 ha
Estimated Avoided Deforestation	Component 2	18,777 ha
Carbon Sequestration	Component 2	2,969 t/CO_2e/year or 38,001 S/./year
Decrease of erosion	Component 2	34,465 t/year or 172,327 S/./year
Freshwater ecosystems under sustainable management	Component 2	329 ha or 3.86 million fish
Demand of thatching met by increased production of palm leaves	Component 2	402 houses/year
Increased productivity under agroforestry systems (30 ha)	Component 2	2.82 times more than monoculture

The scope of this economic analysis is constrained for several reasons: 1) incremental costs were used instead of NPV or ERR at project appraisal; 2) no adequate economic data were collectable for Components 1 and 3, thus making it difficult to obtain the entire benefits of the project; 3) only two sustainable production subprojects could provide enough data for a formal cost-benefit analysis; 3) the impacts of sustainable production activities could be measured because the activities started only toward the end of the project; and 4) the economic benefits of the sustainable production activities were mostly for self-consumption.

The challenge would be for the participants to obtain additional financing at least the recurrent costs of the production such as the supply of seedlings and the maintenance of equipment.

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Carlos Monge	Task Manager		
Gonzalo Castro	Biodivesity Specialist		
Juan Martinez	Social Development Specialist		
Vivian Weiner	Consultant		
Pierre Werbrouck	Sector Leader and TM during and after negotiations		
Carmen Palaco-Nielsen	Procurement Specialist		
Paul Sisk	Financial Management Specialist		
David Varela	Legal Counsel		
Issam Abousleiman	Disbursement Officer		
Hugo Wiener	Financial Analyst		
Santiago Sandoval	Language Team Assistant		
Gary Costello	Project Design Consultant		
Dario Pulgar	Consultant		
Supervision/ICR			
Keisgner De Jesus Alfaro	Sr Procurement Spec.	LCSPT	
Maria E. Castro-Munoz	Sr Social Scientist	LCSSO	Task Team Leader
Olympia Beatriz Icochea	Consultant	LCSHH	
Lourdes Consuelo Linares	Financial Management Specialis	LCSFM	
Patricia Mc Kenzie	Sr Financial Management Specia	OPCFM	
Isabella Micali Drossos	Sr Counsel	LEGLA	
Renan Alberto Poveda	Sr Environmental Spec.	LCSEN	
Grissel Prieto	Language Program Assistant	LCSSD	
Teresa M. Roncal	Operations Analyst	LCSAR	
Luis M. Schwarz	Senior Finance Officer	LOAFC	
Paul Edwin Sisk	Sr Financial Management Specia	SARFM	
Alonso Zarzar Casis	Sr Social Scientist	LCSSO	
Cesar Flores	Consultant		
Olympia Icochea	Consultant		
Keiko Ashida	JPA		
Janice Molina	Language Specialist		
Gabriela Strand	Information Assistant		

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD Thousands (including travel and consultant costs)
Lending		
FY99		29.13
FY00	2	86.74
FY01		33.47
FY02		3.31
FY03		0.00
FY04		0.00
FY05		0.00
FY06		0.00
FY07		0.00
FY08		0.00
Total:	2	152.65
Supervision/ICR		
FY99		0.00
FY00	1	1.85
FY01		0.00
FY02		61.52
FY03		65.46
FY04		60.14
FY05		93.75
FY06		78.41
FY07		88.53
FY08		32.15
Total:	1	481.81

Annex 5. Beneficiary Survey Results

Background and Design: Beneficiary surveys were conducted in four of the target sites during the last quarter of 2006. These surveys were part of a process to systematize the project's lessons learned. A total of 177 persons were surveyed; from this total, about 140 (79%) were project beneficiaries and the rest were other stakeholders including members of grassroots organizations, local and regional authorities, and NGO experts (Table 1). These beneficiaries belong to 60 communities and about 15 grassroots organizations.

Given the wide variation in history and social settings among the sites, the PIU delegated to each CCZ the responsibility to conduct an intensive assessment to systematize the lessons learned (see Table 1 below) using the guidelines prepared for this purpose to: (i) select focal experiences; (ii) identify and sample direct and indirect actors to be interviewed; (iii) analyze available documentation related to the chosen experience; (iv) conduct field work; (v) process data; and (vi) conduct a stakeholder workshop to evaluate and validate the results. The structured questionnaires developed by each CCZ were aimed at gathering information on the following topics:

- Basic information about the beneficiary.
- Beneficiary assessment of the focal experience prior to project implementation.
- Evaluation of project performance/intervention focusing on the suitability of the activities, training provided, adequacy of local participation including women, and support provided by the Field Zone Teams.
- Results/change achieved by the project intervention. The surveys sought to assess perceptions of change both in terms of outputs and local capacity built.
- Lessons learned.

The guideline to systematize the experience was a useful tool to orient the process and particularly the survey. The number of questions varied by the site and the experience assessed. Thus, total questions varied from 9 to 15 open-choice answers. The interview was conducted in Spanish because is a common language to most of the beneficiaries, thus avoiding the use of multiple translators. In Santiago-Comaina the survey was not carried out because the zone team was still fully concentrated on activities related to categorization and addressing the demands of productive projects. The systematization process they conducted did not include outputs from beneficiary surveys.

Table 1:

Site	Focal Experience Assessed	Number of Interviewed Beneficiaries/Stakeholders		
		Men	Women	Total
Pacaya-Samiria	• Community Surveillance System • Participatory Management with Leoncio Prado Community	71	12	80
Güeppi	• Categorization of Protected Areas • Community Surveillance System	25	6	31
Purus	• Categorizing of Protected Areas • Community Surveillance System • Productive Projects	44	7	51
Sira	• Participatory Planning • Community Surveillance System • Productive Projects • Strengthening of Local Capacities	13	2	15
	Total			177

Main Findings:

All sites considered the Community Surveillance System an important experience to be assessed. This was followed by the process of categorizing protected areas and the application of productive projects (two sites each). Finally, there were experiences of particular interest to the target site.

The application of Community Surveillance Systems to prevent encroachment and resource deterioration was highly regarded by the beneficiaries (70%–80%). Thus, 67%–100% acknowledged that prior to project intervention there was illegal extraction of forests and aquatic resources. Local communities were involved in some forms of active control (40%–67%) but lacked institutional support from a governmental institution. The IANP, through the project, met this need. People acknowledged that the project provided training and equipment to increase surveillance (40%–100%). However, they also considered that these inputs were not enough to cover all critical areas. Beneficiaries also indicated that the community surveillance system helped to decrease illegal extraction and prevent natural resource depletion (67%–100%). As a lesson learned they identified the need to increase training, embark on a more aggressive media campaign to deter intrusions, and implement newly identified guard posts.

The beneficiaries reported that they were aware of the categorization process (Purus and Güeppi). Around 80% of those interviewed stated that they have participated in meetings relating to the categorization of protected areas. In Purus, 84% agreed with the achieved result while in Güeppi there is total consensus on the proposed categories. The perception of benefits due to final categorization is about 66% in Purus. People responding negatively indicated that their situation remained the same with the new protected areas while those who responded affirmatively indicated that the park and reserve were helping to avoid loggers, protect their resources, give opportunities to build local capacities for managing natural resources such as river turtles, and create a good opportunity to receive tourists.

Productive projects were also highly appreciated by the beneficiaries. The responses indicated that 53%–94% considered this activity very important because it was generating benefits for their communities. Moreover, 80% of the beneficiaries stated that they actively participated in the design of the project. They also affirmed that the project increased their capacity to design and manage this type of initiative. However, they requested more training in other complementary activities. The case of the Leoncio Prado Community (Pacaya-Samiria National Reserve) illustrates the value of productive projects as a means to resolve conflicts over natural resource use. Strategically located, this community has been the center of conflicts with the Reserve Administration. The project was an opportunity for the administration to identify productive projects that can meet local needs and conservation objectives. Thus, four projects were designed and implemented. The survey showed that 65% of the 24 interviewees perceived benefits from the implemented project (creating job opportunities, providing training, generating income); furthermore, it created a friendly relationship with the Reserve Administration and promoted a better attitude toward biodiversity conservation. It is important to note that 58%–66% of beneficiaries felt that they can sustain the projects without external intervention because they are better organized and have the necessary training. People who responded negatively claimed that they still need technical assistance to resolve problems that may arise in the near future.

Overall, the surveys corroborated the positive judgment on the implemented strategies and results. Beneficiaries confirmed the positive effect on biodiversity conservation from the encouragement of local participation, training, the strengthening of community organization, and the provision of ecologically sound alternatives to the inadequate use of natural resources.

Annex 6. Stakeholders' Workshop Report and Results

Two Stakeholders' Workshops were held in December 2006 (Pacaya-Samiria and Güeppi) and another one in March 2007 (El Sira). These workshops brought together representatives of beneficiaries, their grassroots organizations, local and regional authorities, social researchers, and NGOs linked to the target areas. Most of the participants were also members of their respective PAMC. These workshops aimed at assessing project results, impacts, and lessons learned. Forty-eight people attended the Pacaya-Samiria workshop; 38 people participated in the Güeppi event; and 43 attended El Sira workshop.

Exhaustive reports were produced, detailing the analysis of the results and lessons learned. These events were a long-awaited opportunity to share ideas on problems and limitations encountered during implementation, validated the results from beneficiary surveys, and gathered recommendations. The principal findings of the workshops may be summarized as follows:

Pacaya-Samiria National Reserve:

The project highlighted the benefit obtained from a State–civil society partnership, particularly with local communities. The Communal Surveillance Systems proved to be an adequate tool to improve biodiversity conservation. Along this line, productive projects emerged as important complements to control communal surveillance activities. For this purpose, building local capacities and acknowledging community efforts to protect their environment should be included by future projects to assure project sustainability.

Güeppi Reserve Zone:

The State is ultimately responsible for resource conservation. However, it has a good ally in local communities. Thus, the community surveillance system was both a means to improve resource control and increase interest and local participation to protect biological diversity. Taking into account indigenous interest in the categorization process, it is a time-consuming process; however, it produces better results because it creates solid constituencies in the protected areas.

Sira Communal Reserve:

The systematization of lessons learned emphasized that conservation of natural resources is a prime objective within local communities around the Sira Communal Reserve. The transparent flow of information to the communities proved to be an effective way to build trust between project personnel and local people. Following a strategy to approach the communities and their organizations based on intercultural dialogue was the basis to develop comanagement mechanisms that were later extended to other project sites. The participants agreed that these comanagement mechanisms had a positive effect on strengthening ECOSISA (the indigenous organization that signed the agreement with IANP to manage the Sira Communal Reserve), as demonstrated by the key role played during the preparation of Sira's Master Plan.

Annex 7. Summary of Borrower's ICR

El presente documento es un resumen de la evaluación del INRENA como ejecutor del proyecto "Participación de las Comunidades Nativas en el Manejo de las Áreas Naturales Protegidas de la Amazonía Peruana" - PIMA, los aspectos tratados están relacionados al diseño y la implementación del proyecto y a las lecciones aprendidas durante su implementación.

1. Cumplimiento de los objetivos del proyecto

Se ha evaluado el cumplimiento de los objetivos de proyecto según los indicadores establecidos en el marco lógico del proyecto: i) La pérdida de la biodiversidad esta detenida en cinco áreas del proyecto y ii) Los pueblos nativos co-administran las áreas naturales protegidas en cinco zonas a través de su participación en los correspondientes Comités de Gestión de sus Áreas Naturales Protegidas. Para el cumplimiento del Indicador 1 se han establecido los siguientes criterios indirectos i)creación de áreas naturales protegidas con estatus de protección legal definitiva, ii)representatividad de la biodiversidad en las ANP establecidas con categoría definitiva, iii)impactos ambientales positivos de la ejecución de los proyectos productivos y las iv)propuestas de las áreas naturales protegidas por establecerse.

1.1 Establecimiento definitivo de Áreas Naturales Protegidas

El aumento de la cobertura de protección legal ha sido positiva, sumándose al SINANPE un total de 2 599,171.00 has. correspondientes a la categoría II de la UICN, y 921,414.09 has. correspondientes a la categoría VI de la UICN, áreas que son creadas para ser comanejadas por las comunidades indígenas beneficiarias.

a) Representatividad de la biodiversidad en las ANP establecidas con categoría definitiva
De cuerdo a la Estrategia Nacional para las Áreas Naturales Protegidas del SINANPE – Plan Director (1999), se han identificado en el Perú 31 zonas prioritarias para conservación de diversidad biológica, entre las que encontramos la zona 20: Cordillera del Sira, la zona 28: Alto Purús y la zona 2: Cordillera del Cóndor, las cuales han sido cubiertas con la creación de la Reserva Comunal el Sira; el Parque Nacional Alto Purús y la Reserva Comunal Purús y el Parque Nacional Ichigkat Muja Cordillera del Cóndor y la Reserva Comunal Tuntanait.

Asimismo, se establecieron sobre Áreas de Aves Endémicas EBA (Endemic Bird Areas)[4], los Andes Tropicales "Hotspots de biodiversidad andes tropicales" y de la ecorregión Yungas Peruanas[5] ó "bosques montanos de la vertiente oriental de los andes peruanos" en los que encontramos especies endémicas del país y en peligro de extinción.

b) Evaluación de los impactos ambientales de los proyectos productivos
Los 43 proyectos productivos han sido elaborados buscando generar impactos ambientales positivos como repoblamiento de flora y fauna, disminución de la erosión, captura de carbono, disminución de la deforestación, entre otros.

[4] De acuerdo a clasificación de Birdlife Internacional

[5] Dinerstein et al 1995.

De los cálculos realizados para evaluar los impactos ambientales positivos se ha proyectado en 18777.0 ha la superficie que se dejaría de intervenir, tanto dentro como fuera de las ANP ya que se estaría utilizando las especies reforestadas y manejadas. Con la disminución de la erosión anual de los suelos estimada en 34 465 ton se mantiene la fertilidad y calidad de sitio que influye directamente en una mayor productividad si hablamos de cultivos asociados y de recuperación de flora y fauna silvestre y para el caso de la captura de carbono se ha estimado una captación de CO^2 de 2 969 toneladas anuales en 713 ha.

Por otro lado los impactos positivos de los 20 proyectos con recursos hidrobiológicos que abarcan 345 ha. de espejo de agua de piscigranjas y cochas manejadas, se ha calculado se dejen de extraer estos recursos de 775 ha de espejo de agua con lo cual se espera lograr contribuir al repoblamiento de peces y quelonios, disminución de la depredación de los recursos hidrobiológicos, disminución de la eutrofización, y mejora de la dieta alimenticia de las comunidades beneficiarias

La evaluación de los criterios definidos nos permiten concluir que el establecimiento de las áreas naturales protegidas en zona de alta diversidad de especies de flora y fauna silvestre amenazadas y endémicas y cubriendo parte de la Ecorregión Andes Tropicales y de las Yungas Peruanas, la generación de impactos ambientales positivos a través de la ejecución de los proyectos productivos han contribuido a detener la pérdida de cobertura vegetal por lo que la implementación del proyecto ha favorecido la conservación de la diversidad biológica en la Amazonía Peruana.

Si bien existen experiencias nacionales que han aplicado diversas formas de participación, la participación directa y organizada de las comunidades indígenas en la gestión de áreas naturales protegidas es relativamente reciente. Fue en el año 2001 cuando se impulsó un nuevo enfoque en la relación Estado- áreas naturales protegidas-comunidades indígenas , a través de la "Mesa de Diálogo y Cooperación para las Comunidades Nativas" creada mediante Decreto Supremo Nº 015-2001-PCM encargado al INRENA y al ese entonces SETAI (Secretaría Técnica de Asuntos Indígenas) ahora INDEPA. El resultado de dicho esfuerzo fue la definición de un "Plan de Acción para los Asuntos Prioritarios de las Comunidades Nativas de la Amazonía" que entre sus diferentes temas presentó recomendaciones para ser incorporadas en el Reglamento de la Ley de Áreas Naturales Protegidas.[6]

Para la evaluación del cumplimiento del presente indicador se han identificado los siguientes criterios: a) desarrollo de instrumentos legales, b) desarrollo de proceso y de espacios de participación, c) Formalización de mecanismos de participación y d) Condiciones necesarias para la gestión de las ANP.

c) Desarrollo Normativo

La incorporación de la participación indígena en el manejo de las áreas naturales protegidas se establece en el Reglamento de la Ley de Áreas Naturales Protegidas aprobado mediante Decreto Supremo Nº 038-2001-AG con fecha 22 de junio de 2001, el que en sus artículos reconoce los derechos como el consentimiento informado previo para el establecimiento de áreas naturales protegidas sobre tierras tituladas de comunidades, el respeto a los usos ancestrales de las poblaciones locales y comunidades campesinas o nativas, el derechos de los pueblos en

[6] INRENA.2006. Áreas Naturales Protegidas del Perú Informe Nacional 2005.Lima.

aislamiento voluntario y el manejo participativo estableciendo el Régimen Especial para la Administración de Reservas Comunales, generando condiciones políticas y legales para construir las bases del comanejo con comunidades indígenas y por ende la implementación del proyecto PIMA.

En el marco de la implementación del Proyecto PIMA y teniendo como principales insumos las experiencias de procesos participativos desarrollados en la Reserva Comunal el Sira, la IANP en el año 2002 inicia la elaboración de una propuesta del Régimen Especial y lidera un proceso de consulta con el conjunto de representantes de las organizaciones indígenas, conservacionistas, especialistas y la sociedad civil. En el año 2005 se aprueba a través de la Resolución de Intendencia Nº 019-2005-IANP-INRENA el "Régimen Especial para la Administración de Reservas Comunales". La característica y profundidad de este proceso son únicas en Perú y en Latino América por haberse construido y consultado descentralizadamente con todos los interesados, con este proceso se marca el hito para el comanejo de las áreas naturales protegidas.

d) Desarrollo de procesos y espacios de participación
De las seis áreas naturales protegidas involucradas en el proyecto, la Reserva Nacional Pacaya Samiria en respuesta a las necesidades imperantes para el control y vigilancia y con el apoyo de otros proyectos inicio hace muchos años el trabajo participativo con los grupos de manejo de recursos, principalmente hidrobiológicos. En las otras áreas naturales protegidas involucradas en el proyecto, creadas a finales de la década de los noventa, es en el marco de proyecto PIMA, que se iniciaron los procesos de planificación y gestión que permitieron implementar conceptos, herramientas y metodologías participativas e interculturales, los cuáles en algunas ANP se vieron complementados con otros esfuerzos de la cooperación internacional. Estos procesos y espacios de participación dependieron de una u otra forma de las características político/sociales de los actores, de la dinámica de la gestión de las ANP, del liderazgo de cada Jefatura y de las políticas y estrategias nacionales que enmarcaron estos procesos.

En este contexto, a fin de realizar un análisis cualitativo para medir los niveles de participación en la gestión de estas ANP durante la implementación del proyecto se ha elaborado una matriz de evaluación que presenta dos entradas: procesos y espacios de participación implementados en el marco del proyecto versus las áreas naturales protegidas e identificado cuatro niveles de participación: i)sin información, ii)con información, iii)consulta y iv)consenso y compromiso como se presenta en el Anexo Nº 04. Matriz de evaluación de la conservación participativa de la biodiversidad con comunidades

Como resultado de esta evaluación se concluye que los niveles de participación de las comunidades en la gestión de las áreas naturales protegidas involucradas en el proyecto PIMA se han dado al nivel de consulta y de consensos pudiéndose resaltar tres casos: i)el proceso para la conformación del contrato de la Reserva Comunal el Sira – ECOSIRA y la elaboración del Plan Maestro por sus características han significado que en esta área natural protegida se han dado mayores avances en el diseño y construcción del modelo de conservación participativa con comunidades, concretándose a través de la coadministración del área natural protegida con el Estado. ii)los procesos de categorización de las áreas naturales protegidas los cuales se han desarrollado con la población y sus organizaciones representativas han tenido como su principal característica la búsqueda de consensos y acuerdos como ejemplo se puede mencionar el Decreto Supremo de la creación del Parque Nacional Alto Purus que hace explicito el reconocimiento de los derechos indígenas en aislamiento voluntario y iii) Los proyectos productivos realizados con las comunidades indígenas donde debemos resaltar su participación desde su planificación hasta la responsabilidad de la ejecución, en este marco en la Reserva Nacional Pacaya Samiria, retomando los esfuerzos de otros proyectos, e instituciones, el PIMA ha podido formalizar los

acuerdos de aprovechamiento para la vigilancia comunal y los permisos para desarrollar actividades menores al interior del área natural protegida, siendo esta área natural protegida un ejemplo a seguir en cuanto a estas experiencias.

Respecto a los espacios de participación debemos mencionar la importante función del Comité de Coordinación Zonal (CCZ) para la implementación del proyecto donde principalmente se tomaron decisiones acerca del otorgamiento de becas y pasantías y la selección de los proyectos productivos, luego este espacio de participación es absorbido por el Comité de Gestión de las Áreas Naturales Protegidas.

e) Formalización de mecanismos de participación
El desarrollo de la normatividad y los resultados de los procesos de construcción de consensos se consolidaron con la firma del Contrato de Administración de la Reserva Comunal el Sira, el 18 de diciembre del 2006, conjuntamente con el de la Reserva Comunal Yanesha y la Reserva Comunal Amarakaeri, existiendo actualmente un efecto cadena en las otras Reservas Comunales y viene significando un gran reto para el SINANPE.

f) Condiciones necesarias para la gestión de las 06 áreas naturales protegidas (julio 2001-julio 2006)
La IANP como parte de las herramientas para le monitoreo a la gestión de las ANP del SINANPE ha diseñado la matriz que mide las condiciones necesarias para la gestión de las ANP, la cuál identifica como principales criterios de evaluación los aspectos administrativo, legales, institucionales y de manejo del ANP, sin embargo este último no presenta criterios limitados para la evaluación de la gestión participativa.

Los resultados de la corrida de la matriz desde el año 2001 al 2006 nos indican lo siguiente con respecto a cada ANP del proyecto; la Reserva Nacional Pacaya Samiria, en la que intervienen un conjunto de proyectos estaría muy próxima a alcanzar las condiciones óptimas, es decir a contar con todos los medios para un manejo efectivo del ANP, la Zona Reservada Santiago Comaina, la Zona Reservada Güeppí, la Reserva Comunal el Sira, el Parque Nacional Alto Purús y la Reserva Comunal Purús posee ciertos recursos y medios que son indispensables para su manejo relacionados principalmente a herramientas de planificación y gestión participativa, pero aún les faltan muchos elementos para alcanzar un nivel mínimo aceptable.

De acuerdo a los criterios de evaluación seleccionados para el presente indicador se concluye que el proyecto ha trascendido sobre las expectativas de involucrar en el manejo de las áreas naturales protegidas a las comunidades indígenas, sentando las bases para la co administración y convirtiéndose en un reto el modelo de conservación participativa de la biodiversidad con comunidades a ser institucionalizado en el SINANPE.

2. Evaluación del diseño del proyecto

2.1 Manejo del ciclo del proyecto

El ciclo del proyecto es uno de los enfoques metodológicos mas utilizados por la mayor parte de organizaciones para la gestión del proceso de programación, identificación, formulación, implementación y evaluación de proyectos.

a) La fase de programación y de identificación del ciclo del proyecto, en el caso del proyecto PIMA se refiere a las negociaciones y firma del acuerdo con el GEF y el Banco Mundial para el financiamiento del proyecto.

b) La fase de formulación del proyecto, se refiere al desarrollo del Bloque B del proyecto, el que se desarrollo en consulta con los beneficiarios sin embargo la forma de intervención y los alcances de los acuerdos tomados en esta etapa como por ejemplo la definición de categorías de ANP por establecerse, entre otros, generaron expectativas distorsionadas y sobre dimensionadas de los alcances del proyecto. En esta etapa, el proyecto PIMA no fue incluido en el Sistema Nacional de Proyectos de Inversión, debido a los vacíos con el tema de donaciones lo que ha generado problemas de contrapartida durante su ejecución.

c) La fase de implementación, diseñada para estar a cargo de una unidad ejecutora dentro del INRENA y con 05 unidades desconcentradas llamadas Unidades Técnicas Zonales y que a su vez eran las Jefaturas de las ANP. Asimismo, a fin de generar un espacio de rendición de cuentas apropiado con otros representantes de instituciones públicas y la sociedad civil principalmente con las organizaciones indígenas nacionales se conformo el Comité Directivo del proyecto encargado de la conducción del mismo.

d) Evaluación del proyecto, si bien es cierto el sistema de monitoreo y evaluación del proyecto ha sido implementado limitadamente por que rebasó las capacidades financieras y operativas del mismo, las Jefaturas de las Áreas Naturales protegidas y la IANP promovieron la evaluación del proyecto teniendo como principales criterios la ejecución presupuestal y las estrategias de intervención. En este contexto, la principal evaluación se dio a medio término del proyecto durante la evaluación del Banco Mundial.

2.2 Pertinencia del proyecto

Conceptual, el proyecto presenta como objetivo a la participación como estrategia fundamental para la conservación de la diversidad biológica, buscando la eficacia en la gestión de las áreas naturales protegidas. *Entendiéndose que la participación como proceso social debe apuntar a resolver las necesidades fundamentales del individuo. La participación es un derecho humano fundamental que debe ser aceptado y promovido tanto como herramienta cuanto como finalidad de la democracia.*[7]En este sentido, el marco conceptual del diseño del proyecto busca generar las bases para construir ciudadanía y aportar a la gobernanza del SINANPE a través de la gestión participativa y el comanejo.

El proyecto encierra una propuesta de cambio integral (enfoque ecosistémico) que relaciona las actividades humanas con el funcionamiento de la naturaleza, que sienta las bases para el desarrollo de modelos de gestión de áreas naturales protegidas distintos integrados a la realidad ambiental, social y económica y que contribuyan al desarrollo sostenible regional. Para generar espacios de participación, no solo en la gestión de las ANP sino también en la implementación del proyecto se consideró la conformación de diferentes estructuras formales (establecidas en la normatividad) y no formales, así como agentes de cambio como los promotores indígenas que permitió la activa y real participación indígena a nivel de comunidad, organizaciones locales, regionales y nacionales en la ejecución del proyecto y durante la planificación y gestión participativa de las ANP.

[7] Rivas, Á., A. López, G. Mosquera y T. Granizo.2006. Participación Social en el Manejo de Áreas Protegidas/Distribución de Beneficios generados por la Conservación de las Áreas Naturales protegidas. Una sistematización de las reflexiones del Taller Regional organizado por The Nature Conservancy, 28 al 30 de junio del 2005. Quito.

2.3 Estructura organizativa para la ejecución técnica y administrativa

En el diseño del proyecto PIMA, el INRENA es el responsable técnico y administrativo del proyecto y considera una unidad ejecutora del proyecto en INRENA conformada por un equipo de proyecto central y cinco equipos de proyecto de campo los que a su vez son las Jefaturas de las ANP. En este diseño también se concibió que la ejecución administrativa del proyecto se diera a través de esta Unidad Ejecutora.

Asimismo, en el diseño del proyecto se concibió que el equipo de apoyo para la ejecución del proyecto se incorpore como equipo de especialistas de la IANP, no estando considerados como parte de la Unidad Técnica Central (Ejecutora) ya que se esperaba dotar al ente rector de capacidades para la gestión participativa con comunidades indígenas.

3. Evaluación de la ejecución del proyecto

3.1 Eficiencia

a) *Eficiencia de la implementación del proyecto*, el proyecto PIMA en los inicios de su ejecución presentó problemas de ejecución presupuestal sin embargo en los últimos tres años logró equilibrar su nivel de gasto. Asimismo, se ha cumplido con el tiempo programado para la ejecución del proyecto, existiendo una ampliación del mismo por cinco meses a fin de garantizar el logro de los resultados con mejor calidad. Por otro lado, respecto al cumplimiento de metas si ha ejecutado al 100% en algunos casos ha sobrepasado las metas establecidas en el marco lógico del proyecto.

b) *Eficiencia de la ejecución técnica y administrativa*, el proyecto PIMA ha tenido como responsable de su ejecución al INRENA, por la concepción del proyecto era necesario el fortalecimiento institucional para la construcción de confianza y la generación de alianzas estratégicas con las comunidades indígenas, en este sentido debido a la experiencia institucional generada por años como ente rector del SINANPE ha resultado de vital importancia y trascendencia su ejecución por el INRENA a través de una unidad ejecutora y de las Jefaturas de las ANP, lográndose la presencia institucional y el fortalecimiento institucional mínimo para llevar cabo proceso de construcción de ciudadanía y generación de condiciones para la gobernanza ambiental como los llevados a cabo.

El proyecto fue diseñado para ser administrado por una unidad ejecutora del INRENA, con el cambio de gobierno y políticas se decidió hacer un contrato con PROFONANPE para la administración del proyecto. Esta decisión probó ser positiva, dado que el PROFONANPE había tenido experiencias de ejecución de fondos GEF y otros de cooperación internacional. El aspecto negativo ha sido que el INRENA perdió la oportunidad de fortalecer sus capacidades para la administración, por lo que su experiencia y aprendizaje para la ejecución de este tipo de proyectos se ha visto limitado.

3.2 Las funciones de la gestión

a) *Planificación*, los Planes Operativos Anuales (POA) del proyecto tuvieron como base las propuestas de cada área natural protegida en el marco de los objetivos del proyecto y elaborados con los Comités de Coordinación Zonal, (conformados por representantes indígenas para la

implementación del proyecto), la Unidad Ejecutora realizaba la compilación y organización de estos POA para el logro de los objetivos del proyecto, para luego ser presentado a la IANP para su revisión y presentación ante el Comité Directivo de Proyecto para su respectiva aprobación. Además de los POA el proyecto contó con documentos de planificación que fueron complementados con estrategias específicas como la de capacitación y la de interacción con organizaciones indígenas, que fueron requeridos por el Comité Directivo. Todo este proceso significó que los tiempos para la aprobación del POA del proyecto se extendieran más de lo programado

b) *Ejecutar los gastos*, la ejecución del proyecto depende de un ciclo financiero que debería garantizar que los fondos de la donación y contrapartida estén oportunamente en el lugar indicado para la ejecución de las actividades, además de contar con procesos transparentes.

Para completar el ciclo financiero del proyecto se requiere coordinar oportunamente con el Ministerio de Economía y Finanzas, el INRENA, el Banco Mundial, el PROFONANPE y la ejecución local a través de las Unidades Técnicas Zonales del proyecto ó Jefaturas de las ANP. El conjunto de estas medidas, que obedece a intereses institucionales distintos, con propósitos como ordenar y hacer una previsión del gasto fiscal o lograr transparencia en la gestión, hace que las posibilidades de coordinaciones eficientes sean muy limitadas y que la regla sea más bien la incertidumbre, sin que ello dependa generalmente de la administración del proyecto, sino de la normatividad vigente y los métodos seleccionados para la ejecución. En consecuencia la ejecución del proyecto sufrió constantemente de interrupciones y retrasos, que tuvieron su impacto en algunas de las metas, que fueron modificadas y en los contratos que tuvieron que adecuarse, aunque ello no implicó nunca la esencia del proyecto. Por otro lado, desde el punto de vista de la ejecución el sistema tiene también complicaciones que son inherentes al hecho de que quien paga, quien aprueba el gasto y quien formula la necesidad son tres personas distintas carentes de un procedimiento fácil que unifique el accionar.

Otro aspecto importante de mencionar es el rol del PROFONANPE, quien para la dimensión del proyecto y como encargado de la ejecución administrativa de otros proyectos sobrepaso sus capacidades, optándose por apoyar con la contratación de personal especifico para el proyecto PIMA. Por otro lado, el PROFONANPE aportó con su experiencia de haber ejecutado fondos GEF, contratando profesionales con experiencia en este tipo de ejecución y apoyando a detectar problemas administrativos y a prevenirlos. Sin embargo a pesar de los esfuerzos realizados no se logró en su oportunidad la compra de bienes y contratación de servicios lo que finalmente pudo ser regularizado.

c) *Seguimiento y evaluación*, el proyecto planteó un sistema de monitoreo y seguimiento no pudiéndose levantar todos los datos por la complejidad del accionar del proyecto y las limitaciones financieras y operativas para la realización de esta actividad. Sin embargo, se realizaron ajustes de metas aprobadas en las misiones de evaluación identificándose las que no son aplicables y priorizándose las metas que en ningún caso afectaron el cumplimiento de los objetivos del proyecto.

d) Eficacia y Efectividad, para el logro de los objetivos y metas del PIMA, la ejecución del proyecto requeriría del fortalecimiento de las capacidades de gestión, administración y operación del INRENA y más propiamente de la Intendencia de Áreas Naturales Protegidas (IANP), debido a la integración de la gestión de nuevas ANP al SINANPE, la administración de la donación y la coordinación de los equipos operativos. Para este fin se dispuso como condición de efectividad la creación de una unidad ejecutora a nivel central y unidades regionales que fueron las Jefaturas de las ANP para la ejecución del proyecto y realizar la vinculación permanente con las poblaciones y comunidades involucradas.

Respecto al fortalecimiento de la IANP se optó por la contratación de coordinadores de ANP que en toda la ejecución del proyecto han cumplido un rol de nexo entre las actividades del proyecto, las políticas y estrategias de la IANP y la realidad de la ANP, se considera por una lado una decisión positiva porque permitió incorporar experiencias de otros procesos de planificación y gestión de ANP del SINANPE al accionar del PIMA así como también permitió trasladar a otras áreas del SINANPE la experiencia de manejo participativo, co manejo, monitoreo participativo ,entre otros. Sin embargo, el realizar la doble función generó una recarga de trabajo que a veces desbordó las capacidades humanas para el cumplimiento de las funciones encargadas. En este punto es importante mencionar que la decisión de que los otros especialistas a contratar como sociales y legales no se hayan incorporado a la IANP y conformen parte de la UTC ha sido una perdida de oportunidad para contribuir al fortalecimiento del ente rector.

Por otro lado, un aspecto a resaltar respecto a la estructura orgánica de la UTC del proyecto fue la incorporación de los enlaces indígenas, los cuales cumplieron un papel de interlocución entre las organizaciones indígenas y el ejecutor del Proyecto PIMA. De hecho, las personas que ocupan estas posiciones han sido propuestas directamente por las dos organizaciones indígenas nacionales representativas de la Amazonía, como son AIDESEP y la CONAP.

Autoevaluacion del INRENA Como Ejecutor del Proyecto

La ejecución del proyecto significo una sobre exigencia a la IANP, en aspectos sociales, ambientales, administrativos, operativos y de capacidades humanas para la gestión de las áreas naturales protegidas, sin embargo su capacidad de respuesta estuvo basada principalmente en la experiencia del personal de campo, experiencia institucional en trabajos participativos, en la incorporación de capacidades y experiencias de otros proyectos a través de los coordinadores de ANP y personal directivo de la IANP encargado de monitorear las actividades del proyecto y el soporte técnico – administrativo del PIMA. En este marco se han identificado un conjunto de lecciones aprendidas entre las que tenemos las siguientes:

1. Elaboración e implementación

Los procesos de elaboración e implementación de un proyecto deben tener una mayor interrelación por lo que un aspecto importante es capitalizar las experiencias obtenidas durante el proceso de diseño.

2. Organización presupuestal

En relación al aspecto presupuestal es importante la incorporación de los proyectos en el marco del Sistema Nacional de Presupuesto Público tanto en Gastos Corrientes como en el Sistema Nacional de Inversión Pública con la finalidad de garantizar su ejecución con el cumplimiento adecuado de la contrapartida así como su sostenibilidad. En este sentido, en la etapa de formulación e inicio del proyecto el Estado Peruano estaba construyendo este sistema dificultándose su aplicación principalmente al tratarse de una donación.

3. Implementación del proyecto

Relacionado a la conformación de los equipos para la ejecución del proyecto, una dificultad que se ha tenido es la selección de cuadros técnicos que permitan una ejecución eficiente y eficaz del proyecto por su experiencia en los temas, en este sentido por ser un tema nuevo ha sido muy limitado la opción de encontrar estos profesionales, por lo que es importante evaluar la contratación de profesionales de otros países y mejorar los procedimientos para selección de personal.

Como se ha mencionado en los párrafos anteriores la ejecución del proyecto tenia muchos profesionales nuevos en el tema de gestión de áreas naturales protegidas y su normatividad por lo que es necesario planificar en las actividades de proyectos innovadores un proceso de inducción a todo el personal orientando de forma y aporte profesional para los objetivos del proyecto y las políticas institucionales.

Respecto a la contratación de consultorías especializadas, como producto de la experiencia obtenida se considera que para la ejecución de actividades se debe analizar las características de la intervención que pueda definir si se ejecuta a través de un tercero o se fortalece el equipo con la contratación de consultores individuales, para el presente proyecto considerando la necesidad de construir procesos participativos se ha tenido mejores resultados con la contratación de consultores individuales que permitan la conformación de equipos técnicos que puedan involucrarse y vivir en las áreas donde se realiza el trabajo.

Respecto al Monitoreo y Evaluación del proyecto, la Intendencia a través de las Direcciones de Planificación y la Dirección de Operaciones han realizado el seguimiento a la ejecución del proyecto sin embargo es importante fortalecer y sistematizar esta actividad de forma que nos permita tomar mas acciones preventivas que correctivas. Se considera de vital importancia definir una estrategia de intervención del proyecto, con una línea base que permita ir monitoreando el resultado de esta intervención. Asimismo, en el tema de monitoreo y evaluación es necesario medir los indicadores relacionados a la conservación de la diversidad biológica que nos permitan establecer la relación ente las estrategias de participación y su contribución a la conservación de la diversidad biológica.

Por otro lado, considerando la riqueza de los aprendizajes durante la ejecución de proyectos como el PIMA es importante institucionalizar la practica de sistematización de experiencias que apoya a la capitalización de las experiencias y construcción de conocimientos.

Una de las fortalezas aprendidas en los procesos participativos es haber expresado con claridad y transparencia los conceptos de conservación y gestión de áreas naturales protegidas y paralelamente ir construyendo con todos los niveles de representación indígena las bases para el comanejo reflejado en el Régimen Especial de Reservas Comunales, lo que viene permitiendo dar legitimidad a este modelo de gestión.

Respecto a los cambios institucionales, durante a implementación del proyecto de forma resumida podemos mencionar que ha existido cuatro administraciones diferentes del INRENA, tres

diferentes Intendentes de Áreas Naturales Protegidas y tres Jefes del Proyecto no habiendo cambios desfavorables para su ejecución respecto a sus principales líneas y estrategias. La existencia del PAD del proyecto y la permanencia del equipo técnico de la IANP y las Jefaturas de las ANP permitió que no existieran desajustes temporales ni contradicciones durante su ejecución.

Se han desarrollado capacidades de diálogo intercultural, existiendo en el mismo equipo de profesionales condiciones mixtas, mientras algunos tenían experiencia y aptitud para la concepción y ejecución de un proyecto intercultural, en otros casos, se encontraron resistencias fuertes al modelo de conservación participativa con comunidades indígenas, o carencia de experiencia en negociaciones con organizaciones indígenas. Por ello, para poder ejecutar el proyecto la IANP tuvo que construir y fortalecer su capacidad de diálogo intercultural, incorporando a sus equipos a profesionales indígenas y enlaces indígenas como nexos o agentes de cambio que permitiría el trabajo con las organizaciones nacionales y regionales. Parte de generar este dialogo en los diferentes procesos y espacios de participación entonces evidenció la importancia de incorporar a promotores indígenas y técnicos indígenas como personal de apoyo, sin cuyos aportes no se hubieran podido marcar la diferencia durante la implementación del proyecto. Sin embargo, se considera aún que se tiene que poner mayor énfasis en los procesos de planificación y gestión en el tema de interculturalidad.

Finalmente, y lo mas importante como principal lección es la satisfacción obtenida durante la implementación del proyecto que ha permitido valorar la capacidad y compromiso de las comunidades indígenas que están directamente relacionadas con las áreas para desplegar su fortaleza a favor de su visión de desarrollo y de la conservación de la diversidad biológica que nos animan a continuar generando esfuerzos para continuar con esta alianza estratégica para la conservación y desarrollo sostenible bajo el modelo del comanejo y que consideramos es el mayor legado de la ejecución del proyecto PIMA.

Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders

Not Applicable

Annex 9. List of Supporting Documents

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