

**Document of
The World Bank**

Report No: ICR0000433

**IMPLEMENTATION COMPLETION AND RESULTS REPORT
(Loan No 4557, GEF Grant No. TF- 23681)**

ON A

LOAN

IN THE AMOUNT OF
US\$32.6 MILLION

AND A

GLOBAL ENVIRONMENTAL FACILITY TRUST FUND GRANT

IN THE AMOUNT OF US\$8.0 MILLION

TO THE

REPUBLIC OF COSTA RICA

FOR THE

ECOMARKETS PROJECT

February 9, 2007

Sustainable Development Sector Management Unit
Central America Country Management Unit
Latin America and the Caribbean Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective November 2, 2006)

Currency Unit = Costa Rican Colon
CRC 1.00 = US\$ 0.002
US\$ 1.00 = CRC 514.82

FISCAL YEAR

January 1 – December 31

Acronyms and Abbreviations

ACLAC	La Amistad-Caribe Conservation Area
ACOSA	Osa Conservation Area
ASANA	Friends of Nature Association (<i>Asociación Amigos de la Naturaleza</i>)
ASIREA	Industry and Reforestation Association of the Atlantic Region (<i>Asociación de Industriales y Reforestadores de la Región Atlántica</i>)
CAS	Country Assistance Strategy
CATIE	Tropical Agricultural Research and Higher Education Center (<i>Centro Agronómico Tropical de Investigación y Enseñanza</i>)
CBD	Convention on Biological Diversity
CCAD	Central American Commission on Environment and Development (<i>Comisión Centroamericana de Ambiente y Desarrollo</i>)
CDM	Clean Development Mechanism
CGE	Computable general equilibrium
CI	Conservation International
COOPEAGRI	Agri-Industrial Cooperative (<i>Cooperativa Agrícola Industrial y de Servicios Múltiples</i>)
CR	Costa Rica
CSA	Environmental Services Certificates (<i>Certificados de Servicios Ambientales</i>)
DO	Development Objective
ENA	National Environmental Strategy (<i>Estrategia Nacional del Ambiente</i>)
EOP	End of Project
ERR	Economic Rate of Return
FM	Financial Management
FONAFIFO	National Forestry Financing Fund (<i>Fondo Nacional de Financiamiento Forestal</i>)
FTA	Free Trade Agreement
FUNBAN	Environmental Bank Foundation (<i>Fundación Banco Ambiental</i>)
FUNDECOR	Foundation for the Development of the Central Cordillera (<i>Fundación para el Desarrollo de la Cordillera Central</i>)
GEF	Global Environment Facility
GEO	Global Environmental Objective
GHG	Greenhouse Gas
GIS	Geographic Information System
GoCR	Government of Costa Rica
GRUAS	Land Use Planning for Biodiversity Conservation in Costa Rica Project (<i>Proyecto de Ordenamiento Territorial para la Conservación de la Biodiversidad en Costa Rica</i>)

Ha	Hectare
IBRD	International Bank for Reconstruction and Development
ICR	Implementation Completion and Results Report
IDF	Institutional Development Fund
INBio	National Institute of Biodiversity (<i>Instituto Nacional de Biodiversidad</i>)
INCAE	Central American Institute for Business Administration (<i>Instituto Centro Americano de Administración de Empresas</i>)
ISR	Implementation Supervision Report
KfW	German Reconstruction Credit Bank (<i>Kreditanstalt für Wiederaufbau</i>)
LACI	Loan Administration Change Initiative
LAN	Local area network
M&E	Monitoring and Evaluation
MBC/CR	Mesoamerican Biological Corridor in Costa Rica
MINAE	Ministry of Environment and Energy (<i>Ministerio del Ambiente y de Energía</i>)
MSP	Medium-sized Project
NGO	Nongovernmental Organization
NPV	Net Present Value
OECD	Organization for Economic Co-operation and Development
ONF	National Forestry Office
PAD	Project Appraisal Document
PDO	Project Development Objective
PES	Payment for Environmental Services
PESP	Payment for Environmental Services Program
PINs	Project Idea Notes
PNDF	National Forestry Development Plan (<i>Plano Nacional de Desarrollo Forestal</i>)
PSA	Payment for Environmental Services Program (<i>Pago por Servicios Ambientales</i>)
PSR	Project Supervision Report
QEA	Quality at Entry Assessment
QSA	Quality of Supervision Assessment
SAP	Systems, Applications and Products - World Bank enterprise resource planning system
SIAP	Integrated Project Administration System (<i>Sistema Integrado de Administración de Proyectos</i>)
SINAC	National System of Conservation Areas (<i>Sistema Nacional de Áreas de Conservación</i>)
SIREFOR	Information System for Forestry Resources of Costa Rica
tCO ₂ e	Tons of carbon dioxide equivalents
TORs	Terms of Reference
VER	Verified Emission Reduction
WAN	Wide area network

Vice President:	Pamela Cox
Country Director:	Jane Armitage
Sector Manager:	Abel Mejía
Task Team Leader:	Gunars H. Platais

COSTA RICA

Ecomarkets Project

CONTENTS

Data Sheet	i
A. Basic Information.....	i
B. Key Dates	i
C. Ratings Summary	i
D. Sector and Theme Codes.....	ii
E. Bank Staff.....	iii
F. Results Framework Analysis	iv
G. Ratings of Project Performance in ISRs	viii
H. Restructuring	viii
I. Disbursement Graph.....	ix
1. Project Context, Development and Global Environment Objectives and Design	1
2. Key Factors Affecting Implementation and Outcomes	6
3. Assessment of Outcomes	11
4. Assessment of Risk to Development and GEO Outcome.....	17
5. Assessment of Bank and Borrower Performance	17
6. Lessons Learned.....	21
7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners.....	21
Annex 1. Project Costs and Financing.....	24
Annex 2. Outputs by Component	25
Annex 3. Economic and Financial Analysis.....	27
Annex 4. Bank Lending and Implementation Support/Supervision Processes	35
Annex 5. Beneficiary Survey Results.....	37
Annex 6. Stakeholder Workshop Report and Results	38
Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR	39
Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders.....	50
Annex 9. List of Supporting Documents	51
Map Priority Areas Targeted by the Project	52

A. Basic Information			
Country:	Costa Rica	Project Name:	Ecomarkets Project
Project ID:	P052009,P061314	L/C/TF Number(s):	IBRD-45570,MULT-23681
ICR Date:	03/19/2007	ICR Type:	Core ICR
Lending Instrument:	SIL,SIL	Borrower:	REPUBLIC OF COSTA RICA
Original Total Commitment:	USD 32.6M,USD 8.0M	Disbursed Amount:	USD 32.6M,USD 8.0M
Environmental Category: B,B		Focal Area: B	
Implementing Agencies: FONAFIFO (National Forest Financing Fund)			
Cofinanciers and Other External Partners:			

B. Key Dates				
Ecomarkets Project - P052009				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	04/08/1999	Effectiveness:	04/17/2001	04/17/2001
Appraisal:		Restructuring(s):		
Approval:	06/06/2000	Mid-term Review:		08/30/2004
		Closing:	06/30/2006	09/30/2006

GEF CR-ECOMARKETS - P061314				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	04/08/1999	Effectiveness:	10/20/2000	10/20/2000
Appraisal:		Restructuring(s):		
Approval:	06/06/2000	Mid-term Review:		08/30/2004
		Closing:	06/30/2006	09/30/2006

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes	Not Applicable
GEO Outcomes	Not Applicable
Risk to Development Outcome	Not Applicable
Risk to GEO Outcome	Not Applicable

Bank Performance	Satisfactory
Borrower Performance	Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)

Bank	Ratings	Borrower	Ratings
Quality at Entry	Satisfactory	Government:	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

Ecomarkets Project - P052009

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

GEF CR-ECOMARKETS - P061314

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

D. Sector and Theme Codes

Ecomarkets Project - P052009

	Original	Actual
Sector Code (as % of total Bank financing)		
Forestry	100	100
Theme Code (Primary/Secondary)		
Biodiversity	Primary	Primary

Climate change	Secondary	Secondary
Environmental policies and institutions	Primary	Primary
Legal institutions for a market economy	Primary	Primary

GEF CR-ECOMARKETS - P061314		
	Original	Actual
Sector Code (as % of total Bank financing)		
Central government administration	23	23
Forestry	67	67
Other social services	10	10
Theme Code (Primary/Secondary)		
Biodiversity	Primary	Primary
Climate change	Secondary	Secondary
Environmental policies and institutions	Primary	Primary
Legal institutions for a market economy	Primary	Primary
Participation and civic engagement	Primary	Secondary

E. Bank Staff

Ecomarkets Project - P052009		
Positions	At ICR	At Approval
Vice President:	Pamela Cox	David de Ferranti
Country Director:	Jessica Poppele	D-M Dowsett-Coirolo
Sector Manager:	Abel Mejia	John Redwood
Project Team Leader:	Gunars H. Platais	John V. Kellenberg
ICR Team Leader:	Gunars H. Platais	
ICR Primary Author:	Gunars H. Platais	

GEF CR-ECOMARKETS - P061314		
Positions	At ICR	At Approval
Vice President:	Pamela Cox	David de Ferranti
Country Director:	Jessica Poppele	D-M Dowsett-Coirolo
Sector Manager:	Abel Mejia	John Redwood
Project Team Leader:	Gunars H. Platais	John V. Kellenberg
ICR Team Leader:	Gunars H. Platais	
ICR Primary Author:	Gunars H. Platais	

F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)

The development objective of the proposed project is to increase forest conservation in Costa Rica by supporting the development of markets and private sector providers for environmental services supplied by privately owned forests.

Revised Project Development Objectives (as approved by original approving authority)

Global Environment Objectives (from Project Appraisal Document)

The Global Environmental Objective is to foster biodiversity conservation and preserve important forest ecosystems through conservation easements on privately owned lands outside of national parks and biological reserves in the Mesoamerican Biological Corridor in Costa Rica (MBC/CR).

Revised Global Environment Objectives (as approved by original approving authority) Not applicable

(a) PDO 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 :	100,000 hectares of land contracted as conservation easements in MBC/CR priority areas by EOP			
Value (quantitative or Qualitative)	0 ha	100,000 ha in priority areas	N/A	130900 ha in priority areas
Date achieved	06/06/2000	06/30/2005	06/07/2000	09/30/2006
Comments (incl. % achievement)	As of December 2005, Costa Rica's PSA program had about 270,000 ha under contract. The area enrolled includes 130,900 ha in the projects priority areas, clearly surpassing the original goal of 100,000 ha.			
Indicator 2 :	30 % increase in the participation of women land owners and womens organizations in the ESP program by EOP;			
Value (quantitative or Qualitative)	22 women head of household participating	44 women head of household participating		380 women head of household participating
Date achieved	06/06/2000	12/30/2005		06/30/2006
Comments (incl. % achievement)	Accomplished through support to 2 NGOs (in Tortuguero and Osa Peninsula regions). Allowing women to jointly register with their husbands has also significantly increased the number of women head of household legally able to enter into the PSA Program.			
Indicator 3 :	100% increase in the participation of indigenous communities in the ESP program by EOP			
Value (quantitative or	2,850 ha	5,700 ha		27,638

Qualitative)				
Date achieved	06/06/2000	12/30/2005		06/30/2006
Comments (incl. % achievement)	The area of indigenous-community-owned lands in the program increased from 2,850 hectares in 2000 to 27,638 hectares in 2006 , a 970 percent increase, sharply exceeding the original target of a 100 percent increase.			
Indicator 4 :	Establishment of a financial instrument to support easements targeting biodiversity conservation in Costa Rica by EOP.			
Value (quantitative or Qualitative)	No mechanism in place	Development of revenue capture mechanisms, including establishment of a trust fund to finance contracts targeting biodiversity conservation beyond the life of the project		Certificate of Env't. Services successfully launched. Nontradable bonds used to raise money for conservation. REFORESTA was developed to support the reactivation of commercial forestry. Trust Fund for Sustainable Biodiversity Conservation created
Date achieved	06/06/2000	12/30/2005		06/30/2006
Comments (incl. % achievement)	First successful emission of Certificate of Env't. Svcs. launched in Guanacaste (Province aquifer protection). Another two followed: "Lapa Verde" for biodiversity conservation, & "Emisión Territorios Indígenas" for cultural conservation.			

(b) 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 :	100,000 hectares of land contracted as conservation easements in MBC/CR priority areas by EOP			
Value (quantitative or Qualitative)	0 ha in priority areas	100,000 ha		130,900
Date achieved	06/06/2000	12/30/2005		06/30/2006
Comments (incl. % achievement)	95% of the PSA contracts are natural forests under conservation. 130,900 ha are in the project's priority areas, exceeding the project's target of 100,000 ha by EOP. Several assessments show that the project had a significant impact on forest cover.			

(c) 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 :	Existing contractual obligations fulfilled by 2003.			
Value (quantitative or Qualitative)	US\$14,800,000	US\$14,800,000		US\$14,800,000
Date achieved	06/06/2000	12/30/2003		12/30/2003
Comments (incl. % achievement)	The existing contractual obligations were fulfilled 100% prior to the end of 2003.			
Indicator 2 :	100,000 hectares contracted as conservation easements in MBC/CR priority areas by EOP.			
Value (quantitative or Qualitative)	0 ha in priority areas	100,000 ha in priority areas		130,900 ha in priority areas
Date achieved	06/06/2000	12/30/2005		06/30/2006
Comments (incl. % achievement)	The area enrolled in the PSA Program includes 130,900 ha in the project's priority areas, exceeding the project's target of 100,000 ha by EOP.			
Indicator 3 :	Increased local capacity to value and market environmental services, as measured through technical studies and introduction of market mechanisms by EOP.			
Value (quantitative or Qualitative)	No environmental services market per se established	Various sector entities buying environmental services through FONAFIFO as a clearing house. Various studies on value of NR in CR.		17 different private sector and public sector water users have signed contracts with FONAFIFO covering 18,500 has and generating US\$0.5 million.
Date achieved	06/06/2000	12/30/2005		06/30/2006
Comments (incl. % achievement)	Environmental services are now widely accepted within Costa Rican society. FONAFIFO is now recognized as an efficient and effective institution that delivers the PSA program across the country.			
Indicator 4 :	Trust Fund for contracts targeting biodiversity conservation established in accordance to GEF's best practice by EOP			
Value (quantitative or Qualitative)	No mechanism established which targeted biodiversity conservation	Alternative sustainable financing mechanisms established		FONAFIFO has launched Certificates of Environmental Services and established the Biodiversity Trust Fund.

Date achieved	06/06/2000	12/30/2005		06/30/2006
Comments (incl. % achievement)	The Biodiversity Trust Fund has been established as an official entity. FONAFIFO is pursuing different capitalization strategies.			
Indicator 5 :	Six local NGOs providing services to ESP program, and facilitating its access to small landowners in priority areas of the MB C/CR.			
Value (quantitative or Qualitative)	Inconsistent presence across the country	Maintain involvement of local NGO as they are a key part to reaching small producers		More than six local NGOs have been hired participating in capacity building, institutional strengthening, dissemination, web hosting, international seminars and training of field staff.
Date achieved	06/06/2000	12/30/2005		06/30/2006
Comments (incl. % achievement)	The involvement of local NGOs has been extremely important to achieve the goal of increasing the number of poor farmers in the PSA program, especially women head of household and indigenous population.			

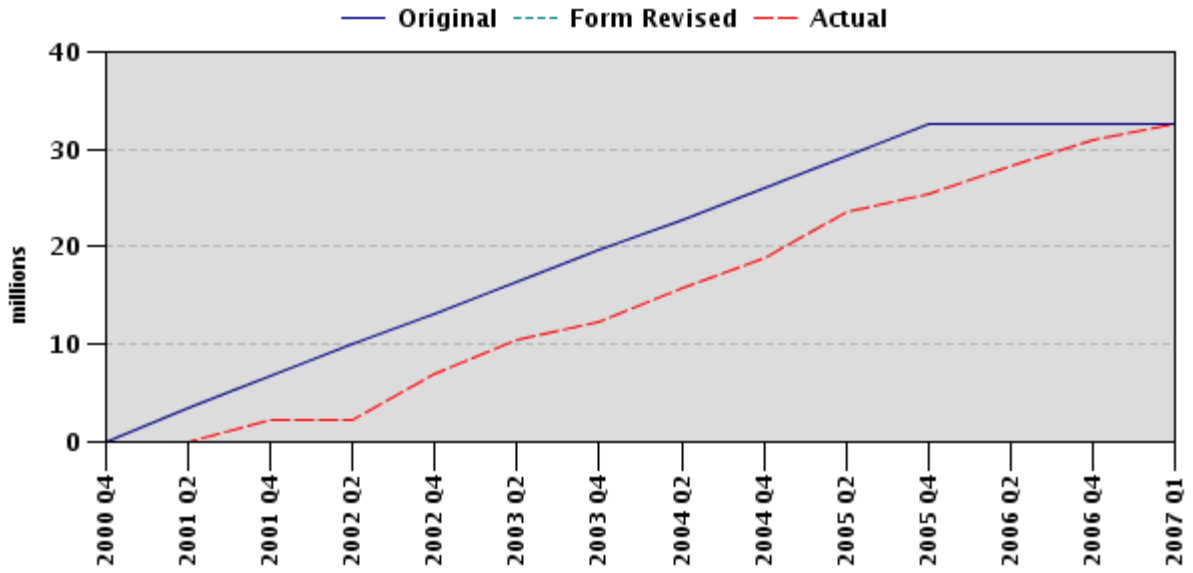
G. Ratings of Project Performance in ISRs

-						
No.	Date ISR Archived	DO	GEO	IP	Actual Disbursements (USD millions)	
					Project 1	Project 2
1	06/22/2000	S		S	0.00	0.00
2	12/06/2000	S	S	S	0.00	0.00
3	06/01/2001	S	S	S	2.33	0.50
4	11/30/2001	S	S	S	2.33	0.50
5	05/18/2002	S	S	S	4.03	0.70
6	11/25/2002	S	S	S	8.87	0.90
7	06/25/2003	S	S	S	12.35	1.47
8	12/24/2003	S	S	S	15.87	2.22
9	12/26/2003	S	S	S	15.87	2.22
10	06/21/2004	S	S	S	18.95	2.86
11	09/23/2004	S	S	S	18.95	2.86
12	05/02/2005	S	S	S	25.50	4.87
13	10/20/2005	S	S	S	25.50	4.87
14	06/19/2006	S	S	S	30.98	7.70

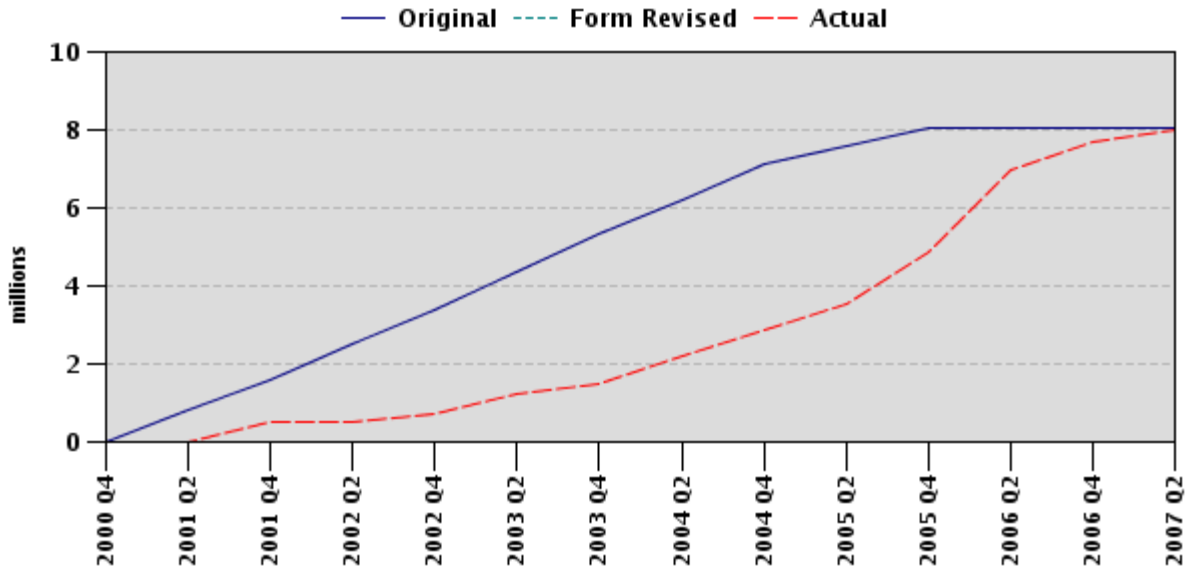
H. Restructuring (if any)

Not Applicable

I. Disbursement Profile
P052009



P061314



1. Project Context, Development and Global Environment Objectives and Design

1.1 Context at Appraisal:

Costa Rica experienced one of the highest rates of deforestation worldwide during the 1970s and 1980s. In 1950, forests covered more than half of the country; by 1995, forest cover had declined to 25 percent of the national territory. Approximately 60 percent of forest cover, totaling 1.2 million hectares, is on privately owned lands outside of national parks and biological reserves. World Bank estimates indicate that 80 percent of deforested areas, nearly all on privately owned lands, were converted to pasture and agriculture. Deforestation was principally driven by the rapid expansion of the road system and by inappropriate policies, including cheap credit for cattle and land titling laws that rewarded deforestation. These policy incentives have since been removed, and Costa Rica has become one of the world's leading proponents of environmentally sustainable development.

In 1996, Costa Rica adopted Forestry Law No. 7575, which explicitly recognized four environmental services provided by forest ecosystems: (a) mitigation of greenhouse-gas (GHG) emissions; (b) hydrological services, including provision of water for human consumption, irrigation, and energy production; (c) biodiversity conservation; and (d) provision of scenic beauty for recreation and ecotourism. The law provides the legal and regulatory basis to contract with landowners for the environmental services provided by their lands, and establishes a financing mechanism for this purpose; and empowers the National Forestry Investment Financing Fund (FONAFIFO) to issue contracts for the environmental services provided by privately owned forest ecosystems. The same law also banned forest clearing. Forestry Law No. 7575 thus established a modern legal framework, which (a) recognizes the environmental services provided by forest ecosystems, (b) defines the role of the State in protecting forests and in promoting and facilitating private sector activities, (c) decentralizes duties and responsibilities to local actors, and (d) establishes that forests may only be harvested under an approved forestry management plan that complies with sustainable forestry criteria.

Costa Rica's Payment for Environmental Services Program (*Programa de Pago por Servicios Ambientales*, PSA),¹ supported by the Ministry of Environment and Energy (MINAE) and executed through FONAFIFO, protects primary forests, allows secondary forests to flourish, and promotes forest plantations to meet industrial demands for lumber and paper products. These goals are met through site-specific contracts with individual small- and medium-size farmers.

As an indication of the true innovativeness of the Costa Ricans, the project evolved from a \$500,000 Institutional Development Fund (IDF) grant to support Costa Rica's Joint Implementation Office (*Oficina Costarricensis de Implementación Conjunta*, OCIC) prior to the establishment of the Clean Development Mechanism (CDM) under the Kyoto Protocol. During implementation of the IDF, the government requested a \$750,000 Medium-sized Project (MSP) grant from the GEF. Seeing the potential for greater impact, the Bank recommended the MSP be scaled up and blended with an IBRD loan. This originated one of the first fully blended IBRD/GEF operations to support an ongoing conservation program.

¹ "PSA" is the Spanish acronym used throughout this document to refer to Costa Rica's *application of the concept of payments for environmental services* (PSA Program). The concept is commonly referred to in the literature as "PES."

The main source of funding for the Program has been, since 1997, the fuel tax, equivalent to 3.5 percent of the revenue generated from sales. In addition to these sources, FONAFIFO was instrumental in leveraging bilateral donors such as the Government of Germany through a grant channeled by the German Reconstruction Credit Bank (KfW) and the Government of Japan and the new water tariff earmarked for watershed conservation. GEF incremental funding has enabled a very substantial expansion of the PSA program in global and regional biodiversity priority areas, that is, the Mesoamerican Biological Corridor, and buffer zones around protected areas of global significance. GEF incremental funding has been absolutely critical in strengthening the institutional capacity of FONAFIFO to more effectively target conservation of global biodiversity priorities.

1.2 Original Project Development Objectives (PDO) and Key Indicators:

The overall objective of the Ecomarkets Project was to increase forest conservation in Costa Rica by supporting the development of markets and private sector providers for environmental services supplied by privately owned forests. As such, the project directly supported the implementation of Forestry Law No. 7575: providing market-based incentives to forest owners in buffer zones and interconnecting biological corridors contiguous to national parks and biological reserves for the provision of environmental services relating to carbon sequestration and reductions of carbon emissions, biodiversity conservation, scenic beauty, and hydrological services.

The project aimed at contributing to environmentally sustainable development in Costa Rica through: (a) supporting the supply of and demand for environmental services provided by forest ecosystems; (b) strengthening management capacity and assuring financing of public sector forestry programs administered by MINAE, including FONAFIFO and the National System of Conservation Areas (SINAC); and (c) strengthening management capacity of local nongovernmental organizations.

1.3 Original Global Environmental Objectives (GEO) and Key Indicators:

The objective of the proposal to the Global Environment Facility (GEF) was to foster biodiversity conservation and preserve important forest ecosystems through conservation easements on privately owned lands outside of national parks and biological reserves in the Mesoamerican Biological Corridor in Costa Rica (MBC/CR).

Key performance indicators to be achieved by end of program (EOP) were as follows:

1. 100,000 hectares of land under conservation contracts in MBC/CR priority areas.
2. Establishment of a financial instrument to support conservation contracts.
3. Strengthened six nongovernmental organizations (NGOs) working in priority areas in the MBC/CR.
4. 30 percent increase in participation of women landowners and women's organizations in PSA Program.
5. 100 percent increase in the participation of indigenous communities in the PSA Program.

1.4 Revised PDO and Key Indicators, and reasons/justification:

The project's objectives were not changed.

1.5 Revised GEO and Key Indicators, and reasons/justification:

The project's global environmental objectives were not changed.

1.6 Main Beneficiaries:

Important project benefits include the conservation and sustainable use of forest ecosystems in privately owned land outside of national parks and biological reserves. The project has: (a) empowered small- and medium-scale private landowners in the conservation and management of forest ecosystems and in making choices that contribute to sustainable development; (b) supported the long-term viability of the PSA Program and promoted increased institutional efficiency of FONAFIFO, SINAC, and nongovernmental organizations promoting conservation and sustainable management of forest ecosystems; and (c) benefited regional users of hydrological services by supporting the provision of high water quality and hydrologic stability from forest ecosystems. Beneficiaries include small- and medium-size landowners, indigenous communities, women's organizations and other nongovernmental organizations, and public sector institutions promoting forest conservation. Environmental benefits related to biodiversity conservation likewise accrue to the international community.

A number of initiatives in other countries in Latin America and elsewhere are benefiting from the lessons learned from the preparation and implementation of the project. Projects incorporating environmental service payments are being prepared or implemented by the World Bank in various other countries in Latin America (Colombia, El Salvador, Mexico, Nicaragua, and Ecuador). Furthermore, the World Bank is playing a key role in sharing the lessons learned from the Ecomarkets Project beyond Latin America through technical assistance (Kenya project preparation, Commonwealth of Independent States countries capacity building), and participation in a variety of international forums (such as the Kathryn Fuller Science for Nature Symposium on Environmental Services held in October 2006).

1.7 Original Components:

Project Component 1: Strengthening Market Development for Environmental Services – US\$37.7 million (total cost of component)

This component supported committed expenditures of the GoCR's PSA program while long-term financing mechanisms for the program were developed and institutionalized. This financing would permit the GoCR to meet its long-term commitments to private landowners that have been incorporated into the PSA program.

(a) **Programmed PES contracts: 1995–1999.** The project financed remaining commitments on existing contracts and incorporated into the PSA program approximately 100,000 hectares of land in MBC/CR high-priority land areas (see below). Priority areas for contracts between 1995

and 1999 include: (i) forest ecosystems in buffer zones of state-owned national parks and biological reserves; (ii) forest ecosystems within the MBC/CR; (iii) forest ecosystems that provide critical hydrological services, degraded forests, or those at high risk of fire; (iv) wildlife refuges; and (v) priority areas for recuperating forest ecosystems.

(b) **New PES Contracts.** Beginning in 2000/2001, the PSA program financed: (i) 50,000 hectares of conservation easements in Tortuguero, La Amistad-Caribe, and Osa Conservation Areas. These areas comprise important portions of the MBC/CR, internalizing the benefits of services provided by small- and medium-size landowners in forest ecosystems relating to biodiversity conservation; (ii) 50,000 hectares of conservation easements in areas of high biological importance as identified in the 1996 Land Use Planning for Biodiversity Conservation in Costa Rica project (*Proyecto de Ordenamiento Territorial para la Conservación de la Biodiversidad en Costa Rica*, GRUAS) Report outside of Tortuguero, La Amistad-Caribe, and Osa Conservation Areas. These easements aim to ensure the proper conservation of high-priority biological corridors and explicit biodiversity habitat quality characteristics. Each local corridor is a long, continuous block of forest-covered areas with very small patches of grasslands; likewise, each corridor has significant biological and geographic value given connectivity with existing National Parks and/or other priority areas; and (iii) additional hectares of land outside of GRUAS Report areas based on priorities established by SINAC-MINAE, ensuring regional representation within the PSA program, including protection of watersheds, and in particular watersheds that provide water for human consumption and hydroelectric production, and biodiversity protection in local biological corridors.

(c) **Development of revenue-capture mechanisms.** Incremental resources supported the analysis, design, and implementation of revenue-capture mechanisms to internalize the value of the environmental services through explicit payment schemes, with emphasis on complementary services to biodiversity in forest conservation areas (that is, hydrological services and scenic beauty).

Furthermore, the subcomponent supported the design and establishment of a trust fund to capture and provide funds to pay for environmental services contracts targeting biodiversity conservation beyond the life of the project.

Project Component 2: Strengthening Administration and Field Supervision of the PSA Program US\$11.2 million (total cost of component)

Projected expenditures financed program administration, coordination, financial management, direct contracting of landowners, geographic information systems (GIS), and field supervision.

(a) **PES supervision.** Project resources, including a 7 percent administrative fee currently paid to FONAFIFO, is used to support monitoring, supervision, and evaluation of the PSA program, and implementation of a financial management system for project activities. GEF co-financed activities included refining the administrative organization, the operational system, and the financial controls and disbursements within FONAFIFO, and technical training for personnel within FONAFIFO and SINAC.

Furthermore, the project provided technical support for FONAFIFO's GIS system, such that the monitoring system would allow for the generation of technical data relating to landownership, forest ecosystems, forest type, forest quality and growth variables, coverage area, identification of priority zones for the conservation of biodiversity outside of national parks and biological reserves, and the monitoring of the consolidation of the MBC/CR using satellite imagery and GIS with field verification to monitor changes in land use.

(b) **SINAC forest protection and field supervision.** Committed expenditures of the Government of Costa Rica were complemented by incremental GEF resources to strengthen forest protection programs and field supervision activities carried out by SINAC. Government resources will cover expenditures related to personnel, operations costs, and goods and services. Incremental resources will support training of regionally based SINAC field staff, implementation of effective field supervision of the PSA program, and field-based monitoring of compliance with existing environmental legislation relating to conservation of forest ecosystems.

(c) **Strengthen local and regional NGOs.** Local and regional organizations were to provide bundling services to small farmers to access the PSA program resources, reducing transaction costs related to contracting of environmental services for small landowners and for FONAFIFO.

Incremental GEF resources were used to improve the technical and administrative capacity of local NGOs and private sector associations providing these services, including field supervision, contract compliance, preparation of technical and administrative manuals for forest conservation, and assistance to individuals lacking land titles. Furthermore, this component supported organizational and technical strengthening of local women's organizations to develop capacity to promote natural resources management and increased participation in the PSA program. Prospective activities include recompilation and systematization of the experiences of organizations of women farmers and training of rural women regarding the political and legal framework of the natural resources sector.

1.8 Revised Components:

Not applicable

1.9 Other significant changes:

It is important to highlight the fact that the project itself was a learning process. There was no prior knowledge as to how a project of this nature would work and ultimately the PSA Program became a generator of lessons for the Bank, the country, and other countries interested in PES. It was also the first project to be approved in Costa Rica in a decade.

At the time of project design, MINAE executed the PSA Program through FONAFIFO and SINAC. On-the-ground implementation was undertaken by SINAC. However, SINAC's progress toward the project's target of enrolling 100,000 hectares in priority areas was considerably behind schedule by 2003. This was partly due to a lack of diligence in targeting sites within the established priority areas. In response to these delays and recognizing that FONAFIFO itself was extremely efficient, MINAE passed full responsibility of implementation of the PSA Program to FONAFIFO, through an executive decree. FONAFIFO opened eight field offices (within SINAC's infrastructure). An important outcome of this decision was that implementation in the

field was streamlined. As a result, implementation accelerated and the considerable backlog was removed by 2005.

In 2003, FONAFIFO, realizing that the areas selected under the GRUAS proposal were not offering the full conservation potential of the originally established corridors, requested a no objection from the Bank to expand the projects' targeted area. A proposal was presented by the Directors of the Conservation Areas, which was accepted. This expanded area allowed the Project to target areas for conservation more effectively, and is the area now in place (see map at end of document).

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design, and Quality at Entry:

In line with the Quality at Entry Assessment (QEA4 – April 2001), overall quality at entry is rated **Highly Satisfactory**. The project objective was consistent with the 1993 CAS and with the CAS that was under preparation and to be released in 2000, which in turn reflected the priorities established in the GoCR's development plan.

Soundness of the background analysis: The techniques proposed for promoting market development were not well tested, nor could they have been, since there were no prior experiences to build on worldwide—emphasizing the truly innovative nature of the PSA Program and the Ecomarkets Project. Despite these shortcomings, the project undertook a detailed and candid cost-effectiveness analysis of the environmental services program by comparing it with the option of establishing additional national parks to achieve conservation objectives.

Assessment of the project design: By seeking to refine, and thereby expand the scope of, an existing government program, the project was well focused on specific outcomes: (a) targeting to establish protected corridors between key protected areas, (b) measures to increase access to the program for indigenous people and women landowners, and (c) facilitation of private funding for conservation contracts. The latter objective was ambitious, but was the key to long-term financial sustainability of the program. Some contracts had already been concluded, providing some limited experience. Although there was no recent CAS, the project was clearly in line with the government's own priorities, and exemplified key aspects of the Bank's forest sector policy. Project preparation benefited from extensive prior sector work carried out on valuation of forest products and services, including review of options for using market mechanisms to promote conservation.

Poverty and Social Aspects: While poverty reduction was not the main objective, it was estimated that a good number of poor people with forested land would gain access to the program and receive payments that would help increase their income. The Social Assessment conducted during project preparation was of high quality, identifying key stakeholders and raising three social development issues which were successfully addressed in project design: (a) the possible exclusion of poor farmers who lack land titles; (b) the possible exclusion of indigenous peoples whose communal land holdings are not individually titled; and (c) the possible exclusion of women farmers, many of whom lack titles. Mechanisms were formulated

to address each of these problems, including technical assistance grants, through NGOs, to the poor who lack titles so that they could obtain titles and enter into the program, and waiving the requirement for individual titles in the case of indigenous communities. Performance Indicators selected for monitoring progress toward project objectives were sensitive to social development issues of inclusion, specifying clear targets for indigenous and women beneficiaries. The project preparation process and design features complied with the Bank's social safeguard policies.

Adequacy of the government's commitment: Borrower ownership is exemplary, and in many respects can be seen as a model. The PSA program enjoys wide support among political parties and civil society. It has received political and financial support that spans four changes of administrations in Costa Rica. While the prerequisites for this innovative project were very demanding, Costa Rica is one of the few countries where these prerequisites were met. In addition, given that it built on an existing government program, the project was entirely appropriate for the country conditions.

Assessment of risks: The main risks were clearly identified and candidly assessed, which were all rated substantial or high. Some of these risks could not be mitigated in the formal sense, because innovation is essentially a risk-taking endeavor.

2.2 *Implementation:*

Logical Framework: The project's logical framework has been consistently used during project implementation as a management and a monitoring and evaluation (M&E) tool. FONAFIFO's periodic reports to the World Bank and GEF have measured the project's achievements to date against the targets established in the logical framework. Very few of these original targets have had to be revised, even though some of the project's "Critical Assumptions" (that were beyond the control of the Bank or the GoCR) have not held true as assumed. For example, the assumption that there would be "macroeconomic stability" during 2000–05 was posited at the outset of the project. Another key assumption that only materialized very late in implementation is that "Regulations within the Kyoto Protocol permitting financing of carbon forestry" would be issued.

To the credit of the project, FONAFIFO, and the GoCR, the failure of these critical assumptions did not significantly impede the on-time achievement of the project's main targets and objectives. This is largely due to the GoCR's fulfillment of all of the project's critical assumptions that were within its power to control or influence: An uninterrupted high level of government commitment (political will and technical capacity) to market environmental services and legally enforce conservation contracts, and to provide sufficient financial support and trained human resources to achieve these ends.

Effective Partnership with Stakeholders: The project has created highly effective partnership arrangements with relevant local stakeholders, including NGOs such as FUNDECOR, COOPEAGRI, and ASANA, whereby the latter organizations have served as intermediaries for contract preparation and implementation. The project has created highly effective partnership arrangements with Costa Rican governmental and nongovernmental conservation organizations (including INBio and SINAC) for the purpose of establishing biodiversity priorities, and evaluating and monitoring biodiversity at particular sites.

The project has created effective partnerships with governmental and nongovernmental international agencies (including German Reconstruction Credit Bank [KfW], the Japanese Government, and Conservation International) to promote shared environmental goals at particular sites or in regions. Finally, the project has created effective partnerships with private sector enterprises such as hydropower producer *Energía Global*, agribusiness *Azucarera El Viejo*, bottler Florida Ice and Farm, tourism operator *Desarrollos Hoteleros Guanacaste*, and others, whereby those enterprises have signed contracts to pay landholders who provide environmental services.

Lessons from other Projects Incorporated into Implementation: Because this was such a “cutting edge” project, there were very few specific lessons that it could learn from other GEF projects (as opposed to general lessons such as the need for transparency, broad participation, coordination with government ministries, and so forth). The GEF’s Integrated Ecosystem Management Operational Program (OP#12) did not exist prior to the project. In fact, the project served as a model for its development. This project represented the first significant effort to implement a program for payments of environmental services in a developing country. Until then, the only other such programs had been in Organization for Economic Co-operation and Development (OECD) countries such as the United States and European Union countries. Recent GEF projects involving payments for environmental services (including GEF projects in Colombia, El Salvador, Mexico, and Nicaragua, and others under preparation) have all been based largely on lessons learned in the Costa Rica Ecomarkets Project.

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

As mentioned, the project’s logical framework was used during project implementation as a monitoring and evaluation (M&E) tool.

The project has created highly effective partnership arrangements with Costa Rican governmental and nongovernmental conservation organizations (including INBio and SINAC) for the purpose of establishing biodiversity priorities, and evaluating and monitoring biodiversity at particular sites.

The project used feedback from its monitoring and evaluation activities to make changes such as increasing the participation of poorer landowners and indigenous communities.

The monitoring framework developed during preparation was weak in two respects. First, it did not allow for a systematic evaluation of the extent to which participation in the program changed behavior. Thus, while it can be observed that PSA participants have substantially higher levels of forest cover, it is difficult to ascertain how much of this difference was due to the project. This criticism is based on the benefit of hindsight; the literature on the need for appropriate impact evaluation frameworks of conservation policies (for example, Ferraro and Pattanayak 2006) post-dates project preparation. Nevertheless, efforts were instituted under the project to rectify this omission. The Project supported several formal evaluations (for example, Sills and others 2006; Tattenbach and others 2006). Results show that the project did have a significant impact on forest cover.

The second weakness of the project’s monitoring efforts is that they did not include any monitoring of the actual impact of project activities on the generation of specific services. There was no monitoring, for example, of the extent to which biodiversity or water services increased.

In this regard the project relied excessively on the conventional wisdom on the benefits of forest cover. While these benefits are well established in the case of biodiversity, the linkages between forest cover and water services are less clear cut. More systematic monitoring of how PSA-supported land uses affect service generation would help improve targeting and the cost-effectiveness of the program. Such monitoring is by no means simple, however, particularly in the case of water services, because impacts are often felt at a considerable distance from the areas in which the program is active, and with a lag. A follow-on project² will include more systematic efforts to monitor such impacts.

With the support of the Ecomarkets Project, the PSA program established state-of-the-art spatial analysis and administrative systems (GIS and SIAP) to monitor land-user compliance with payment contracts.

2.4 Safeguard and Fiduciary Compliance:

Safeguards

The 2002 Quality of Entry Assessment assessed the quality of entry of the project as highly satisfactory. It concluded that the key development objectives of structural and policy reform and environmental sustainability were highly likely to be achieved. It also noted that “none of the safeguard policies presented in the PAD had been checked as ‘applicable,’ though in reality policies on indigenous peoples, forestry, natural habitats, and environmental assessment all applied, and were mostly treated in exemplary fashion in project preparation.” Subsequent to this, the Bank records were amended, and safeguard compliance was tracked and reported in the ISR (formerly PSR). No safeguard issues were triggered and compliance was satisfactory throughout the life of the project.

Fiduciary Aspects

Procurement. The Project suffered delays in implementation due to the year it took the National Assembly to approve the project. Once this approval was obtained, FONAFIFO needed to include the Loan in the National Budget. Subsequently FONAFIFO had to include the approved monies into its own budget and submit that for approval by the Comptrollers Office. These complex measures, coupled with lack of familiarity with World Bank procedures, resulted in a 1.5-year delay in disbursement.

Once these bureaucratic milestones were completed and FONAFIFO staff members received Bank Procurement and Financial Management training, the project quickly accelerated disbursements, reaching a 100 percent disbursement rate by EOP. The Project Team had an excellent working relationship with the Fiduciary team and quickly resolved to Bank satisfaction any issues that were identified during supervision.

Financial Management: At the outset of the project, the World Bank introduced the Loan Administrative Change Initiative (LACI). FONAFIFO expended considerable financial and human resources to adapt its financial management system to LACI. Unfortunately the World Bank abandoned LACI shortly thereafter. In the course of its life the project was subjected to a full financial management-specific supervision mission. The mission looked at staffing

² The Mainstreaming Market Based Instruments for Environmental Management has been prepared and approved by the Board of the World Bank and is now pending approval in Costa Rica.

arrangements, FM systems, flow of funds, follow-on to audit report recommendations, and financial programming. Moreover, the mission performed a sample field review of SOEs and documented the PSR (now ISR) rating (Satisfactory). FONAFIFO was also subject to a full financial management assessment in connection with the follow-on project (Mainstreaming Market Based Instruments). The assessment concluded, among other things, that FONAFIFO makes use of suitable FM structures and systems in connection to the Ecomarkets Project and therefore it is an adequate FM implementing agency for the follow-on project. As documented by the supervision mission, the assessment mission, and the results of the external audits (acceptable, clean opinions), FONAFIFO's FM performance is satisfactory.

2.5 Post-completion Operation/Next Phase:

FONAFIFO's transition strategy is one of continuation. It is important to recall that the project came in to support and strengthen an existing program. There was no need to create a Project Implementation Unit (PIU) and consequently no need to close it down. The PSA Program will continue after project closure.

FONAFIFO has a capable technical and administrative staff that will continue to provide effective program operation. The PSA Program is part of the National Budget and has its main source of funding through the 3.5 percent capture of the revenues of fossil fuel sales. It is anticipated that the Water Tariff will eventually increase cash flow to FONAFIFO coffers and other sources discussed above.

Marketing of Project output has been identified as an important area to focus on. A concerted effort toward increasing FONAFIFO's and the PSA Program's visibility nationally and internationally is already underway.

The weaknesses in the monitoring framework identified during implementation (see section 7.3) are the subject of specific efforts under the follow-on project.

A follow-on project has been prepared and is pending approval by the GoCR and its National Assembly. The proposed project's development objective is to enhance the provision of environmental services of national and global significance and to assist in securing their long-term sustainability. The project is structured as a US\$30 million loan and a US\$10 million GEF grant.

3. Assessment of Outcomes

3.1 *Relevance of Objectives, Design and Implementation:*

The objectives, design, and implementation of the Ecomarkets Project are considered to have a **high overall relevance**. The development objective of increasing forest conservation by supporting the development of markets for environmental services remains highly relevant. Increasing forest cover remains an important objective for the GoCR, as is the use of market-based instruments to achieve it. Costa Rica is at the forefront of biodiversity conservation and environmental management. Recognizing that its biological resources are an important national asset, Costa Rica has actively promoted a variety of conservation mechanisms and encouraged innovation in financing and administration. The continued relevance of the Ecomarkets PDO is reflected in the GoCR's request for a follow-on project that continues efforts in this area and improves on its predecessor by internalizing lessons learned. Building on the Ecomarkets PDO, the PDO of the follow-on project is to enhance the provision of environmental services of national and global significance and to assist in securing their long-term sustainability. Likewise, the follow-on project's **Global Environmental Objective** is to enhance the conservation of globally significant biodiversity and ensure its long-term sustainability by mainstreaming market-based instruments in productive landscapes in the buffer zones of protected areas and the corridors connecting them. Both of these objectives reflect the recognition by the GoCR that the path taken was appropriate and that in order to accomplish this, it will consolidate the PSA Program, improving its efficiency and expanding its coverage.

3.2 *Achievement of Project Development Objectives and Global Environmental Objectives:*

Achievement of Project Development Objectives

Forest conservation. The PSA program had about 270,000 ha under conservation contracts involving 3,000 landowners by the end of 2005. Eighty seven percent of these contracts are natural forests under conservation, 7 percent forest plantations, and 6 percent sustainable forest management (a modality that was discontinued in 2003). An agroforestry modality introduced in 2003 does not yet represent a significant area (1,170 ha). The area enrolled includes 130,900 ha in the project's priority areas, exceeding the project's target of 100,000 ha by EOP. As noted in section 7.3, preliminary results of several assessments show that the project had a significant impact on forest cover. Tattenbach and others (2006), for example, estimate that primary forest cover nationwide in 2005 was about 10 percent greater than it would have been without the PSA Program, while Sills and others (2006) find evidence that the PSA program has encouraged protection of mature native forest in Sarapiquí.

Development of markets for environmental services. During project implementation, FONAFIFO signed more than a dozen agreements with Costa Rican private and public water users (hydropower producers, bottlers, municipal water supply systems, agricultural industries, irrigation water users, and hotels) to finance the conservation of important watersheds. After a slow start, the number of financing agreements with water users rose sharply in the latter part of project implementation, helped by the development of a streamlined process based on environmental services certificates (CSAs), which are standardized instruments that pay for the conservation of one hectare of forest in a specified area. Rather than negotiating each agreement

on an ad hoc basis, FONAFIFO can sell interested water users the appropriate number of certificates. These agreements currently generate about US\$0.5 million annually, and pay for the conservation of about 18,000 hectares (adding about 5 percent to funds available from the fuel tax), and covering FONAFIFO's administrative costs. Progress on selling biodiversity services has been slower, but efforts have begun to bear fruit. Conservation International (CI) is paying for biodiversity conservation through the PSA Program, by providing US\$0.5 million to pay 50 percent of the cost of agroforestry contracts in the Osa and Amistad Pacifico conservation areas, and by paying 50 percent of the costs of planting up to 80,000 trees under agroforestry contracts in the buffer zone of Chirripó National Park. Efforts to sell carbon sequestration services were hampered first by uncertainty over what land use activities would be eligible under the Kyoto Protocol's Clean Development Mechanism (CDM), and then by the CDM's decision to exclude avoided deforestation. Because most of Costa Rica's emission reductions are generated by avoided deforestation rather than reforestation, FONAFIFO was unable to sell emission reduction services. FONAFIFO continued working on this topic, however, and with Ecomarkets Project support developed a reforestation/afforestation project involving the sale of about 0.61 million tons of carbon dioxide equivalents³ (tCO₂e) by 2017 to the BioCarbon Fund, and laying the basis for additional future sales.

Participation of marginalized groups has increased during Ecomarkets Project implementation. Participation of female landholders increased from only 22 in 2000 to 474 (whose properties cover over 30,000 hectares) in 2006, significantly more than called for under the original target of a 30 percent increase in participation. Likewise, the area of indigenous-community-owned lands in the program increased from 2,850 hectares in 2000 to 27,638 hectares in 2006, a 970 percent increase, sharply exceeding the original target of a 100 percent increase.

Achievement of Global Environmental Objectives: The project provided critical financial and technical support for the long-term conservation of Costa Rica's most globally significant and biologically diverse ecosystems, and helped streamline and refocus Costa Rica's cutting-edge program of payments for environmental services. In particular, the project was instrumental in shifting the PSA program's earlier scattered approach to PSA contracting, to a more focused approach of conserving and consolidating the areas of Costa Rica that were designated as priorities by the Mesoamerican Biological Corridor (MBC) project of the Central American Commission on Environment and Development (CCAD). Tattenbach and others (2006) estimate that 66 percent of the deforestation avoided thanks to the PSA Program was in biodiversity priority areas. The Project has also served as an example to many other countries of how to use "economic incentives for the conservation of biodiversity" (as recommended by the Conference of the Parties to the Convention on Biological Diversity, [CBD]), and its lessons have been incorporated into many other PES programs.

³ tCO₂e is the universal unit of measurement used to indicate the global warming potential of each of the six greenhouse gases. Carbon dioxide—a naturally occurring gas that is a byproduct of burning fossil fuels and biomass, land-use changes, and other industrial processes—is the reference gas against which the other greenhouse gases are measured. To convert tons of carbon to tons of CO₂, multiply by 3.67.

3.3 *Efficiency:*

Available data do not allow an NPV or ERR to be estimated. This would require information on the extent to which the project succeeded in increasing the generation of environmental services. As noted, such data were not collected during the project. Even if it had been, many of the services would have been difficult to value, notably the global benefits such as biodiversity conservation.

In preparation, a **cost-effectiveness analysis** was undertaken that compared the costs of the PSA program's approach to that of the main alternative approach to conserving forests, namely creation of new protected areas, assuming that benefits would be identical under either approach. This analysis found that the PSA approach was somewhat more expensive in economic terms, but much less so in financial terms. Creating new protected areas would be financially and socially impossible, however. In the absence of the project, the main alternative for Costa Rica to obtain the services the program generates would be to place additional areas under formal protection. This alternative would be prohibitively costly in financial terms, because it would require compensating landholders for the full value of their land rather than just for the difference between its value under an alternative land use compared to its value under a conservation use. Additionally, it would require the entire value of this compensation to be paid up-front rather than being paid annually, like under an environmental service contract. Given that Costa Rica still owes substantial amounts to landholders whose land was expropriated to create the current protected areas, the idea of creating new protected areas, and thus displacing their owners, would also be socially unacceptable. Approaches such as the PSA Program are the only feasible way to achieve substantial conservation in private lands.

A review of the costs and benefits of the PSA Program during Ecomarkets Project implementation (see Annex 5) shows significant likely benefits, but also considerable room for improvement in targeting.

1. In areas with significant water use, for example, the PSA Program is very likely to be generating benefits well above its costs—particularly by avoiding a deterioration of water quality and by reducing the risk of flooding at the local level. This is confirmed by the willingness of many private sector water users to pay the full cost (including covering FONAFIFO's administrative costs) of conservation in their watershed. Available estimates show the deforestation avoided by the PSA Program-protected water sources as supplying 7 million m³ of water for domestic use and 756 million m³ of water for hydropower generation. This is particularly impressive in that with the exception of payments based on contracts with individual water users (see below); hydrological importance has not been a targeting criterion for the PSA program to date. Nevertheless, there is considerable room for improvement, as only about 34 percent of avoided deforestation was in hydrologically important watersheds. Biodiversity benefits cannot be easily quantified. As noted, about 131,000 hectares of land in biodiversity priority areas were enrolled in conservation contracts under the project. An estimated 66 percent of the deforestation avoided thanks to the PSA Program was in biodiversity priority areas. Because of the huge financial and social cost that the alternative means of securing these benefits (creation of new protected areas) would have entailed, the PSA program was the only practical means of achieving these results. Again, there is room for further improvement by further improving targeting efforts, by differentiating payments so that available funds go further, and by ensuring the long-term sustainability of payments.

2. By avoiding deforestation, Costa Rica has avoided a substantial amount of carbon emissions to the atmosphere. The deforestation avoided thanks to the PSA Program is estimated to have prevented the emission of almost 11 million tC (assuming each hectare of forest holds 100 tC). Current CDM rules prevent Costa Rica from being compensated for this global benefit. If current prices of about US\$12/tC are applied, however, the benefit to the world is worth about US\$130 million. The PSA Program also contracted for reforestation on 11,346 hectares during project implementation; assuming an 80 percent survival rate and 100tC/ha sequestered, another 0.9MtC will be sequestered, worth an additional US\$11 million.

The numbers are too crude to allow a formal cost-benefit analysis to be carried out, but the size of the carbon benefits alone (about US\$140 million) compare very favorably to the project's total costs of about US\$50 million.

The need and potential for further improvements in targeting and in the efficiency of the program are a major theme of the follow-on project.

3.4 Justification of Overall Outcome and GEO Outcome Rating:

Overall Rating: Satisfactory

GEO Outcome Rating: Satisfactory

This ICR review concurs with an independent evaluation panel that assessed the Ecomarkets Project in the summer of 2005⁴ concluding that the project reached its key targets and objectives. The panel wrote that “[t]he GEF Ecomarkets Project has enabled Costa Rica to more effectively conserve its globally significant biodiversity by creating linkages between geographically isolated protected areas and other high concentrations of biodiversity, that is, linkages consisting of privately owned lands where biodiversity is legally protected through PSA contracts.”

The Ecomarkets Project's main achievement has been not merely to provide additional financial resources to expand the PSA Program, but to refocus the entire PSA Program on global and regional biodiversity conservation priorities, and on national social goals. The Ecomarkets Project's other main achievement has been to greatly strengthen FONAFIFO's institutional and technical capacity, thereby increasing the effectiveness and efficiency of the entire PSA Program, making it a model for other countries to analyze and adapt to their reality.

3.5 Overarching Themes, Other Outcomes and Impacts:

(a) Poverty Impacts, Gender Aspects, and Social Development

Poverty Impacts. While it is recognized that the PSA Program is not a poverty alleviation project, it has been observed that small and medium-size landholders, many of whom are poor, have found it difficult to enter the program. Environmental service programs are not specifically designed to be poverty reduction programs, and targeting them purely on the basis of poverty reduction objectives risks undermining their primary objective of generating valuable environmental services. However, they can often contribute to poverty reduction, because many

⁴ “Evaluation of the World Bank/GEF Ecomarkets Project in Costa Rica,” October 2005. Members of the Panel: Gary Hartshorn (World Forest Center), Paul Ferraro (Georgia State University), Barry Spergel (Independent Consultant), and Erin Sills (North Carolina State University).

potential service providers are poor and marginalized groups, including indigenous peoples, women, and small landholders without land title.

There was a need for targeted efforts to ensure that such landholders were able to participate in the program. Lack of training and capacity-building activities in PSA Programs for both the supply and demand sides have created a barrier for less-organized and marginalized families to participate in the program. Therefore, mechanisms such as the collective contracts—grouping many small plots of land and processing them in one operation, thereby generating efficiency gains—targeted capacity building, and financial support, were considered in order to remove barriers for their participation in PSA Programs.

Gender. As noted, there has been a very robust increase in women heads of households participating in the program. This has been accomplished through supporting two NGOs in the Tortuguero (ASIREIA) and Osa Peninsula (ASANA) regions. Another important development that contributed to this increase is the change in the land titling rules. Women are now allowed to jointly register with their husbands. This significantly increased the number of women heads of households who were able to legally enter into the PSA Program.

Indigenous peoples. The results of the project show unequivocally a close to 900 percent increase in indigenous peoples' communal land under PSA contracts. This has also been made possible through NGOs that have worked with local indigenous communities through capacity building.

The significance of working with these disadvantaged groups is that the PSA payments help diversify the household portfolio of recipients with a relatively risk-free source of cash, which is desirable to risk-averse rural households.

It can also be argued that Costa Rican society as a whole benefits from an increased supply of ecosystem services provided by the PSA Program. Several studies (including Porras and Miranda 2006) have identified a change in public perception about forest ecosystems. Recognizing that these ecosystems provide valuable services, there is an acceptance that it must be paid for. This change in perception has increased support for the program from all sectors of society, from ministers to taxi drivers.

Through contractual consultancies with NGOs, as described above, the Ecomarkets Project has also contributed to the development of a broad range of skills and knowledge among NGOs that work with landowners in rural Costa Rica.

(b) Institutional Change/Strengthening:

One of the key objectives of the Ecomarkets Project was to strengthen Costa Rican institutional capacity for environmental management. The PSA Program's effects on institutions are clear and substantial. FONAFIFO's Geographic Information System (GIS) and *Sistema Integrado de Administración de Proyectos* (SIAP) would not have achieved their current level of sophistication without project funds. Likewise, the Ecomarkets Project helped facilitate the change in the field administration of the PSA Program from SINAC to FONAFIFO in 2003.

The long-term sustainability of project outcomes is also made more likely by the existing institutional and legal structure of FONAFIFO, its technical capacity, and the proposed endowment fund.

However, the project was not able to improve the process of dealing with the Government's Comptroller's office. This was a long and bureaucratic process that would delay payments to farmers who needed to receive funds in time to make the planting season.

(c) *Other Unintended Outcomes and Impacts:*

Knowledge Transfer. The lessons learned and experiences from the project are being widely disseminated within the country, region, and around the world. FONAFIFO has shown its willingness to share the lessons learned with others and hosted dozens of delegations from around the world who have come to study the PSA program. In fact, this has been considered by the Costa Rica Foreign Affairs Ministry as a South-South cooperation "Best Practice." Lessons from the project continue to be disseminated within the country, region, and globally through workshops, seminars, study tours, publications, and a website (www.fonafifo.com).

Monitoring. With the key support of the Ecomarkets Project, the PSA program has established state-of-the-art systems (GIS and SIAP) to monitor land-user compliance with payment contracts. The program remains weak, however, in monitoring its effectiveness (social, economic, and biological).

Priority Issues for the Future of PSA. Despite the program's considerable achievements, significant weaknesses and limitations remain, on both the demand and the supply side of the environmental service markets it has established.

Demand side. There is a need to develop additional funding mechanisms to complement current funding sources and allow an expansion of the area under conservation, because the current 230,000 ha represent only a small part of conservation needs. There is also a need to draw a greater proportion of funding from service users, because the current program highly depends on funding from the fuel tax and short-term donor financing, thus making its sustainability uncertain. Developing sustainable financing sources for biodiversity conservation is particularly challenging.

Supply side. The use of available funds to contract landholders also needs revision. Increased targeting and differentiation of payments could result in substantial efficiency gains for the program. The independent review panel noted that current criteria for PSA allocation cover as much as 70 percent of the country. Moreover, the use of undifferentiated payments means that the program is likely overpaying in some areas (for example, paying for conservation in cases where conservation may well have happened anyway), while offering insufficient payments to induce conservation in other priority areas. There is a need to sharpen and better prioritize the selection of conservation areas with unique biodiversity features, and to adapt payment levels to local circumstances. Differentiated payments will also allow an increase in area conserved.

Without differentiation, the higher payment levels approved by Presidential decree in late 2005 would result in substantial contractions of area conserved.

Links to poverty. Small- and medium-size landholders, many of whom are poor, have found it difficult to enter the program. There is a need for targeted efforts to ensure that such landholders are able to participate in the program.

Monitoring. To ensure that these aims are achieved, there is a need to improve program monitoring. With support from the Ecomarkets Project, FONAFIFO instituted a state-of-the-art system to monitor land-user compliance with environmental service contracts. The program remains weak, however, in monitoring the impact of its activities on service generation and socioeconomic impacts.

3.6 *Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops:*

Neither a Beneficiary Survey nor a Stakeholder Workshop was carried out.

4. Assessment of Risk to Development and GEO Outcome

Rating for Risk to Development Outcome: Satisfactory

Rating for Risk to GEO Outcome: Satisfactory

It is highly unlikely that the PSA Program will cease with the end of the Ecomarkets Project's support. There is a strong commitment within the government as shown by the political support received from four consecutive administrations (of two different political parties). However, the higher payment levels approved by Presidential decree in late 2005 would result in substantial contractions of area conserved without a differentiated payment scheme.

The long-term sustainability of project outcomes is made more likely by the existing institutional and legal structure of FONAFIFO, its technical capacity, and proposed endowment fund. However, other long-term financing mechanisms should also be developed to complement the four main current or potential financing sources that have been identified so far (that is, fuel tax, new water tariff, payment for carbon services, and the endowment), because these four sources may not be enough to fully achieve the project's ambitious long-term goals.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry:

Rating: Satisfactory

The project was the object of a Quality at Entrance review (QEA4 – April 2001). The panel assessed the quality at entry of the Ecomarkets Project as highly satisfactory. Bank processes were judged satisfactory and the panel also concluded that the key development objectives of structural and policy reform and environmental sustainability were highly likely to be achieved.

It was considered a high-risk but potentially high-reward project that built on a government program to promote conservation on privately owned land through market mechanisms. The review considered that if successful, the project could become a model for replication in other countries, as indeed it has. The panel recognized that the prerequisites for such an approach are quite demanding, and were met in very few countries at the time—with Costa Rica being the prime example.

At the time of the QEA4, three suggestions were provided to the task team: (a) promoting a system of differentiated payments for environmental services; (b) increased outcome indicators of market development; and (c) given the high risks and potentially high returns, appropriate attention paid to the midterm review. The Task Team successfully addressed the latter two, and progress was made on the first.

(b) Quality of Supervision:

Rating: Satisfactory

The project team developed an excellent working relationship with the client. During the first four years of the project, a Task Team Leader lived in Costa Rica and had constant interaction with FONAFIFO. This allowed for any issues to be identified and resolved expeditiously. The Mid-term Review was of excellent quality with a high caliber team participating covering the different aspects that were of concern at the time (priority areas, monitoring, sustainable financing mechanisms). Field trips targeted deforested and degraded areas to analyze a new modality of PES for forest regeneration.

In April of 2001, three quality improvement suggestions were provided to the task team: (i) promoting a system of differentiated payments for environmental services; (ii) increased outcome indicators of market development; and (iii) given the high risks and potentially high returns, appropriate attention paid to the mid-term review. The Task Team successfully addressed two of the three suggestions, and progress was made on the third.

With respect to (i), a system of differentiated payments has been under implementation in pilot areas for several years; at the national level, a system of differentiated payments is the cornerstone of the follow-on project – Mainstreaming Market-Based Instruments for Environmental Management -- approved by the Board in June 2006.

With respect to (iii), a detailed mid-term review was carried out to measure progress made under the project and make necessary adjustments. Equally important, the project was reviewed by an international blue ribbon panel contracted by GEF resources, which endorsed the original project design while providing guidance for future environmental service programs (e.g., target contracts to maximize environmental benefits per dollar expended, encourage greater contiguity /

concentration of contracts, explore and develop mechanisms to generate additional sources of sustainable financing). These recommendations served to shape the design of the follow-on project; a summary of the panel report is included as an annex in the PAD of the follow-on project.

With respect to (ii), QEA4 rated the Quality and Coherence of Development Rationale of the project (e.g., Is it focused on outcomes?) as Highly Satisfactory and Implementation Arrangements for the project (e.g., Arrangements to monitor implementation and to review progress, Arrangements for evaluating impact and measuring outcomes) as Satisfactory. During the course of the project actions were taken to ensure that the DOs were adequately addressed. Missions were very effective in not only moving implementation forward but also engaging with the client on longer-term program issues.

Baseline data was collected at the outset of the project despite quantitative and qualitative limitations. As the project evolved, the team was very responsive to feedback provided through various mechanisms including supervision missions and the mid term review. The original PAD included a Logical Framework (or LogFrame) – the standard for all Bank-financed projects in 2000. As the results framework became more widely adopted in the Bank one was developed for the program. Also as a result of feedback, collection of outcome indicators on the number and value of transactions facilitated by FONAFIFO for payment of environmental services by hydropower projects, ecotourism operators, and municipal water supply companies has been ongoing since 2001. To this effect, the project supported the automation of field data collection and integrating it into the administrative system in FONAFIFO. Tables indicating contracts for provision of hydrological services (e.g., hydropower projects, water bottling companies, municipal water supply facilities, agribusiness, and tourism) are in the PAD of the follow-on project.

In FY06, the implementing agency (FONAFIFO) was subject to a full financial management assessment in connection with a follow-on project. The assessment concluded that FONAFIFO has suitable FM structures and systems in place, as documented in the PAD of the follow-on project. Finally, as documented in the results of external audits, all of which were acceptable/clean opinions, the implementing agency's performance was reviewed and deemed to be acceptable to the Bank.

(c) Justification of Rating for Overall Bank Performance:

Rating: Satisfactory

The project team was very effective in not only moving implementation forward but also engaging with the client on longer-term program issues. This was due to a large extent to the Team's excellent relationship with the borrower, enabling an open discussion of issues and options.

5.2 Borrower Performance

(a) Government Performance:

Rating: Satisfactory

Preparation performance was **Satisfactory**, with an adequate contribution by the Borrower during the year required to design the project. Excellent local consultants hired by the Borrower played an instrumental role in project preparation. The GoCR had an ongoing program that they scaled up with the Ecomarkets Project. This has been a program that has been completely country driven and that has enjoyed the support of four consecutive governments (all from different parties). The 3.5 percent of revenues from the fossil fuel sales tax continues to be allocated to FONAFIFO, and the government has committed to new funds through the recently approved Water Canon.

Further evidence of Costa Rica's support for the project's principal goals of conserving biodiversity, halting land degradation, and promoting the sustainable management of natural resources on privately owned land, can be found in: (a) the National Environmental Strategy (ENA); (b) the National Forestry Development Plan (PNDF); and (c) the National Biodiversity Conservation Strategy.

(b) Implementing Agency or Agencies Performance:

Rating: Highly Satisfactory

The success of the Ecomarkets Project is based on FONAFIFO's strength as an institution that is capable of effectively and efficiently (7 percent overhead) managing a complex system of payments for environmental services. The project also had a strong legal framework on which to support itself, and wide political support for the PSA program through four successive administrations. Finally, there was nationwide support from civil society, particularly small- and medium-size landowners, and from local and regional organizations (such as NGOs and cooperatives). The PSA program and the Ecomarkets Project have attracted widespread international interest, spurring several replication efforts. To its credit, FONAFIFO has hosted official delegations from many countries wanting to study the PSA program.

FONAFIFO has also been capable, despite a limited budget, of an excellent application of technological solutions (remote sensing, GIS applications) for forest monitoring and managing contracts. It is also quite effective operating at the political and civil society level (indigenous, gender). This ability has allowed it to successfully navigate through the bureaucratic budget approval cycle controlled by the Comptrollers office.

(c) Justification of Rating for Overall Borrower Performance:

Rating: Satisfactory

The Government of Costa Rica has shown a strong overall commitment to the PSA Program and plans to continue supporting it. The new water canon is a strong indication of this support which complements the fuel tax revenues. Despite some inefficiency (complex bureaucratic procedures, increase in the environmental service payment rate) the PSA Program is a success story that is being shared with the rest of the world. FONAFIFO continues to be the implementing agency and receives high marks for its efficient delivery of the PSA Program.

6. Lessons Learned

- Implementing a successful environmental services program takes a concerted effort over time with political support and an efficient national institutional arrangement and equally efficient local institutions when the program is decentralized.
- Significant amounts of international donor funding can serve as an essential (although not, by itself, sufficient) catalyst for inducing important institutional changes leading to more effective and efficient biodiversity conservation programs.
- Efforts to induce the private sector to enter into voluntary agreements to pay for environmental services may be a useful way of strengthening the private sector's awareness and understanding of the system of payments for ecosystem services, but are unlikely to generate significant amounts of funding to support a national-level PSA program.
- The Ecomarkets Project's focus on creating new markets for ecosystem services, and on the Project's substantial budget, appear to have facilitated a change in the mindset of key national stakeholders, including officials of the Ministry of Finance and private sector businesses.
- Evaluating the effectiveness of conservation programs is difficult when such programs are not designed to be tested and measured against a clear baseline or "control" case.
- While a fixed national price might make political and administrative implementation of the program easier, it is not necessarily the most efficient. Differentiated payments will make for a more efficient use of scarce resources and will allow for an increase in the area covered.
- Identifying up-front training needs of the implementing agencies staff in order to more effectively implement the project can potentially save precious time and avoid unnecessary delays.

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners

(a) Borrower/implementing agencies:

The Executive Director of the National Forestry Financing Fund (FONAFIFO) conveyed to the World Bank the Fund's comments on the ICR in a letter dated December 14, 2006 to the ESSD

Sector Leader of the Central America Country Management Unit for Central America. The following is a summary of the translated version of the section of the comments pertaining to their review of the evaluation (the letter is attached below).

"We have received the Implementation Completion Report (ICR No. 37968) of the Ecomarkets Project financed through a GEF grant of US\$ 8 million and a loan in the amount of US\$32.6 million to the Government of Costa Rica and which was implemented by FONAFIFO.

Having reviewed the evaluation, FONAFIFO as executing agency for the project, expressed its total agreement with the results of the evaluation of the project's performance."

(b) Cofinanciers:

To a great extent, KfW shares the same view as the World Bank about Costa Rica's PES system. KfW's own experience as a co-financing agency of the complementary Huetar Norte Forestry Program shows the utmost importance of establishing a continuous dialogue among donors, implementing agencies, and the government, while providing financing over a period long enough to accompany institutional and political changes. The World Bank's engagement while KfW's funding was not yet available—due to complex Costa Rican institutional procedures for signing an intergovernmental agreement with Germany's government—was extremely helpful. The institutional stability of FONAFIFO, which to a certain extent is the result of long-standing donor engagement, has proven an important element in maintaining the PES system in a prominent place in the political agenda of Costa Rica. The World Bank and KfW have always supported FONAFIFO in further developing the PES and in venturing into alternative financial mechanisms like CDM, voluntary payments, and establishing a Biodiversity Trust Fund.

A sale of carbon to the BioCarbon Fund by FONAFIFO, sponsored by the Ecomarkets Project, and a KfW-financed study on the potential for CDM-related activities have spread interest in Germany among institutions related to voluntary payments and at KfW's Carbon Fund. That demonstrates impressively how the concerted effort of an efficient implementing agency like FONAFIFO and different donors can develop far-reaching, innovative initiatives to conserve biodiversity and avoid CO₂ emissions. Thus, the GEF/World Bank-financed Ecomarkets and KfW-financed Huetar Norte Projects—under the institutional umbrella of FONAFIFO—have proven the advantages of sound donor coordination practices.

(c) Other partners and stakeholders:



Ministerio de Ambiente y Energía
Fondo Nacional de Financiamiento Forestal



14 de Diciembre del 2006
FONAFIFO-D-266-2006

Señor
John Kellenberg
Sector Leader
Environmentally and Socially Sustainable Development
Central America and Caribbean Region
World Bank, Washington D.C.

Ref: TF-23681 Proyecto Ecomercados

Estimado Señor:

Hemos recibido el "Informe de Implementación y Resultados de Finalización del Proyecto Ecomercados " (TF-23681), financiado mediante una donación de USD\$8 millones del Fondo Mundial del Medio Ambiente (GEF por sus siglas en inglés) y un préstamo de USD\$32.6 millones al Gobierno de Costa Rica, en el cual el Fondo Nacional de Financiamiento Forestal (FONAFIFO) actuó como el agencia implementadora del Proyecto.

Una vez que se analizó dicho informe, el FONAFIFO como agencia ejecutora del proyecto, expresa su total conformidad con los resultados de la evaluación realizada sobre el desempeño del Proyecto Ecomercados.

Tanto el préstamo como la donación, la asistencia técnica brindada por el personal del Banco Mundial y la colaboración de todas las ONG's involucradas en el proyecto, hicieron posible que éste proyecto fuera todo un éxito y además se logró entre otras cosas, fortalecer al FONAFIFO en su gestión de proteger y promover la conservación y uso sostenible de los recursos naturales de nuestro país. Los resultados obtenidos en los diferentes estudios realizados sobre este proyecto, reflejan que se cumplieron los objetivos planteados durante la preparación del mismo, y se alcanzaron las metas propuestas.

Ahora nuestro propósito es continuar con nuestra misión de proteger y promover la conservación y el uso sostenible de los recursos naturales de nuestro país, con el fin de darle a las futuras generaciones una mejor calidad de vida.

Atentamente,

Ing. Jorge Mario Rodríguez Zúñiga
Director Ejecutivo



y/oficios

cc: Sr. Gunars Platans Banco Mundial
Sr. Nadim Kourim Banco Mundial
Archivo ☐ FONAFIFO-D-02-2006
consecutivo

"Ofreciendo Recursos para el Desarrollo del Sector Forestal"

Tel.: (506) 257-8475 / Fax: (506) 257-9695 / Apdo. 594-2120 / www.fonafifo.com / fonafifo@fonafifo.com

ANNEXES

Annex 1. Project Costs and Financing

(a) Project Cost by Component (in US\$ million equivalent)

(Total rows and percentage column will be calculated by the system)

Components	Appraisal Estimate (US\$ million)	Actual /Latest Estimate (US\$ million)	Percentage of Appraisal
1. Strengthen Market Development for Environmental Services			
a. Programmed ESP contracts	14.0	13.8	99%
b. New ESP contracts	23.3	23.8	102%
c. Development of revenue capture mechanisms	0.4	0.2	50%
2. Strengthen Administration and Field Supervision of PSA Program			
a. FONAFIFO Administration	2.5	2.9	116%
b. SINAC forest protection and field supervision	7.9	8.2	104%
c. Strengthening of non-governmental organizations	0.8	0.4	50%
Total Project Costs			
Front-end fee	0.3	0.3	100%
Total Financing Required	49.2	49.6	101%

(b) Co-financing

Source of Funds	Type of Financing	Appraisal Estimate (US\$ million)	Actual/Latest Estimate (US\$ million)	Percentage of Appraisal
[Borrower]	Government	8.6	9.0	105%
[IBRD/IDA]	IBRD	32.6	32.6	100%
[GEF]	GEF	8.0	8.0	100%
TOTAL		48.9	49.3	101%

Annex 2. Outputs by Component

Component 1: Strengthening Market Development for Environmental Services – US\$37.7 million (total cost of component)

(a) **Programmed PSA contracts: 1995–1999.** The project financed payments to 195,128 hectares (ha) of land already enrolled in the PSA Program at project start. This financing permitted the GoCR to meet its long-term commitments to private landowners that had enrolled in the PSA Program while long-term financing mechanisms for the program were developed and institutionalized. Since 1995, the GoCR had signed environmental service contracts incorporating 224,191 ha of privately owned forest ecosystems throughout Costa Rica into the PSA Program.

(b) **New PSA contracts.** The project financed the enrollment of (i) 50,000 ha of land in Tortuguero, La Amistad-Caribe, and Osa Conservation Areas (important portions of the MBC/CR); and (ii) 50,000 ha of land in other areas of high biological importance as identified in the 1996 GRUAS Report; and (iii) additional land outside of GRUAS Report areas based on priorities established by SINAC-MINAE, ensuring regional representation within the PSA program. The area enrolled includes 130,900 ha in the project's priority areas, exceeding the project's target of 100,000 ha by EOP.

At the beginning of the project there was a strong revealed preference of voluntary payments for hydrological services by a number of hydroelectric operations. Based on this experience and with project support, a total of 17 companies had PES contracts through FONAFIFO at project end totaling approximately US\$0.5 million per year.

The project also supported FONAFIFO's exploration into the international market of greenhouse gas reduction. Studies were undertaken that provided critical information from which FONAFIFO has been able to position itself with innovative products such as a carbon reduction project with a local cooperative presented to the BioCarbon Fund. The methodology for calculating carbon emission reduction was a first for the Clean Development Mechanism Executive Board. As a result, FONAFIFO developed seven Project Idea Notes for carbon emission reductions and placed this on offer in the international market (Carbon Expo 2005–2006).

(c) **Development of revenue-capture mechanisms.** The project supported the analysis, design, and implementation of revenue-capture mechanisms to internalize the value of environmental services through explicit payment schemes, with emphasis on complementary services to biodiversity in forest conservation areas (for example, hydrological services). The project also supported the design and establishment of a trust fund to capture and provide funds to pay for contracts targeting biodiversity conservation beyond the life of the project.

Component 2: Strengthening Administration and Field Supervision of the PSA Program – US\$11.2 million (total cost of component)

(a) **PSA supervision.** Project resources were used to support monitoring, supervision, and evaluation of the PSA Program and implementation of a financial management system for project activities. The project also provided technical support for FONAFIFO's GIS system to enhance the PSA Program's monitoring and evaluation system.

(b) **SINAC forest protection and field supervision.** The project supported and strengthened forest protection programs and field supervision activities carried out by SINAC. FONAFIFO has opened eight field offices within SINAC installations, which has helped strengthen SINAC.

(c) **Strengthen local and regional NGOs.** Throughout Costa Rica, local and regional organizations provide resources bundling services, reducing transaction costs related to contracting of environmental services for small landowners and for FONAFIFO. Such bundling allows small forest owners to access the PSA Program through legal assistance and technical advice relating to conservation and sustainable use of forest ecosystems. Bundling numerous small landowners together reduces the unit cost of such services while supporting landowners who might otherwise have difficulty complying with PSA Program regulations. Furthermore, local and regional NGOs provide evaluation and contract compliance services to FONAFIFO, thereby reducing program administrative costs.

The project provided resources to improve the technical and administrative capacity of local NGOs and private sector associations that assisted small farmers in accessing the PSA Program, and supported organizational and technical strengthening of local women's organizations to develop capacity to promote natural resources management and increased participation in the PSA Program. This resulted, as stated in section 8.2, in an increase from 22 to 474 women heads of households. Likewise, the increase in indigenous peoples' lands in the program went from 2,850 ha in 2000 to 25,125 ha in 2006.

Annex 3. Economic and Financial Analysis

(Including assumptions in the analysis)

The economic analysis of the project is constrained by the lack of quantitative data on the extent of benefits being generated by PSA activities. However, qualitative results show that the PSA program is likely to be generating substantial national benefits in terms of improved hydrological services, biodiversity conservation, and carbon sequestration.

As discussed in this Annex, despite data limitations, it is reasonable to conclude that the PSA Program generates significant benefits. There is, however, considerable scope to improve the program's efficiency and substantially increase the benefits it generates, both to Costa Rica and to the world. Doing so requires introducing a much more differentiated payment program, in which the supported land uses, the definition of eligible areas, and the payments offered are closely tailored to site-specific characteristics rather than being uniform nationwide. These changes will tend to increase average benefits per hectare and reduce the proportion of enrolled area that is not generating additional benefits.

Land use change. The first question that needs to be addressed is the extent to which payments under the PSA Program induce changes in land use. To the extent that some of the area enrolled would have been under forest even in the absence of the program, it would have generated services even without the program, and the benefits of these services could not be attributed to the PSA Program. Determining the extent to which the PSA Program actually changed land use is difficult, because it requires comparing land cover under the program with the counterfactual of what land cover would have been in its absence.⁵

Considerable work is underway to assess the extent to which the PSA Program has induced land use change. Tattenbach and others (2006), using an econometric model of deforestation, estimate that primary forest cover in 2005 was about 10 percent greater than it would have been without the PSA Program. Sills and others (2006), using a propensity-score matching method, find evidence that PSA has encouraged protection of mature native forest in Sarapiquí. A separate test using similar methods with district-level data finds inconsistent results. More work will clearly be needed to arrive at a clear assessment of the extent to which the PSA Program induced land use change.

Improved hydrological services. Expectations that the PSA program would improve hydrological services are based on the view that forests are always beneficial to hydrological services. In fact, the evidence on the links between land use and forest is far from clear. Nevertheless, it is likely that activities funded by the PSA program (forest conservation and reforestation), are indeed generating valuable hydrological services.

- **Total water volume.** Although the belief that forests increase total water flow is well entrenched, most hydrologists agree that the opposite is true: the total annual volume of water usually decreases with an increase in forest cover in the upper catchments area. Total annual water volume is seldom a constraint in Costa Rica, however, because it receives an estimated 170 km³ of water annually, but consumes only about 6 km³.

⁵ To assess the extent of actual land use change, emerging guidelines for conservation project evaluation recommend randomizing participation decisions, or including control groups (Ferraro and Pattanayak 2006). These guidelines post-date preparation of the Ecomarkets Project, however.

- **Water quality.** Unlike total water volume, water quality is an important concern for many water users in Costa Rica—particularly for domestic water supply systems and for industrial users such as bottlers. It is well established that forested catchments usually produce much-higher-quality water than non-forested catchments. Conserving watersheds thus allows downstream water users to make substantial savings in water treatment costs.⁶
- **Sedimentation.** A well-managed watershed will also usually have low levels of sedimentation, thus reducing damage to reservoirs and water intakes and avoiding the need for costly de-silting operations.
- **Reduced flood risk.** An important regulatory function of forests is that of reducing floods. While this impact is very limited in large-scale basins, it has been well established in small basins (about 500 km²). Given the size of Costa Rica, most watersheds in the country are in this latter category.
- **Dry season water flow.** Although hydrologists agree that forest cover generally reduces total annual water flow in a watershed, there is no such consensus on its effect on dry season water flow, because increased infiltration and increased evapotranspiration act in opposite directions. Even though total water supply is generally ample, dry season water flow is an important issue in several areas of Costa Rica.

On balance, it seems likely that PSA-financed forest conservation and reforestation are indeed generating valuable hydrological services, notably by improving water quality and by reducing sedimentation and flood risk. The only significant uncertainty is over whether forest cover helps improve dry season water supply or not. Unfortunately, however, available data seldom allow these benefits to be quantified. By helping improve the monitoring of water flows, the project will help Costa Rica improve its understanding of how land use affects hydrological services, thus allowing it to better target its activities in the future.

Targeting. Appropriate land uses will only help if they are in the right place. Hydrological services, by their nature, are highly site specific. Water users in a watershed only benefit from appropriate land uses in that same watershed—and only for those uses that are upstream of their water source. Tattenbach and others (2006), using data on the location of water users compiled by Fallas (2006), estimate that the deforestation avoided by the PSA Program protected water sources supplying 7 million m³ of water for domestic use and 756 million m³ of water for hydropower generation. This is particularly impressive in that with the exception of payments based on contracts with individual water users (see below); hydrological importance has not been a targeting criterion for the PSA program to date. Nevertheless, there is considerable room for improvement: according to the estimates of Tattenbach and others (2006), only 34 percent of avoided deforestation was in hydrologically important watersheds.

Contracts with water users. FONAFIFO has signed contracts with 17 different private sector and public sector water users (hydroelectric producers, bottlers, irrigated agriculture, domestic water supply systems, a hotel), under which the water users pay for the conservation of the

⁶ In a well-documented case, New York City was able to save an estimated US\$8.5 billion to build and operate a water treatment plant by instead investing US\$1.5 billion in watershed conservation. In Costa Rica, the town of Heredia faced a similar situation. Like New York City, it does not filter its water as it emerges from the well-conserved upper watershed with very high quality. To ensure that this continues to be the case and to avoid the need to build a costly filtration plant, Heredia is paying FONAFIFO to conserve its watershed through the PSA program, in conjunction with Florida Ice & Farm, a large bottler located in the same watershed.

watersheds from which they draw their water. These arrangements currently cover about 18,500 ha and generate US\$0.5 million annually. These agreements are significant in that they demonstrate that the willingness to pay for hydrological services is not just theoretical, but real.⁷ They also provide prima facie evidence that these water users perceive the benefits of conservation to exceed the costs. It is particularly significant that both water service contracts that have come up for renewal have been renewed.

Improved biodiversity conservation and scenic beauty. Although biodiversity is primarily a global benefit, it also brings direct benefits to Costa Rica, in particular through its contribution to the booming tourism industry sector. Biodiversity in this sense includes scenic beauty (which is named as a separate service in Forest Law No.7575). The contribution that improved forest conservation makes to the tourism industry is not easily quantified, however. Efforts to generate financing from the local tourism industry have not yet borne fruit. In addition to tourism benefits, biodiversity can also provide some local benefits to agriculture, for example through improved pollination. A study of pollination patterns in the coffee-growing region of San Isidro del General, in the Province of San José, found that forest fragments in the region provide nearby coffee plants with a diversity of bees that increased both the amount and stability of pollination services. This suggests that coffee production near forest fragments might have higher yields, although this was not measured.

Tattenbach and others (2006) estimate that 66 percent of the avoided deforestation thanks to the PSA Program was in biodiversity priority areas.

From the country's perspective, the payments received from outside sources for biodiversity conservation count as program benefits. These include the US\$5 million provided by GEF under the Ecomarkets Project to make payments in biodiversity priority areas, and a smaller amount provided under the Regional Integrated Silvopastoral Ecosystem Management Project. Conservation International (CI) is also paying for biodiversity conservation through the PSA Program, by providing US\$0.5 million to pay 50 percent of the cost of agroforestry contracts in the Osa and Amistad Pacifico conservation areas, and by paying 50 percent of the costs of planting up to 80,000 trees under agroforestry contracts in the buffer zone of Chirripó National Park.

Carbon sales. Costa Rica's PSA Program has increased carbon sequestration through reforestation and, to the extent that it has prevented deforestation, it has avoided carbon losses. However large these impacts, they only provide benefits to Costa Rica to the extent that the country is compensated for them. Although a consortium of Norwegian power producers paid US\$2 million for carbon sequestration in 1997 (before the Ecomarkets Program began), no further sales were made because of the uncertainty over what land use activities would be eligible under the Kyoto Protocol's Clean Development Mechanism, and then by the decision to exclude avoided deforestation. Because most of Costa Rica's emission reductions are generated by avoided deforestation rather than reforestation, FONAFIFO was unable to sell emission reduction services. FONAFIFO continued working on this topic, however, and toward the end of the Ecomarkets Project developed a reforestation/afforestation project involving the sale of about

⁷ Several contingent valuation surveys have been carried out of consumer willingness to pay for improved hydrological services and/or for watershed conservation. For example, Barrantes (2001) found willingness to pay for watershed conservation in Heredia to be about C15.5/m³ (about C25.7 in 2004, or US\$0.05), or about C4,826/year, given mean monthly household consumption of about 23m³ (C7,100 in 2004, or about US\$14.5).

0.61 million tons of carbon dioxide equivalents (tCO₂e) by 2017 to the BioCarbon Fund. FONAFIFO is also exploring the small but growing market for voluntary contributions to conservation. Costa Rica's recognized "brand name" related to environmental conservation, combined with FONAFIFO's track record of developing environmental service markets, place FONAFIFO in a strong position to develop new innovative market-based instruments for financing forest conservation. Already, some transactions have been negotiated on an ad hoc basis (for example, an Italian NGO is paying to regenerate degraded forests in Costa Rica's Talamanca region). The proposed project will support a more systematic approach to these voluntary markets, including the development of a range of products (for example, certificates to finance conservation in areas of globally significant biodiversity). Funds generated through these sales would help capitalize the Biodiversity Conservation Trust Fund. This would ensure that conservation financed by these voluntary markets (which would otherwise be very unsustainable) would be sustainable in the long term. That the Biodiversity Conservation Trust Fund would help ensure that conservation is in perpetuity is also expected to be an important "selling point" for these voluntary markets. Although these voluntary markets are unlikely to generate very large amounts, they will help to finance conservation.

More broadly, Tattenbach and others (2006) estimate that the deforestation avoided thanks to the PSA Program during 1999–2005 (about 110,000 ha) prevented the emission of almost 11 million tC (assuming each hectare of forest holds 100 tC). Current CDM rules prevent Costa Rica from being compensated for this global benefit. If current prices of about US\$12/tC are applied, however, the benefit to the world is worth about US\$130 million. The PSA Program also contracted for reforestation on 11,346 ha during Ecomarkets implementation; assuming an 80 percent survival rate and 100tC/ha sequestered, another 0.9MtC will be sequestered, worth an additional US\$11 million.

Costs of the PSA program

The costs to the country of undertaking the PSA-financed conservation activities include: (a) the opportunity costs of foregone land uses, in cases where landholders would indeed have undertaken other land uses; (b) any management or reforestation costs involved to comply with PSA contracts; (c) the transaction costs of the PSA program, including FONAFIFO's administrative costs and costs borne by program participants; (d) any deadweight losses arising from the way in which financing is generated, and (e) any induced costs resulting from general equilibrium effects (for example, because of reduced agricultural production). Note that the payments themselves are not costs to the country, because they are transfers to other Costa Ricans.

- **Opportunity costs.** The opportunity costs of land placed under conservation are potentially the largest cost of the PSA program. This cost will only be borne, however, if land use change is indeed additional; if land would have been under forest even without the program, there is no opportunity cost. For areas that do participate, it is safe to assume that the opportunity cost of land, plus any necessary management costs and transaction costs borne by participants, are less than the payment offered (US\$40 to US\$45, depending on the year of enrollment). Since some land would have been under forest even without the program, there is reason to believe that the opportunity costs are zero in at least part of the area enrolled.

- **Planting and management costs.** Planting and management costs are likely to be most significant in the plantation contract and the agroforestry contract. Estimates prepared for the COOPEAGRI carbon sequestration project in the Brunca Region show gross costs of about US\$1,200/ha for plantations and US\$290/ha for agroforestry (in present value terms, over a 20-year period with a 10 percent discount rate). In both cases, however, these costs would be offset by income from timber sales and, in the case of agroforestry, induced on-site benefits from higher land productivity. Indeed, estimates prepared for the COOPEAGRI project show that both timber plantations and agroforestry would be profitable in those areas, even without PSA payments. Landholders with forest protection contracts also have to bear some additional costs for fencing, sign-posting, and fire protection. These are generally low and, as noted, are already included in the overall estimate of costs not exceeding the payment.
- **Transaction costs.** By law, FONAFIFO's administrative costs are limited to 7 percent of payments, or about US\$3.15/ha/year. Likewise, program participants must bear transaction costs, particularly related to the cost of preparing and monitoring implementation of required management plans. The estimated transaction costs for forest conservation contracts is in the range of US\$5 to US\$12 per hectare per year, whereas transaction costs related to reforestation contracts range from US\$12 to US\$28 per hectare per year during the five years that payments are received.
- **Other costs.** Estimating the broader costs that might be induced by the PSA program is difficult, because it would require a general equilibrium framework. An attempt was made to do this using a computable general equilibrium (CGE) model (Ross, Depro, and Pattanayak 2006). It concludes that the program's gross costs to the country were \$12 million a year in 2005, rising to \$36 million a year by 2015 as additional areas are brought under conservation. The bulk of these costs represent opportunity costs.

Net benefits of the PSA program to Costa Rica

Determining whether implementation of the PSA program is beneficial for Costa Rica requires assessing whether total benefits exceed total costs. Table A.5.1 summarizes the available information.

Although lack of quantitative data precludes a numerical analysis, it can be concluded that: (a) in areas with significant numbers of water users, water benefits are likely to be sufficient by themselves to justify the PSA program's conservation activities; and (b) contributions by the GEF and other donors compensate the country for the incremental costs of conservation efforts in areas of high biodiversity significance. Looking forward, in areas eligible for sales of verified emission reductions (VERs), income generated from VERs will cover the bulk of reforestation costs, meaning that only small amounts of additional benefits would be necessary for these activities to be economically justified. Thus it is likely that PSA program activities are economically justified for the country.

Nevertheless, there is considerable scope to increase net benefits by improving targeting to areas with high benefits, and by fine-tuning activities supported to those most appropriate to given locations (given the specific services of interest there, and the cost of implementing them). The follow-on project will support efforts to identify and prioritize areas most likely to generate valuable benefits (thus increasing average service generation per dollar spent) and to differentiate

and target payments so that they are more likely to result in land use change (thus reducing the cost per unit of service generation).

Global cost-benefit analysis: From a global perspective, the Ecomarkets Project can be said to have generated carbon emissions reductions benefits worth about US\$141 million (US\$130 million from avoided deforestation and US\$11 million from reforestation, assuming a carbon value of US\$12/tC). The numbers are too crude to allow a formal cost-benefit analysis to be carried out, but the size of the carbon benefits alone compare very favorably to the project's total costs of about US\$50 million.

Alternative approaches. In the absence of the PSA program, the main alternative for Costa Rica to obtain the services the program generates would be to place additional areas under formal protection. In both cases, the opportunity costs of preserving a given plot of land would be the same.⁸ Differences must then be sought in other cost categories. The environmental services that would be generated would also be the same if the same plot is conserved, although the on-site benefits might differ.

- For land under the forest protection contract (the bulk of enrolled area), the management costs are generally low. In addition, there are about US\$3.15/ha in transaction costs to FONAFIFO and US\$5 to US\$12 in transaction costs borne by participants. Data provided by SINAC indicate that the recurring annual costs of protected area management vary from US\$0.50/ha to as much as US\$20/ha. Note that this does not include the initial transaction costs involved in establishing protected areas. These figures suggest that the protected area approach would likely be relatively cheaper in many, but not all, cases than a PES approach when conserving existing forests.⁹
- For land under the timber plantation contract, the appropriate comparison is to land in protected areas that requires reforestation or natural regeneration. The costs of planting would likely be similar in both cases if reforestation is required, but where seed sources are adequate, natural regeneration might be sufficient, and would obviously be much cheaper. In the case of a PES approach, however, the timber benefits can be harvested; presumably this would not be possible if the same plot was placed in a protected area. As noted, timber sales alone are likely to be sufficient to justify planting costs. In this case, the PES approach would be much more attractive than the protected area approach.
- Agroforestry land uses would presumably not be undertaken in a protected area. This would preclude the use of a practice that could allow some environmental services to be regenerated at a much lower cost than with full reforestation or natural regeneration.

Overall, it seems likely that PES is slightly more expensive than a protected area approach when it is applied to conserving existing forest, but that it is much cheaper when it is applied to restoring (fully, through reforestation or regeneration, or partially, through agroforestry) areas where forests have been lost.

⁸ Just as payments to participants in a PES program are not considered an economic cost, payments made to purchase land from landholders are not either.

⁹ This was the conclusion of a more in-depth analysis of the comparison between PES and protected area approaches conducted during preparation of the Ecomarkets Project (World Bank 2000). The protected area approach has a distinct cost advantage to the extent that it is able to secure land that is compact.

Financial cost-effectiveness. Whatever its economic merits, the protected areas approach would be prohibitively costly in financial terms, because it would require compensating landholders for the full value of their land (rather than just for the difference between its value under an alternative land use compared to its value under a conservation use), and it would require the entire value of this compensation to be paid up front (rather than being paid annually, as under a PES contract). Indeed, Costa Rica still owes substantial amounts to landholders whose land was expropriated to create the current protected areas. Creating additional protected areas, and thus displacing their owners, would also be socially unacceptable.

Conclusions

Costa Rica's PSA program has relatively low costs, and likely generates a wide variety of benefits. In areas where water users are already paying for hydrological services, there are prima facie reasons to believe that water benefits alone exceed the costs. In other areas, costs are harder to compare with benefits because most benefits are unquantified. Improved targeting of enrolled areas can increase the proportion of land likely to generate valuable benefits included in the program. The introduction of differentiated payments will also allow a much larger area to be included with a given budget, thus increasing benefits without increasing costs.

Together, these changes should result in a substantial increase in the generation of environmental services per dollar spent. Work is underway to develop suitable indicators of the extent to which provision of different services increases under the PSA program. These indicators will then be measured through the increased monitoring efforts that the new project will include, to track the increased efficiency of the PSA program.

Table A.5.1: Costs and benefits of the PSA program

<i>Modality</i>	<i>Additional?</i>	<i>Costs</i>	<i>Total (US\$/ha/yr)</i>	<i>Benefits</i>	<i>Comments</i>
Forest protection	Yes	Opportunity cost		Improved water quality, reduced sedimentation	In some cases, sufficient by itself to justify total costs
		Management cost			
		Transaction cost for participants	< 45	Biodiversity conservation	
	Transaction cost for FONAFIFO	3	Avoided C emissions	Not eligible under CDM	
		Total:	<48	Preservation of scenic beauty	Unquantified contribution to tourism
	No	Transaction cost for participants	5-12	None, except in 'insurance' sense	In some cases, willingness to pay by water users for insurance function
Transaction cost for FONAFIFO		3			
Total:		<8-15			

Table A.5.1: Costs and benefits of the PSA program

<i>Modality</i>	<i>Additional?</i>	<i>Costs</i>	<i>Total (US\$/ha/yr)</i>	<i>Benefits</i>	<i>Comments</i>
Timber plantation	Yes	Opportunity cost	< 900	Timber sales ca 2,100	
		Planting and management cost	1,200	Improved water quality, reduced sedimentation	
		Transaction cost for participants	*	Biodiversity conservation	Potential GEF or other donor financing in priority areas
		Transaction cost for FONAFIFO	12-28	Increased C sequestration	Potentially eligible under CDM

Notes: * Included with opportunity cost

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending (from Task Team in PAD Data Sheet)			
John Kellenberg	Task Team Leader	LCSES	Natural Resources Economist
Thomas Wiens	Sector Manager	LCSES	Institutional Specialist
Jeffrey Muller	Natural Resources Economist	LCSES	Economist
Martin Raine	Sr. Economist RUTA	LCSES	Agricultural Economist
Juan Martínez	Indigenous Specialist	LCSES	Indigenous Specialist
Gonzalo Castro	Biodiversity Specialist	ENV	GEF eligibility
Enzo de Laurentiis	Procurement Specialist	LCSPT	Procurement
Luz Zeron	Financial Management Specialist	LCSFM	Financial Management
Daria Goldstein	Country Lawyer	LC2	Legal Agreement
Gabriela Boyer	Environmental Specialist	LAC	Environmental concerns
Esteban Brenes	Environmental Specialist	LCSES	Local Institutional knowledge
Supervision (from Task Team Members in all archived ISRs)			
John Kellenberg	Task Team Leader (up to 2003)	LCSES	Natural Resource Economist
Gunars Platais	Task Team Leader	LCSEN	Environmental Economist
James Smyle	Sr. Natural Resources Specialist	LCSER	Natural Resource Specialist
Angela Armstrong	Operations Analyst	LCSEN	Operational issues
Teresa Roncal	Operations Analyst	LCSER	Procurement
Luz Zeron	Financial Management Specialist	LCSFM	Financial Management
Stefano Pagiola	Sr. Environmental Economist	ENV	Environmental Economist
Gommert Mes	Consultant	LCSEN	Natural Resource Specialist
Kenneth Chomitz	Lead Economist	DECRG	Natural Resource Economist
Nadim Khouri	Sr. Nat. Res. Mgmt. Specialist	LCSER	Natural Resource Specialist
Luis Prada	Procurement Specialist	EWDAN	Procurement
Fabienne Mroczka	Financial Management Specialist	LCSFM	Financial Management
Brenda Kleysen	Consultant	LCSEN	Operational support
Ketty Morales	Program and Procurement Assistant	LCSER	Operational support
Alexandra Sears	Program Assistant	ENV	Operational support

(b) Staff Time and Cost (from SAP)
(The system pulls data available for all fields)

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	Number of Staff Weeks	US\$ Thousands (including travel and consultant costs)
Lending		
FY98	2.46	18.8
FY99	1.96	15.0
FY00	6.88	52.6
TOTAL:	11.29	86.4
Supervision/ICR		
FY01	7.79	35.2
FY02	10.47	34.0
FY03	8.1	28.7
FY04	13.3	60.3
FY05	14.25	61.1
FY06	13.08	60.1
FY07	8.33	50.3
TOTAL	75.32	330.4

Stage of Project Cycle	Staff Time and Cost (GEF Budget Only)	
	Number of Staff Weeks	US\$ Thousands (including travel and consultant costs)
Lending		
FY00	10.12	43.4
TOTAL:	10.12	43.4
Supervision/ICR		
FY00	0.18	0.3
TOTAL	0.18	0.3

Annex 5. Beneficiary Survey Results

A beneficiary survey was not undertaken.

Annex 6. Stakeholder Workshop Report and Results

A stakeholder workshop was not undertaken.

Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR

FONDO NACIONAL DE FINANCIAMIENTO FORESTAL

Ecomarkets Project

**Final Evaluation by the Project Executors and Beneficiaries:
Main Lessons Learned**

Presented to: The World Bank

October 2006

1. Introduction

As a result of various meetings, workshops, and consultancies in different fields, during 1999 and 2000, an interdisciplinary and interinstitutional team from the public and private sector, created the Ecomarkets Project. The purpose was to obtain information that would facilitate the integration of the Costa Rican Payment for Environmental Services Program (*Programa de Pago por Servicios Ambientales- PSA*)¹⁰ to be integrated into a project aimed at developing green markets.

The Project officially began on April 17, 2001, according to Loan Agreement No. 4557-CR, subscribed between the International Bank for Reconstruction and Development (IBRD) and the Government of Costa Rica (GoCR), for \$32.6 million, to finance the PSA Program during a five-year period. Concomitantly, a GEF donation agreement for \$8 million was signed with the World Bank as implementing agency. The GoCR contributed an equivalent amount to the GEF donation in Costa Rican colones.

To implement the project, the Ministry of Environment and Energy (MINAE) selected the Fondo Nacional de Financiamiento Forestal (FONAFIFO) as the Executing Unit with oversight of the Implementation Committee. The committee was composed of a representative of the National System of Conservation Areas (SINAC), a representative of MINAE's Executive Division for Gender and Environment, and the Directors of the OSA, Tortuguero, and Amistad/Caribe Conservation Areas, with the intention of overseeing compliance with the objectives established by the Ecomarkets Projects.

The Ecomarkets Project was designed based on the PSA Program, which has been in operation since 1997. This Project supports institutional strengthening and the possibility of searching national and international market niches for environmental services, the first national project of its kind. The main objective of the Ecomarkets Project was to provide financial assistance in the conservation of forestry areas by supporting the development of the environmental services market, provided by ecosystems on private lands.

2. Project Description

The Project has two components that would address institutional strengthening, market development, and accountability, by following up on contracts with beneficiaries.

2.1 Component 1: Strengthening of the environmental services market

Costa Rica has developed innovative financial mechanisms to promote the medium-term financial sustainability of the PSA Program carried out by MINAE through FONAFIFO and SINAC.

¹⁰ "PES" is used throughout this document to refer to the *concept* of payments for environmental services, while Costa Rica's application of this concept is referred to by its Spanish acronym, "PSA."

In this component, the Project supports the PSA Program by taking on the financial obligations of contracts existing prior to the Project and providing environmental services through new contracts.

The strategic objectives of this component are to:

- Incorporate 100,000 new hectares into the PSA Program in the Project's priority areas.
- Increase the participation of women in the PSA Program by 30 percent.
- Increase the participation of indigenous communities by 100 percent.
- Design, develop, and implement fundraising mechanisms to internalize the value of environmental services through explicit payment programs so that they are able to support the PSA Program, including the design and development of a fund to raise and provide resources for the payment mechanism of the PSA Program beyond the Project's life.

2.2 Component 2: Strengthening of the administration and field supervision of the PSA Program

This component supports PSA Program's supervision through coordination with MINAE. In this respect, it is important to mention the project's contribution to institutional strengthening for the creation of capacities in FONAFIFO both to qualified personnel and technological support through the geographic information system (GIS) and the Project Administration System.

This component is divided into three subcomponents:

- Supervision of the PSA Program by FONAFIFO
- Forestry protection and Field Supervision by SINAC
- Strengthening of Local and Regional NGOs.

3. Project Results

3.1 Strengthening of the environmental services market development

FONAFIFO was granted the responsibility of strengthening the development of the market for environmental services in article 47 of Forestry Law 7575, which foresees FONAFIFO's asset base constituted from resources arising from the conversion of external debt and payment for environmental services which, due to the nature of its activities, are made by private and public, and national and international organizations. This, with the intent of finding financial sustainability of the PSA Program, is based on two fundamental principles:

- Internalizing the four environmental services to which the Forestry Law makes reference, and
- Applying the principle of financial sustainability by which those who benefit from the environmental services are charged for them, and those who produce them are paid for the service, thus promoting the development of markets for environmental services.

At the beginning of the Project, resource management was restricted to the protection of water resources, since the potential for the development of environmental services was identified by the interest expressed by hydroelectric plants, through the voluntary payments made to the PSA

Program. With the experience generated through the first companies that entered the PSA Program, and its strengthening through the ECOMARKETS project, it was possible to involve 17 companies interested in the environmental services for the protection of the water resources in the watersheds where they held their productive activities. Their contribution to the program has reached \$7.029 million. It is important to highlight that these contracts were negotiated on a one-on-one basis, which translates into long and costly negotiations.

Later, using the financial support of the ECOMARKETS Project, consultant services were sought for the “Strengthening of FONAFIFO’s capacity in technical and financial cooperation resource management,” and a “Strategy to strengthen FONAFIFO’s capacity in technical and financial cooperation resource management,” in hopes of increasing the institution’s capacity to market environmental services.

Thus, in 2002, and with the support of the Ecomarkets Project, a study was contracted to develop a financial instrument that would allow private businesses to contribute resources to the program in its search for the PSA Program’s financial sustainability. The study results led to the design of the Certificates for Environmental Services, and the first offering of the Certificates, called *Guanacaste Emission*, on the open market, is planned. Its objective is to protect the aquifers of the province of Guanacaste.

Later, with the support of the project, two more offerings were designed, called “Green Parrot” and “Emissions from Indigenous Land,” the purpose of which is to attract private investment in the conservation of biological and cultural biodiversity.

The process to launch the Certificates for Environmental Services to the market was accompanied by a publicity campaign for its diffusion and elaboration of promotional material, financed through the Ecomarkets Project, which sought to position FONAFIFO and seek the credibility and support of private businesses promoting an environment of trust for the investment of resources.

At the same time, the conditions were established to enter the international markets for the reduction of the greenhouse-effect gases. In this sense, the resource management area, with the support of the Ecomarkets Project, took on the task of researching the carbon international voluntary and obligatory market. Experts from the Tropical Agricultural Research and Higher Education Center (CATIE), the Central American Institute for Business Administration (INCAE), and the Biocarbon Fund, among others, were consulted, as were Internet sites, which would make it possible to identify the market, its demand, and prices.

Furthermore, to promote institutional technical capacity in the formulation and marketing of projects within the carbon market, one person was trained under the hands-on principle through the development of a forestry project sold to the Biocarbon Fund and whose methodologies were presented to the Clean Development Mechanism’s (CDM) Board of Directors.¹¹

As a result, seven Project Idea Notes (PIN) were developed for projects that seek to reduce greenhouse-effect gas emissions in different regions of the country. These PINs became

¹¹ “Carbon Sequestration in Small and Medium Farms in the Brunca Region, Costa Rica (COOPEAGRI- Project).”

FONAFIFO's potential offer, which was later offered in different events specialized in carbon marketing, such as the Carbon Expo in Germany during 2005–06.

This new potential offer and the contract with the Central American Institute for Business Administration (INCAE) business school resulted in a business plan that identified the best market conditions from the projects' financial analysis. This same study determined that the voluntary market offered good opportunities at a lesser cost, potential buyers, prices, offers, and so forth. Furthermore, a study was conducted that made it possible to determine feasible alternatives to implement dendroenergy projects.

The Internet webpage was redesigned thanks to the Ecomarkets Project, developing a technological platform that makes it possible to receive donations and sell some of the products designed by FONAFIFO. This mechanism will be used to market the environmental service for reducing the emission of greenhouse gases (GHG) through the "Clean Trip" component, which allows travelers to compensate for their GHG emissions generated through their national and international travel. This project has generated \$24,000 to date, contributed by Nature Air airlines, two international meetings conducted in Costa Rica, and a Travel Agency (*Viajes Horizontes*). In addition, a Spanish NGO acquired 3,000 tons from one of the projects elaborated by FONAFIFO to reduce CO₂ emissions. This is a good example of the positive results generated by this technological redesign.

The Ecomarkets Project also contributed to the studies carried out for the design and creation of the Biodiversity Fund, which establishes the basis for entering the markets for the environmental services of protecting Biodiversity. This Fund is a Capital Fund in which the principal capital resources and interests will be capitalized in a Trust Fund created by the *Fundación Banco Ambiental* (FUNBAN), part of the conclusions and recommendations made by this study that include the creation of a Foundation as a legal entity, since this is the only arrangement that guarantees that the objectives of its constitution are not modified, and provide Fund investors security that the funds will be destined to the conservation of biodiversity in the long term through a payment plan for environmental services.

FONAFIFO's participation in the update and execution of the National Forestry Development Plan was of vital importance. Particularly in the support offered through the Ecomarkets Project for the Implementation of the Information System for Forestry Resources of Costa Rica (SIREFOR, <http://www.sirefor.go.cr>), an information system that systematizes and makes available the information generated by different public and private institutions of the sector.

During the execution of the Ecomarkets Project, FONAFIFO supported and led an interinstitutional commission to prepare and negotiate several funding proposals to generate financial resources, which would make it possible to capitalize the fund for the conservation of biodiversity through the PSA Program within the Free Trade Agreement (FTA) framework. Therefore, through the Ecomarkets project, a consultancy was contracted for the negotiation of forestry products and services within the framework of the FTA between Costa Rica and the United States.

3.2 Incorporation of 100,000 new hectares into the PSA Program in the Project's priority areas

Within the process initiated in 2000 to include a greater number of hectares under the forest protection category in the areas identified as a priority for the Project, several important actions were taken that made it possible to include an accumulated 159,573 hectares within the PSA Program.

The project widely exceeded the goals established for each of the different categories that could potentially be implemented in the areas identified outside the project's priority areas.

The success of the Ecomarkets project in exceeding its goals is based on FONAFIFO's strength as an institution capable of effectively and efficiently managing a complex system for environmental services payments, and a solid legal framework and wide political support for the program, besides the support from civil society throughout the national territory, particularly small and medium owners and local and regional organizations (NGOs and Coops).

3.3 Increase the participation of women into the PSA Program by 30 percent

One of the project's goals focused on increasing the participation of women in the PSA Program by at least 30 percent. It was a challenge for the Institution to motivate the female property owners to incorporate their lands under the categories implemented by the Program.

Comparing the data for women heads of households who have entered the program to the number of original hectares reveals a significant increase. In 2004, women who entered the PSA Program participated with 13,000 hectares, a stark contrast to the few hundred hectares present at the outset of the PSA Program.

During project development, there were activities established to promote the PSA Program among women and women's groups. FONAFIFO, in coordination with MINAE's Executive Division for Gender and Environment, implemented consultancies and training aimed at this population segment. Initially, an analysis was developed of the potential of groups of female forest owners who could enter the PSA Program, analyzing the possible causes of why women did not have a strong presence in it.

Also, groups of female rural producers were introduced to the PSA Program through training in the establishment of nurseries.

Further, contact was made with female beneficiaries of the PSA Program, through a national symposium for the creation of the Network of Female Beneficiaries of the PSA Program, created under the framework of this subcomponent. One of the more important results of this subcomponent was the training of potential women beneficiaries of the La Amistad-Caribe Conservation Area (ACLAC) and the Osa Conservation Area (ACOSA) in accessing the PSA Program and accompanying them in the process. This made it possible for the women in the Agrarian Development Institute's Land Reform Peasant Settlement to enter the program under the category of Agroforestry Systems. They normally have very small farms that do not fulfill

the requirements of the Program's other categories. There was also the elaboration of a communication strategy for PSA Program, which was transmitted on Radio Santa Clara in Ciudad Quesada, which associated the care of trees and forests with the health of women. Finally, a consultancy evaluated this subcomponent, highlighting the main achievements during the Project's five years.

3.4 Increase the participation of indigenous communities by 100 percent

Several of the studies conducted during the project concluded that PES contracts in indigenous lands improve the ability of indigenous groups to strengthen their property rights against rustlers and opportunists, and generated capacities for the organization and administration of resources. Therefore, the participation of indigenous groups increased by more than 100 percent since 2000, when the Ecomarkets Project began. During 2001–05, the indigenous communities placed 27,638 hectares under PES contracts.

4. Strengthening the management and field supervision of the PSA Program

4.1 Supervision of the PSA Program by FONAFIFO

With the key support of the Ecomarkets Project, the PSA Program has established modern systems (geographic information system [GIS] and the *Sistema Integrado de Administración de Proyectos* [SIAP]) to monitor compliance of land users with the payment contracts.

In early 2000, FONAFIFO did not have a structured information system. Its computers were five or six years old, there was no local area network (LAN), and certainly no wide area network (WAN), software was not licensed, and equipment and other software packages were not standardized. The database concept was neither applied nor implemented since there was no institutional database. With the commitments acquired under the Ecomarkets Project, technological improvements were made. In just a few years, it was possible to structure and implement a GIS and the SIAP, existing computers were replaced with new ones, and a LAN was implemented so the equipment could be interconnected and resources maximized (printers, fax, and so forth). With respect to the reorganization and structuring of data, SIAP enabled management and control of the PES contracts, using the INTERBASE database motor. In addition, the payment request processes, requests to enter the environmental services program, and access to contract information have been computerized.

4.2 Strengthening of local and regional NGOs

In Costa Rica, some of the local and regional NGOs play a fundamental role in the implementation of the PSA Program. These organizations lend group services for small forest and landowners to facilitate access to PSA Program resources, reducing the transaction costs generated by the contracting of environmental services for small owners and proprietors.

This service allows forest owners to participate in the PSA Program and receive technical and administrative assistance pertinent to conservation and sustainable use of forestry ecosystems. The groups of small property owners help reduce the unitary costs of these services that

otherwise would have technical and economic limitations. Likewise, the NGOs lend their services for evaluation and compliance of FONAFIFO contracts and conduct audits through the Forestry Manager and promotion of the PSA Program among small and medium-size owners.

On the other hand, one of the objectives of the strengthening component is to strengthen these producer organizations through the hiring of six NGOs nationwide during the Project's life. In compliance with this objective, during 2001–05, FONAFIFO hired the following NGOs: ACICAFOC, ASANA, ASIREA, FUNDATEC, FUNDAUNA, INbio, INCAE, Neotropica Foundation, and the Talamanca Caribe Biological Corridor. Of these NGOs, six received PES-related training or technical support. Therefore, it can be said that this project performance indicator was fully reached.

The private sector actively participated in project formulation, represented by NGOs such as ASANA, ASIREA, CAC De Siquirres, FUNDECOR, and the Talamanca Caribe Biological Corridor. Later, some of these NGOs, jointly with the National Forestry Office (ONF), developed activities that support the project's execution by either fulfilling technical assistance for forest and forestry plantation owners or acting as consultants in specific areas.

Furthermore, these NGOs performed consultancies that had important impacts on the Project, such as: "Analysis of Potential Beneficiaries in the Four Priority Corridors of the Project," and "Identification of Potential Beneficiaries to Enter the PSA Program, Monitoring of PES Projects In and Out of the Priority Biological Corridors," conducted by ASANA, ASIREA, Neotropica Foundation, and the Talamanca Caribe Biological Corridor in the three Priority Areas.

Similarly, FUNDATEC was hired to carry out a "Study to determine the populations of [Almendro] (*Dipteryx panamensis* Pittier) in Costa Rica's north zone and a preliminary appraisal of its environmental services," and a "Study of the Monitoring of the Forestry Cover." FUNAUNA carried out a consultancy for the "Design of a conservation fund for Biodiversity," INCAE for the "Development and implementation of a strategy to access resources for carbon products," INBio for an "Update of the technical proposal of land ordering for the conservation of biodiversity in Costa Rica," and ACICAFOC for "Characterization of CSA emission in the indigenous territories of Costa Rica."

With respect to processing PES payments through NGOs, at least 10,400 hectares are under contract, as are 36,800 agroforestry system trees, representing approximately 81 contracts.

4.3 Training conducted within the Ecomarkets Project

The Ecomarkets Project facilitated the training of personnel in the priority Conservation Areas in different topics such as the use of GPS, first-aid, effective leadership for teamwork, handling the media, job management in the Wildlife Protected Areas, forest management, geographic information systems, environmental education, Public Administration Law, conflict resolution, economic and ecological appraisal of environmental damage, and techniques for the implementation of topics related to the environment. Likewise, community and civil society groups participated in the training to formulate and negotiate projects aimed at community groups in project management, in the PSA Program, and so forth.

The Executive Division for Gender, with the support of the Ecomarkets Project, successfully concluded five leadership and environmental management courses, having generated, thanks to the Project, the educational material used for each course. Several materials were developed to diffuse the PSA Program, such as brochures, planners, and posters.

4.4 Consultancies prepared during Project Implementation

One of the more important aspects to which the Project lent its support, and specifically from GEF, was financing several studies, through consultancies, in such aspects as policy formulation, statistics update, analysis of ecosystems, land tenancy, accompaniment of forest owners, training of staff and community groups, identification of productive projects, project audits, and preparation and elaboration of promotional materials related to the environment and the PES.

Given their importance, several of the consultancies need to be mentioned individually:

- Legal support to FONAFIFO: Update of 450 files where it was determined that disbursements were made in more than 100 cases; furthermore, resources have been released in approximately 30 files.
- Update of the GRUAS Project: Land Use Planning for biodiversity conservation in Costa Rica over the next 10 years.
- Update in 2005 of the country's forest cover through which it was possible to identify that the country has reached approximately 50 percent of the forest cover.

5. Lessons learned

The beneficiaries, FONAFIFO, and its personnel have learned many lessons through the negotiations, approvals, and implementation of the Ecomarkets Project. They include:

A) On Project negotiations.

The process leading up to Project approval generated considerable in-house capacity to formulate projects and define goals and conditions for its implementation. FONAFIFO has capitalized on this by attracting other projects (for example, the German Reconstruction Credit Bank [KfW]). There have been plans that facilitate the negotiations of similar projects on the one hand, and on the other, their start-ups and the raising of resources for them.

In addition, the discipline of having to welcome several World Bank missions, either to learn about the Project's physical or financial progress or to learn about the country's achievements with respect to the PES, has proved very valuable for FONAFIFO, because this contributes to diffusing the achievements at a much higher level, with the priceless value this represents.

B) FONAFIFO's start-up.

The PSA Program had been operating for three years prior to the formalization of the Ecomarkets Project. Although it represented an important challenge for FONAFIFO, upon implementation, it was only necessary to strengthen the entity with four new employees and the

implementation of a system to process PES contracts and technological support. Therefore, the project fitted right into an existing plan that had been operating successfully.

However, many important institutional changes that took place in FONAFIFO over the last four years would not have happened without the Ecomarkets Project. The three most important changes are: (a) substantial improvements in FONAFIFO's GIS technology since 2000, (b) development of the SIAP information management system, and (c) the improvement of the contractual process through the consolidation of all administrative activities under FONAFIFO in 2003.

C) Ensure a budget ceiling.

Perhaps one of the greatest advantages gained from the PSA Program, with the implementation of the Ecomarkets Project, was to ensure a minimum of resources during a five-year period. At the same time, the resources destined from the national budget as a counterpart were ensured, as stipulated in the loan contract. On the other hand, the fact that the institution was capable of carrying out the Project gave other financial entities the trust they needed to grant resources for FONAFIFO's programs and projects.

D) Organizing the house (SIAP).

Upon initiating the implementation of the Ecomarkets Project, FONAFIFO did not have a solid database that would make it easier to handle the beneficiaries' detailed budgets and information. With its execution, the Project Administration Integrated System (SIAP) was developed and initiated, which makes it possible to follow the project's budget progress and the payment status of each one of the beneficiaries in detail. Furthermore, this system makes it possible to generate the different reports that facilitate the diffusion of the results. As with all systems, SIAP requires permanent maintenance to adjust to the new information needs as they arise.

It is important to highlight that SIAP also makes it possible to handle all PES-related information independently from its resource source (KfW, hydroelectric companies, CES, agroforestry systems, and so forth).

This system is complemented by the GIS, which has geo-referenced each one of the PES projects, and the information is cross-referenced with SIAP's database. Similarly, GIS entered into a contract with the University of Alberta, Canada, to keep the information for FONAFIFO related to cover updated; it has been possible to monitor the progress of forest recovery in Costa Rica.

E) Fulfilling priorities.

The fact that the Ecomarkets Project identified priorities did not guarantee on its own that the resources would achieve its purpose; however, after reviewing their progress, it was deemed convenient that, after 2003, FONAFIFO became the institution responsible for the selection of beneficiaries. This decision made it possible to guarantee that the beneficiary projects were indeed located in the areas identified as a priority. To achieve the implementation of the Project in priority areas, it was necessary to open nine Regional Offices, which operate with minimum personnel—one forestry engineer and an assistant.

F) How to support NGOs in the PES.

When the Ecomarkets Project was first formulated, it was considered important to have the support of forestry NGOs; nonetheless, it was not clearly defined how they would participate in the project's development. However, it was very useful to identify specific tasks NGOs could perform to make FONAFIFO's job easier. These organizations identified and accompanied potential beneficiaries to facilitate their entry into the PSA Program, developed statistics systems, and so forth.

G) Contracting Consultancies.

The lesson learned in this case was how to formulate terms of reference (TORs) for consultants, lead the selection process, select the consultants, and follow up the different consultancies. For future reference, the TORs related to the expected products and the type of contract signed need to be carefully reconsidered and analyzed since they do not allow the recovery of resources in a situation of noncompliance by the contracted consultants. This situation is made possible under the contract format followed by the World Bank.

H) Earn the trust of other financial entities.

The trust generated by the fact that FONAFIFO would manage the Ecomarkets Project resources invited other financial entities to invest additional resources for specific PES projects: KfW, CATIE, national hydroelectric companies, airlines, and users of environmental services.

I) What the beneficiaries think.

Some beneficiaries have confused the Ecomarkets Project with the start-up of the Kyoto Protocol; others have assumed that the resources used in the project are a donation from a European country. To clarify misunderstanding, it is probably necessary that FONAFIFO initiate an information campaign to show that the majority of the resources come from Costa Ricans themselves through the fuel tax.

Many beneficiaries think there are too many requirements to enter the PSA Program; however, there have been no concrete suggestions for identifying which requirements can be disregarded or eliminated without risking PES resources, which are, after all, public resources.

Finally, the opinion of forest owners and proprietors interested in entering the program was very clear: Every year since 1997, the offer of land has always exceeded FONAFIFO's resources to take advantage of it.

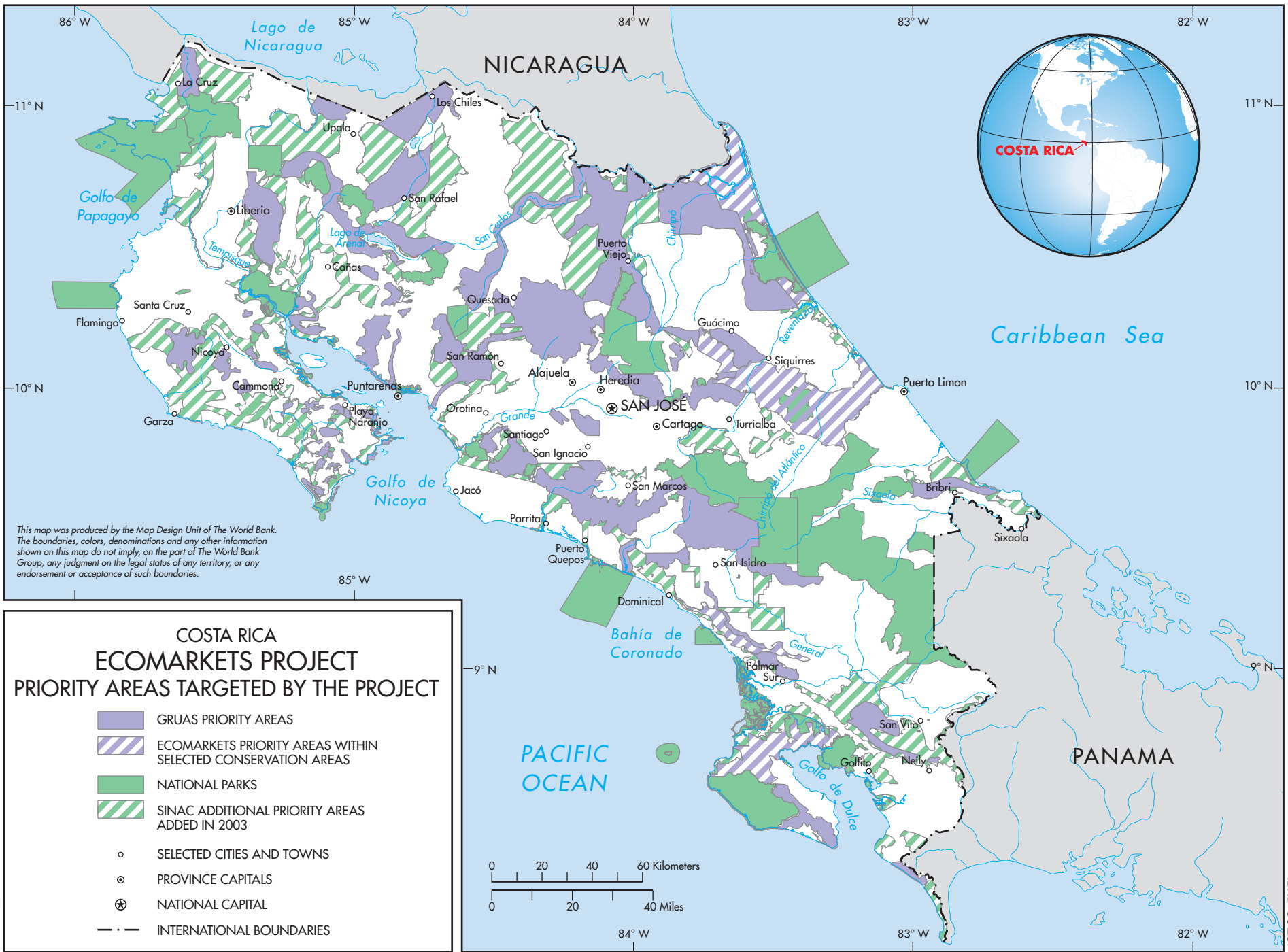
Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders

See Section 7. (b), in the main text above.

Annex 9. List of Supporting Documents

- Barrantes, G. 2001. "Disposición de pago para la protección del recurso hídrico." Paper presented at the First Regional Forum on Integrated Management of Underground Water: A Challenge for the Future," Montelimar, Nicaragua, April 2–4.
- Fallas, J. 2006. "Identificación de zonas de importancia hídrica y estimación de ingresos por canon de aguas para cada zona." San José: FONAFIFO.
- Ferraro, P. J., and S. K. Pattanayak. 2006. "Money for Nothing? A Call for Empirical Evaluation of Biodiversity Conservation Investments." *PLoS Biology*, 4:482–88.
- Government of Costa Rica. "Estrategia Nacional de Conservación y Uso Sostenible de la Biodiversidad."
- Hartshorn, G., P. Ferraro, B. Spengel, and E. Sills. 2005. "Evaluation of the World Bank – GEF Ecomarkets Project in Costa Rica." Raleigh: North Carolina State University.
- Ortiz Malavasi, R., L. F. Sage Mora, and C. Borge Carvajal. 2002. "Impacto del Programa de Pago por Servicios Ambientales en Costa Rica como medio de reducción de pobreza en los medios rurales." San José: RUTA.
- Porras, Ina, and Miriam Miranda. 2006. "Social Impact of the PSA Program." Presented at the Workshop on Costa Rica's Experience with Payments for Environmental Services, San Jose, September 25–26.
- Ross, Martin, Brooks Depro, and Subhrendu K. Pattanayak. 2006. "Assessing the Economy-Wide Effects of the PSA Program." Presented at the Workshop on Costa Rica's Experience with Payments for Environmental Services, San Jose, September 25–26.
- Sills, Erin, Rodrigo Arriagada, Subhrendu Pattanayak, Paul Ferraro, Luis Carrasco, Edgar Ortiz, and Silvia Cordero. 2006. "Impact of the PSA Program on Land Use." Presented at the Workshop on Costa Rica's Experience with Payments for Environmental Services, San Jose, September 25–26.
- Tattenbach, Franz, German Obando, and Jhonny Rodríguez. 2006. "Generación de Servicios Ambientales." Presented at the Workshop on Costa Rica's Experience with Payments for Environmental Services, San Jose, September 25–26.
- World Bank. 2000. Costa Rica – Ecomarkets Project. (Report No. 20434-CR) Project Appraisal Document.

Map Priority Areas Targeted by the Project



This map was produced by the Map Design Unit of The World Bank. The boundaries, colors, denominations and any other information shown on this map do not imply, on the part of The World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.

COSTA RICA ECOMARKETS PROJECT PRIORITY AREAS TARGETED BY THE PROJECT

- GRUAS PRIORITY AREAS
- ECOMARKETS PRIORITY AREAS WITHIN SELECTED CONSERVATION AREAS
- NATIONAL PARKS
- SINAC ADDITIONAL PRIORITY AREAS ADDED IN 2003
- SELECTED CITIES AND TOWNS
- PROVINCE CAPITALS
- NATIONAL CAPITAL
- INTERNATIONAL BOUNDARIES

