

GEF

Global Environment Facility

MOHAMED T. EL-ASHRY
CHIEF EXECUTIVE OFFICER
AND CHAIRMAN

May 18, 2000

Dear Council Member:

The World Bank, as the Implementing Agency for the project, *Costa Rica: Ecomarkets*, has attached the proposed project document for CEO endorsement prior to final approval of the project document in accordance with World Bank procedures.

The Secretariat has reviewed the project document. It is consistent with the proposal approved by the Council in December 1999 and the proposed project remains consistent with the Instrument and GEF policies and procedures. The attached explanation prepared by the World Bank satisfactorily details how Council's comments and those of the STAP reviewer have been addressed. I am, therefore, endorsing the project document.

We have today posted the proposed project document on the GEF website at www.gefweb.org. If you do not have access to the Web, you may request the local field office of UNDP or the World Bank to down load the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

cc: Alternates, Implementing Agencies, STAP

OFFICE MEMORANDUM

DATE: May 12, 2000

TO: Mr. Mohamed El-Ashry, CEO/Chairman, GEF

FROM: Lars Vidaeus, GEF Executive Coordinator



EXTENSION: 34188

SUBJECT: ***COSTA RICA: Ecomarkets Project***
Final GEF CEO Endorsement

1. Please find attached the electronic file of the Project Appraisal Document (PAD) for the above-mentioned project for your final endorsement.
2. The PAD is fully consistent with the objectives and content of the proposal endorsed by Council as part of the December 1999 Work Program. Some changes related to project area targeting and scope have been introduced during final project preparation and appraisal. GEFSEC, STAP, and Council comments received at Work Program entry have also been addressed. The changes introduced and comments addressed are outlined below.

Changes in Scope

3. The number of conservation areas to be supported by the GEF funds has been expanded. The three original target conservation areas (Tortuguero, La Amistad-Caribe, and Osa) have been expanded to include additional areas deemed to be rich in biological resources that fall within the Mesoamerican Biological Corridor (MBC), as defined in the 1996 GRUAS Report. The GEF-financed GRUAS Report was prepared by the Ministry of Environment & Energy, together with UNDP, the Central American Commission on Environment and Development (CCAD), the National Institute on Biodiversity (INBio), the Tropical Science Center (CCT) and other national and international environmental organizations to identify priority areas for conservation within the Costa Rican portion of the MBC.
4. The rationale for this change was based on the need to avoid placing unnecessary restrictions on funds provided by the Government of Costa Rica (including the IBRD loan), given that the Government of Costa Rica will finance over 85% of the total annual payments for the Costa Rican program. Simulation models executed during final preparation and appraisal demonstrated that targeting only these three areas would have unnecessarily tied a very large proportion of all conservation funds under the Environmental Service Payment (ESP) program, thus reducing the overall impact of the program and likewise diminishing domestic political support. The expansion of eligible areas for GEF funding will result in a significant increase in the quantity of

global benefits generated: whereas the GEF Council-approved document was based on a target of incorporating 50,000 hectares of privately owned lands within Tortuguero, La Amistad Caribe and Osa Peninsula Conservation Areas into Costa Rica's ESP program, the final version of the PAD includes the contracting of 50,000 hectares of privately owned lands within Tortuguero, La Amistad Caribe and Osa Peninsula Conservation Areas *as well as* 50,000 hectares of privately owned lands within other areas identified as priorities in the MBC by the GRUAS Report.

5. With respect to project financing, total costs have decreased from \$59.9 million at Work Program stage to \$49.2 million currently. As a result, GEF financing of \$8.0 million has increased slightly as a share of total project financing, from 13.5% to 16.3%. The reduction in overall project financing of US\$10 million is due to a decision to reduce the amount of GoCR financing for non-GRUAS areas. As explained above, this decrease in total project costs is not expected to decrease the quality or quantity of global benefits to be generated through GEF funds, rather the opposite is true (ie, a doubling of original estimates of conservation easements within the MBC is planned). Moreover, it should be noted that the GEF's share of financing on a per hectare level is unchanged from the WP entry stage; as indicated in Annex 2 of the PAD, GEF resources will be utilized to reimburse FONAFIFO at a rate of US\$10/hectare/year for each hectare of land integrated into the ESP program in high biodiversity areas.

Comments by GEFSEC

6. *Clarification of activities related to the Prototype Carbon Fund (PCF) and Certified Tradable Offsets (CTOs).* GEFSEC requested that language in the Project Brief be changed to indicate that: (1) any activities funded by the PCF are included in a separate project; and (2) discussion of CTOs is limited to their potential for supporting the financial sustainability of the ESP program. These changes were introduced at Work Program entry, and Sections B.3, D.1 and F.1 in the final version of the PAD are consistent with the PCF/CTO language approved by Council in December 1999.
7. *"Shot-gun approach".* During upstream consultations, the GEF Secretariat expressed some concerns with respect to the lack of targeting of priority areas. ESP selection criteria in GRUAS areas give extra weight to clustering (existence of contiguous ESP parcels), thereby assuring that GEF funds will not be dispersed and have limited conservation impact. The expanded list of eligible areas, selection criteria, and rationale for expansion are found in the PAD (see Annexes 2b, 8b and 8c, and Section D.1, respectively). Maps in the PAD indicate the contiguous nature of GRUAS priority biological corridor areas.

Comments by STAP:

8. *Implementation of the Mesoamerican Biological Corridor (MBC):* As recommended by the STAP Reviewer, the project is working in priority areas of the MBC with regional NGOs and private sector associations which are promoting activities

compatible with the conservation and sustainable use of biodiversity and which are providing solutions to problems resulting from deforestation and environmental degradation. In particular, institutional strengthening during project implementation will be directed to organizations that provide technical assistance to small landowners for contracting under the ESP program, and, likewise which promote contract compliance under the framework of the ESP program. For details, see sections C.3, C.4 and E.7 as well as Annexes 2, 7a and 7b.

9. *Lessons learned:* As recommended by the STAP Reviewer, project preparation has supported various assessments of the ESP program (e.g., targeting, impact of program on forest ecosystems; socio-economic impact of program) to derive lessons learned and to strengthen the national program during implementation. In particular, the assessment is examining the application of economic incentives to promote forest conservation in the Arenal Conservation Area and the Cordillera Volcanica Conservation Area. For greater discussion of the lessons learned from the ESP program, see section C.3.
10. *Capacity building:* As recommended by the STAP Reviewer, capacity building under the project will focus on field-based staff working in the critical biological corridors rather than Government of Costa Rica personnel based in San Jose. Capacity building within non-governmental organizations will focus upon locally based organizations – including NGOs working with explicitly with indigenous communities and women’s organizations – rather than NGOs headquartered in San Jose. During project preparation, discussions and workshops have been carried out with regional SINAC staff as well as locally-based NGOs to discuss the forest conservation program, priority areas for targeting, and priority activities to be financed during project implementation. More details on the project's capacity building activities can be found in sections C.3 and C.4 as well as in Annex 2.

Comments by Council:

11. *Post-project financial sustainability:* The Council members from Germany, France, and the Netherlands raised concerns about the financial sustainability of the ESP program after the end of the project. Various sources of ongoing funding have been identified and the general issue of financial sustainability is discussed in section F.1 of the PAD.
12. *Additionality and incremental benefits:* The Council member from Switzerland raised the issues of additionality and incremental benefits from the ESP program. Annexes 8b and 8c detail the additional efforts required by private landowners to participate in the ESP program and the ESP selection criteria that target incremental benefits.
13. *Market development:* The Council member from Germany questioned whether markets were actually being created by the project. This issue has been clarified in section F.1 of the PAD that discusses how the project supports the creation of a market for environmental services in Costa Rica. Briefly, the Costa Rican program is

applying market mechanisms through (i) identifying environmental services provided by owners of forest ecosystems, including biodiversity conservation and carbon sequestration (whose value is recognized at the global level) as well as hydrological services and scenic beauty (whose value is recognized at the local level); (ii) identifying potential buyers of these services; and (iii) determining the willingness-to-pay for these global and local environmental services.

For instance, in the case of hydrological services, discussions have been carried out with private sector renewable energy producers to determine their willingness-to-pay for watershed services (e.g., hydrological stability, reduced O&M expenditures due to reduced upstream sedimentation, etc.) These private sector producers have expressed a willingness-to-pay between \$10/hectare/year and \$40/hectare/year for areas within their watersheds to maintain these critical services to their multi-million dollar investments in run-of-river hydropower. Presently, six separate watersheds are incorporated into the Costa Rica forest conservation program, financed in part by private sector hydropower developers.

14. *Local involvement and participation:* The Council member from the Netherlands asked for more details of local involvement and participation in project preparation and implementation. Section E.7 of the PAD provides a more detailed discussion of local involvement, participation, and project beneficiaries. Furthermore, Annex 7b details a Monitorable Action Plan for Indigenous Participation.
15. *Structure of the ESP payments:* The Council member from France questioned why payments for sustainable forest management and reforestation easements are greater than payments for conservation easements. The reason for this difference is that payment amounts are based on both the value of environmental services generated as well as the private costs of implementing particular management practices. This clarification has been incorporated in section B.2.A of the PAD.
16. *Links to other programs:* The Council member from the Netherlands questioned the coordination between the ESP program with other (e.g., bilaterally-financed) programs in Costa Rica. Linkages to donor-supported initiatives in the MBC are covered in various sections of the PAD (eg, see for instance 1.b.). With respect to the ESP program itself, the Government of Costa Rica and the Government of Germany have begun negotiating a donation to the ESP program for reforestation in the Arenal Huertar Norte Conservation Area. Similarly, we understand that the Government of the Netherlands, through their embassy in Costa Rica, has expressed interest in co-financing ESP program activities. Likewise, a proposal was recently submitted to a World Bank/Government of Netherlands Trust Fund to support monitoring of aquatic biodiversity in upstream and downstream areas near hydropower projects which are providing private sector financing to the forest conservation program. As potential funding for these activities is still uncertain, these activities were not incorporated into the final version of the PAD.

17. We look forward to receiving your final endorsement of the Project Appraisal Document.

18.

Cc : Messrs./Mmes. Dowsett-Coirolo, Cackler (LCC2C); Redwood, Wiens, Lovejoy, Kellenberg, Muller, Boyer, Kimes, Bradley (LCSES); Castro, Aryal, Khanna (ENVGC); Raine (RUTA-San Jose); Goldstein (LEGLA).

IRIS4
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**Document of
The World Bank**

Report No: 20434-CR

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED
IBRD LOAN OF US\$32.6 MILLION
AND
A GRANT FROM THE GLOBAL ENVIRONMENT FACILITY
TRUST FUND OF SDR 6.1 MILLION (US\$8 MILLION EQUIVALENT)
TO THE
GOVERNMENT OF COSTA RICA
FOR THE
ECOMARKETS PROJECT
MAY 15, 2000

Environmentally and Socially Sustainable Development
Central American Department
Latin America and the Caribbean Regional Office

CURRENCY EQUIVALENTS

Currency Unit = Colones
1US\$ = 303 C 1C = 0.0033 US\$

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AIJ	Activities Implemented Jointly
CAF	Forest Credit Certificate (<i>Certificado de Abono Forestal</i>)
CAFMA	Forest Credit Certificate for Sustainable Forest Management (<i>Certificado de Abono Forestal para Manejo</i>)
CAS	Country Assistance Strategy
CCAD	Central American Commission on Environment and Development (<i>Comisión Centroamericano de Ambiente y Desarrollo</i>)
CCB	Forest Conservation Certificate (<i>Certificado de Conservación del Bosque</i>)
CDM	Clean Development Mechanism
CEM	Country Economic Memorandum
CTO	Certified Tradable Offset
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ESP	Environmental Service Payments
FONAFIFO	National Forestry Financing Fund (<i>Fondo Nacional de Financiamiento Forestal</i>)
FRER	Fund for Renewable Energy Resources (<i>Fondo de Recursos para Energía Renovable</i>)
GEF	Global Environment Facility
GHG	Greenhouse Gas
GTZ	German Agency for Technical Cooperation (<i>Gesellschaft für Technische Zusammenarbeit</i>)
ICE	Costa Rican Institute for Electricity (<i>Instituto Costarricense de Electricidad</i>)
IDF	Institutional Development Facility
LACI	Loan Administration Change Initiative
MBC/CR	Mesoamerican Biological Corridor in Costa Rica
MINAE	Ministry of Environment & Energy (<i>Ministerio de Ambiente y Energía</i>)
OCIC	Costa Rican Office for Joint Implementation (<i>Oficina Costarricense de Implementación Conjunta</i>)
PMR	Project Management Report
SINAC	National System of Conservation Areas (<i>Sistema Nacional de Areas de Conservación</i>)
SOE	Statement of Expenses
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme

Vice President: David de Ferranti Country Director: Donna Dowsett-Coirolo Sector Director: John Redwood Task Manager: John Kellenberg
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Costa Rica Ecomarkets Project

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A: Project Development Objective

1. Project development objective: (see Annex 1)

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. As such, the project directly supports 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 aims to contribute to environmentally sustainable development in Costa Rica through: (i) supporting the supply of and demand for environmental services provided by forest ecosystems; (ii) strengthening management capacity and assuring financing of public sector forestry programs administered by the Ministry of Environment and Energy (MINAE), including the National Forestry Financing Fund (FONAFIFO) and the National System of Conservation Areas (SINAC); and (iii) strengthening management capacity of local non-governmental organizations.

The objective of the proposal to the Global Environment Facility 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).

2. Key performance indicators: (see Annex 1)

Key performance indicators related to the project development objective include:

- 100,000 hectares of land incorporated into the Environmental Services Payments (ESP) program by the end of the project (EOP), of which 50,000 hectares will be privately owned lands within Tortuguero, La Amistad Caribe and Osa Peninsula Conservation Areas and 50,000 hectares will be privately owned lands within other Conservation Areas identified as priorities in the MBC/CR by the GRUAS Report;
- 30 % increase in the participation of women land owners and women's organizations in the ESP program by EOP;
- 100% increase in the participation of indigenous communities in the ESP program by EOP; and
- Establishment of a financial instrument to support easements targeting biodiversity conservation in Costa Rica by EOP.

B: Strategic Context

1. (a) Sector-related Country Assistance Strategy (CAS) goal supported by the project: (see Annex 1)

Document number: P-5912 - CR

Date of latest CAS discussion: April 15, 1993

The most recent Country Assistance Strategy (CAS) emphasized the importance of environmental management, especially in forested areas. A new CAS is currently under preparation and is expected to be finalized in the fall of 2000. The CAS under preparation continues to emphasize environmental issues. It likewise points out that higher and sustained economic growth in Costa Rica depends on the Government's success in strengthening the outward-orientation of the economy and increasing the role of the private sector. The proposed project directly supports improved incentives for private sector-led growth, improved natural resource management through the conservation of forest ecosystems, and poverty alleviation through targeting small farmers and the rural poor for contracts for conservation easements, sustainable forest management, and reforestation.

1. (b) GEF Operational Strategy/program objective addressed by the project:

Costa Rica ratified the Convention on Biological Diversity on August 26, 1994. The proposed project is eligible for GEF financing under two of the four Operational Programs supporting the conservation and sustainable use of biodiversity: Forest Ecosystems and Mountain Ecosystems (O.P. Nos. 3 & 4). It strengthens capacity for biodiversity conservation at the local level through the involvement of local people and the support of conservation-oriented poverty alleviation in rural areas. Furthermore, it strengthens conservation management and makes more appropriate the uses of ecosystems on the margins of state-owned national parks and biological reserves.

The project complements a number of ongoing and recently-completed GEF-financed activities in Costa Rica, including: the National Biodiversity Strategy and Action Plan; the GEF/World Bank/INBio Biodiversity Resources Project; the GEF/UNDP Medium-sized project in the Talamanca-Caribe Biological Corridor project; and the GEF/World Bank/CATIE Sustainable Cacao Medium-Sized Project. In addition, the project complements the UNDP/UNEP/GEF/CCAD/GTZ/DANIDA regional program to consolidate the Mesoamerican Biological Corridor (MBC). The Costa Rica national technical coordinators for the regional project, who are responsible for the inter-agency coordination of activities related to the consolidation of the MBC, assisted in the identification of priority corridor areas in the proposed project in accordance with strategies defined at national and sub-national levels. Furthermore, the proposed project builds upon efforts carried out within Costa Rica, such as the GRUAS Report (UNDP/GEF/MINAE), as well as in neighboring countries, including the Panama Atlantic Mesoamerican Biological Corridor Project (World Bank/GEF/ANAM), Nicaragua Atlantic Biological Corridor Project (World Bank/GEF/MARENA), and Honduras Biodiversity in Priority Areas Project (World Bank/UNDP/GEF/COHDEFOR).

2. Main sector issues and Government strategy:

Costa Rica experienced one of the highest rates of deforestation worldwide during the 1970s and 1980s. In 1950, forests covered more than one-half of Costa Rica; by 1995, forest cover had declined to twenty-five percent of the national territory. Approximately sixty 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 eighty percent of deforested areas, nearly all on privately owned lands, were converted to pasture and agriculture. Deforestation was principally driven by inappropriate policies including cheap credit for cattle, land titling laws that rewarded deforestation, and rapid expansion of the road system. These policy incentives have since been removed and Costa Rica has become one of the world's leading proponents of environmentally sustainable development.

Costa Rica's efforts to internalize environmental values provided by forest ecosystems date back to 1979, with the passage of the first Forestry Law and the establishment of economic incentives for reforestation. Subsequent laws strengthened incentives for reforestation, broadening opportunities for landowners to participate in reforestation programs and making the program accessible to small landowners within rural areas.¹ In 1996, Costa Rica adopted Forestry Law No. 7575, which explicitly recognized four environmental services provided by forest ecosystems: (i) mitigation of GHG emissions; (ii) hydrological services, including provision of water for human consumption, irrigation, and energy production; (iii) biodiversity conservation; and (iv) provision of scenic beauty for recreation and ecotourism. The law: (a) delegates responsibilities and duties *inter alia* to licensed foresters, the Ministry of Environment and Energy (MINAE), the National Forestry Financing Fund (FONAFIFO), the National System of Conservation Areas (SINAC), and the Costa Rican Office for Joint Implementation (OCIC); (b) provides

¹ In order to accomplish these objectives, Forestry Law 7032 was passed in 1986 that created the Forest Credit Certificate ("*Certificado de Abono Forestal*" or CAF), which provided incentives for reforestation activities. In 1990, the CAF was expanded to include sustainable forest management (CAFMA) and in 1995, the CAF was expanded to forest conservation (CAF-2000).

the legal and regulatory basis to contract with landowners for environmental services provided by their lands and establishes a financing mechanism for this purpose; and (c) empowers FONAFIFO to issue such contracts for the environmental services provided by privately-owned forest ecosystems. With the passage of Forestry Law No. 7575, the forestry sector has established a modern legal framework, which (i) recognizes environmental services provided by forest ecosystems; (ii) defines the role of the State in protecting forests as well as in promoting and facilitating private sector activities; (iii) decentralizes duties and responsibilities to local actors; and (iv) establishes that forests may only be harvested if there exists a forestry management plan that complies with the criteria for sustainable forestry as approved by the State.

The ESP program, which MINAE executes through FONAFIFO and SINAC, aims to protect primary forest, allow secondary forest to flourish, and promote forest plantations to meet industrial demands for lumber and paper products. These goals are met through site-specific contracts with individual small- and medium-sized farmers. In all cases, participants must present a sustainable forest management plan certified by a licensed forester, as well as carry out conservation or sustainable forest management activities (depending on the type of contract) throughout the life of individual contracts. Management plans include *inter alia* information on land cadastre, cartography, and physical access; description of topography, soils, climate, drainage, actual land use, and carrying capacity with respect to land use; plans for prevention of forest fires, illegal hunting, illegal harvesting; and monitoring schedules. Commitments associated with the environmental service contracts are registered with the deed to the property, such that contractual obligations transfer as a legal easement to subsequent owners for the life of the contract. Furthermore, landowners cede their GHG emissions reductions rights to FONAFIFO to sell on the international market. It should be noted that the ESP program sets different regulations for indigenous territories. Experience indicates that indigenous territories have clear land boundaries but they do not always hold titles to their land nor have legally established associations as representative of the territory. As a result, FONAFIFO exempts indigenous territories from complying with land ownership regulations.

ESP contracts are based upon two factors: (1) the value of the environmental services provided by primary and secondary forests (see Table 1); and (2) the management costs specific to each type of contract. Regulations within Forestry Law No. 7575 establish the conditions for contracting environmental services. At present², there are four different types of ESP contracts. They are:

- Forest conservation contracts: US\$200 per hectare (equivalent to \$40 per year per hectare), disbursed evenly over a five-year period, for forest conservation easements. Eighty-six percent of contracts in the ESP program to date support forest conservation easements (see Table 2), which target the conservation of vegetative cover in primary and mature secondary forest areas (see Map 4).
- Sustainable forest management contracts: US\$313 per hectare, disbursed over a five-year period, for sustainable forest management easements. Nine percent of contracts in the ESP program support sustainable forest management. Landowners must make a commitment to maintain forested areas for a period of 15 years.
- Reforestation A contracts: US\$513 per hectare, disbursed over a five-year period, for reforestation easements. Landowners must make a commitment to maintain reforested areas for a period of fifteen to twenty years, depending upon tree species. Five percent of contracts in the ESP program support reforestation of degraded and abandoned agricultural lands.
- Reforestation B contracts: US\$200 per hectare, distributed evenly over a five-year period, for reforestation easements. This type of contracts started in 1998, and only landowners that establish forest plantations with their own resources can apply for payments under this type of contract. Less than one percent of contracts in the ESP program support these activities.

² The levels of the payments changed in 1998 to adjust them due to inflation (1US\$ = 303 colones).

Table 1
Minimum, Medium, and Maximum Annual Value
for Environmental Services from Primary and Secondary Forests
(1996 US\$/ha)
(Tropical Science Center, 1996)

Environmental Service	Primary Forest			Secondary Forest		
	Min.	Med.	Max.	Min.	Med.	Max.
Carbon Sequestration	19	38	57	14.6	29.3	43.9
Hydrologic Services	2.5	5	7.5	1.3	2.5	3.8
Biodiversity Protection	5	10	15	3.8	7.5	11.2
Ecosystem Protection	2.5	5	7.5	1.3	2.5	3.8
Totals	29	58	87	21	41.8	62.7

Table 2
Total area and number of participants in
Environmental Service Payments program by year

Year	Forest Conservation Easements		Sustainable Forest Management		Reforestation		CAF	
	Has.	Nº of land-owners	Has.	Nº of land-owners	Has.	Nº of land-owners	Has.	Nº of land-owners
1995	23,683	423	1,612	13	-----	-----	4,782	1,058
1997 ³	58,835	1,058	7,337	88	2,979	462	-----	-----
1998	45,258	762	7,476	88	3,998	333	-----	-----
1999	57,007	988	5,840	70	5,384	409	-----	-----
TOTAL	184,783	3,231	22,265	259	12,361	1204	4,782	1,058

From a conservation perspective, the ESP program provides market-based incentives to conserve natural forest ecosystems. These economic incentives help maintain habitats that are critical to a rich, globally important biodiversity, and have the potential for helping to maintain biological corridors linking national parks and biological reserves.⁴ Approaching forest conservation through the ESP program is akin to the system of conservation easements that are widely used in the United States and European countries. In 1997 and 1998, US\$15 million were disbursed by FONAFIFO through the ESP program for the conservation and sustainable use of privately owned forests. Since 1995, 224,191 hectares of forests have been incorporated into the program at a cost of approximately US\$47 million.

3. Sector issues to be addressed by the project and strategic choices:

Principal sources of funding for the program include a tax on fuel sales, payments to FONAFIFO from private sector renewable energy producers for the conservation of critical watersheds, and through the sale of Certified Tradable Offsets (CTOs) derived from forest ecosystems.⁵ IBRD resources will be utilized to finance conservation, sustainable management, and reforestation commitments on the part of FONAFIFO. GEF co-financing will leverage additional resources for forest conservation easements. The

³ Allocations for 1997 prioritized forest conservation, in part, because El Niño conditions were thought to jeopardize reforestation efforts.

⁴ Coincidentally, the Government of Costa Rica's Protected Areas Project aims to consolidate approximately 530,000 hectares within the borders of national parks and biological reserves which have been declared as protected areas but which have not been purchased and/or registered in the National Property Registry as part of the forest patrimony of the State.

⁵ Certified Tradable Offsets (CTOs), or "carbon bonds" are an environmental commodity that provides global environmental and economic benefits, representing internationally-recognized Emissions Reductions of GHG expressed in metric tons of carbon.

project will support the targeting of priority areas so as to maintain strategic biological corridors within the MBC/CR.

Article 69 of Forestry Law No. 7575 authorizes conservation easements for periods of five or twenty years, for which financial resources were devoted via the above-mentioned dedicated tax on fuel sales. To date, FONAFIFO has only contracted five year conservation easements under Article 69. Under the proposed project, one-half of GEF co-financed conservation easements will be targeted to areas within the MBC/CR in Tortuguero, La Amistad Caribe and Osa Peninsula; the other half will target other priority MBC/CR areas as identified in the GRUAS Report. All GEF co-financed contracts will have a contractual obligation of twenty years, through five-year periods which will be automatically renewed where resources permit and where landowners have met their contractual obligations. In return for this commitment on the part of small- and medium-sized landowners, the Government of Costa Rica is committed to seek continued financing for these easements throughout the life of the contracts. In turn, the proposed project will support the design of a trust fund to finance contracts targeting biodiversity conservation in the MBC/CR beyond the five-year life of the project for the remaining fifteen years of the twenty-year contracts. It is expected that capitalization of this trust fund will come from international support for biodiversity conservation.

The GoCR has committed US\$6.8 million annually for the ESP program. Five percent of this figure is allocated for FONAFIFO administration expenses, leaving US\$6.46 million for ESP payments. Translated into conservation easements, this funding is sufficient to incorporate more than 100,000 hectares of land into the ESP program. GEF co-financing will support the first five years of the above-mentioned conservation easements in priority areas in the MBC/CR.

ESP contracts written prior to the proposed project generally have not been targeted to increase the quantity of environmental services generated. The project supports greater targeting by developing and improving criteria for selecting land to include in the ESP program at both macro- and micro-levels (for biodiversity conservation, macro-level targeting involves identifying crucial biological corridors in Costa Rica while micro-level targeting involves identifying the plots within these corridors).

C: Project Description Summary

1. Project components: (see Annexes 2 and 3 for details)⁶

Component	Sector	Indicative Costs (US\$M)	GoCR (US\$M)	IBRD (US\$M)	GEF (US\$M)	% of Total
1. Strengthen Market Development for Environmental Services	VM					88
a. Programmed ESP contracts		14.0	0.0	14.0	0.0	
b. New ESP contracts		23.3	0.0	18.3	5.0	
c. Development of revenue capture mechanisms		0.4	0.0	0.0	0.4	
2. Strengthen Administration and Field Supervision of ESP Program	VI					22
a. FONAFIFO Administration		2.5	1.7	0.0	0.8	
b. SINAC forest protection and field supervision		7.9	6.9	0.0	1.0	
c. Strengthening of non-government organizations		0.8	0.0	0.0	0.8	
Total		48.9	8.6	32.3 ⁷	8.00	100

2. Key policy and institutional reforms supported by the project:

The project will support the contracting of conservation easements under Article 69 of Forestry Law No. 7575. GEF co-financed conservation easements in Tortuguero, La Amistad Caribe and Osa Peninsula and other priority areas identified within the GRUAS Report will have a contractual obligation of twenty years, contracted in five-year renewable periods. In return, these landowners will receive highest priority for contracts for conservation easements. Furthermore, the Government of Costa Rica is committed to seek continued financing for these conservation easements beyond the life of the project.

3. Benefits and target population:

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 will: (i) empower small- and medium-scale private land owners in the conservation and management of forest ecosystems and in making choices that contribute to sustainable development; (ii) support the long-term viability of the ESP program and promote increased institutional efficiency of FONAFIFO, SINAC, and non-governmental organizations promoting conservation and sustainable management of forest ecosystems; and (iv) benefit regional users of hydrological services by supporting the provision of high water quality and hydrologic stability from forest ecosystems. Beneficiaries include small- and medium-sized landowners, indigenous communities, women's organizations and other non-government 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 will greatly benefit from the lessons learned through the preparation and implementation of the proposed project. Projects

⁶ Throughout the document, numbers within tables do not always sum to totals due to rounding.

⁷ A front-end fee of one percent will be capitalized into the amount of the IBRD loan, increasing the total size of the loan to 32.6 million.

incorporating environmental service payments are being prepared by the World Bank in three other countries in Latin America (El Salvador, Guatemala, and Ecuador). Furthermore, the World Bank is playing a key role in sharing the lessons learned from the proposed project beyond Latin America through participation in a variety of international working groups (such as the Forest Trends discussions being held from 2000 to 2002).

4. Institutional and implementation arrangements:

Implementation period: 5 years
Executing Agencies: Ministry of Environment and Energy (MINAE) and the National Forestry Financing Fund (FONAFIFO)

Implementing Institutions:

1. The main institutions involved in implementation include the National Forestry Financing Fund (FONAFIFO), the National System of Conservation Areas (SINAC), and various local non-governmental organizations (NGOs). FONAFIFO, as implementing agent for GoCR, would have full responsibility for overall management and supervision of the loan/grant, as well as monitoring and evaluation. This responsibility would be carried out in close collaboration with SINAC regarding activities executed in the Conservation Areas, and with NGOs for which proper agreements and accords would be signed.

2. The institutional framework for the Project would be defined legally by a Memorandum of Understanding for Project Execution between FONAFIFO and SINAC, which would incorporate (a) legal agreements between the World Bank and the Republic of Costa Rica; (b) a document entitled Institutional and Organizational Aspects (see Annex 9); and (c) a Subsidiary Agreement between FONAFIFO, SINAC, and MINAE which will specify details of operations and operational arrangements in each Conservation Area (CA) of SINAC. The Project would be implemented within the existing organizational framework of FONAFIFO and SINAC, with specified division of responsibilities between them and assignment of management authority over specific project components to existing subunits. Overall coordination would be performed by the office of the Executive Director of FONAFIFO, also to be described below.

A. FONAFIFO

FONAFIFO was created by Forestry Law No. 7575 (February 13, 1996) as a relatively autonomous or deconcentrated body within the structure of the State Forestry Administration to finance a variety of forestry activities through credit and other mechanisms directed to small- and medium-sized producers. FONAFIFO has the legal power and independence to enter into legal contracts, including constitution of trust funds, as required for administration of the resources entrusted to it (currently it administers five trust funds totaling US\$4 million). The institution is headed by an Executive Director under a Board of Directors, which has majority representation of the public sector. The executive entity is currently divided into three divisions: (1) Administration; (2) Environmental Services (with most direct responsibility for this project); and (3) Credit.

As the activities financed by the project are integral and central to FONAFIFO's responsibilities, FONAFIFO would not create a distinct Project Coordinating Unit. Rather the Executive Director would function as Project Coordinator, with assistance from staff with the appropriate specialties. This project would finance a natural resource management specialist, procurement specialist, and a financial analyst to strengthen project-specific competencies. A Coordinating Committee, composed mainly of representatives of FONAFIFO and SINAC (see Annex 11), would build on experience from on-going joint programs, and would oversee FONAFIFO in terms of policy, planning and technical operations. FONAFIFO would maintain separate project accounts and retain strict financial controls and contractual authority over all components, while routine supervisory authority over contractual staff, material

inventories, and daily work programs would be undertaken through existing systems within FONAFIFO. These implementation arrangements would be precisely defined in a Memorandum of Understanding between FONAFIFO, SINAC, and MINAE satisfactory to the Bank or a Subsidiary Agreement signed by FONAFIFO, SINAC, and MINAE which would detail operating arrangements in each participating Conservation Area.

FONAFIFO will be responsible for conducting annual project reviews, including audited financial statements of the project, as well as preparing periodic reports on performance against agreed performance indicators, and the physical and institutional components of project implementation. FONAFIFO will consolidate and transmit to the Bank quarterly Project Management Reports (PMRs) which summarize project progress in terms of financial activity, key performance indicators, and procurement (see below).

FONAFIFO, in coordination and with the technical support of SINAC, will be responsible for the implementation of the project sub-components: 1.a, 1.b, 1.c, and 2.a (see section C: Project Description Summary). In coordination with qualified local NGOs, it will be also responsible for the implementation of the project sub-component 2.c.

B. SINAC-MINAE

SINAC is a decentralized and participatory institutional management system that unifies MINAE's competencies regarding forestry, wildlife and protected area issues, in order to plan and execute processes aimed at the sustainable management of the country's natural resources. Administratively, SINAC is a system made up by ten subsystems called Conservation Areas (CAs), and a General Bureau. A CA is a territorial unit governed by the same development and management strategy, where private and Government sectors participate together in the management and conservation of natural resources and seek to find sustainable development solutions together with civil society.

Each CA is comprised of a Regional Bureau and Subregional Offices. The Regional Bureau, which includes a Director and Coordinators for strategic areas of Control, Promotion, and Protected Wildlands, as well as an administrative support group and legal advisers, has strategic decision-making responsibilities. The Control function relates mainly to enforcement of law and regulations; Protected Wildlands with processes to ensure biodiversity conservation; and Promotion to encouraging management and conservation on privately-owned lands within CAs, including most activities relating to this project. A Technical Committee, composed of the Director, Subdirectors, various program coordinators, and a Local Council (not yet fully functioning at some of the CAs), operates as a collegial body in making decisions and defining policies for technical management and operations, and serves as a channel for consultation and diffusion of information to local society. The Local Council is composed of representatives of local communities, governmental and non-governmental institutions or groups in the region of influence, and is usually selected by comparable Councils at the level of the individual National Park or equivalent reserve. The Council operates under an elected Board of Directors, which has the responsibility of approving plans and programs of conservation and development in the area. Finally, a CA's administration also functions through other departments which may include Accounting and Finance, Human and Topographical Resources, and Land Tenancy; and support sections for Computer Services, a Research Center, and Biological Stations (varying by CA).

SINAC, with the financial support of FONAFIFO; will be responsible for the implementation of all the activities programmed under the sub-component 2.b in the Tortuguero, La Amistad-Caribe, and Osa Conservation Areas. Direct responsibility for the execution of the planned activities in the field will belong to the respective Conservation Area Directors.

C. Non-Governmental Organizations.

FONAFIFO lacks a field presence for purposes of promotion, monitoring, and provision of technical assistance to small landowners, including indigenous communities. For these purposes, local NGOs would be contracted to participate in the project. NGOs willing to participate would be pre-qualified by FONAFIFO based on legal registration, extent of local activity, and evaluation of capacity in the above program elements (i.e., promotion through sponsoring farmer cross-visits and assisting with the application process; monitoring of ESP contract compliance in cooperation with CA staff; and technical assistance in land titling, identification of livelihood alternatives, and implementation of forestry activities). The project will work with NGOs and similar associations that provide direct outreach to land owners. The project also will work with NGOs which provide technical assistance to the NGOs which provide direct outreach to landowners.

Financial Management:

A. Financial Management Systems

FONAFIFO will maintain an adequate financial management system, compatible with Project Management Reporting (PMR) as required by the Bank under the Loan Administration Change Initiative (LACI). The financial management system will include internal control systems, reliable records and report of project assets, accounting, financial reporting, reconciliation of FONAFIFO's project records with the Special Account financial statements, and auditing systems—to ensure the provision of accurate and timely information to the World Bank regarding project resources and expenditures, in accordance with: (i) the Financial Accounting, Reporting, and Auditing Handbook (World Bank, 1995); (ii) the Bank's Operational Policy (OP) and Bank Procedure (BP) 10.02 dated July 1996; and (iii) the revised Bank financial management standards to comply with OP and BP 10.02, dated August 1997.

As part of project preparation, a World Bank financial management consultant carried out a financial management assessment of FONAFIFO. The assessment indicated that FONAFIFO's funds are managed through trust funds with a local commercial bank, and there is no separate accounting system managed by FONAFIFO. Thus FONAFIFO does not have a financial management system that meets minimum Bank requirements. As a result of the October 1999 assessment, an action plan was agreed upon which includes key actions to: (a) design and implement a financial management system that meets PMR requirements; (b) hire additional staff to meet project needs; (c) draft a project operations manual and develop administrative procedures; and (d) identify the flow of funds for the IBRD loan and GEF grant. It was agreed that a Financial Management System (FMS), PRM compatible would be operational prior to the project effectiveness. The action plan is included in Annex 6, Table D.

Under the Loan Administration Change Initiative (LACI) introduced by the Bank, FONAFIFO should maintain a financial management system that integrates financial, physical and procurement activities of the project, and reported through the Project Management Reports (PMRs). The PMRs will also serve as an application for disbursement from the loan and grant accounts. The first PMR will present a forecast for disbursements during the first six (6) months of the project; subsequent disbursements to the Special Accounts will be based upon receipt and approval of quarterly PMRs. The PMRs should identify, separately, the funds requested for the IBRD loan and GEF grant, and GoCR counterpart funds.

B. Progress Reporting

FONAFIFO will produce Project Management Reports (PMRs) on a quarterly basis. These reports will be prepared 45 days after the end of each quarter. In addition, annual financial statements (to be included in the audit report) will be required. The fiscal year of the project will match FONAFIFO's fiscal year (January 1 to December 31).

C. Annual Audits:

In addition to submission of quarterly PMRs, FONAFIFO will contract an independent public accounting firm, prior to the beginning of the fiscal year to be audited. The auditors should be hired under a multi-year contract, according to terms of reference acceptable to the Bank, for the performance of annual project audits. The auditors will conduct interim audits through each year of project implementation. A consolidated audited report for all project components will be submitted to the Bank within 120 days of the close of the project's financial year. The terms of reference and the proposed short list of public accounting firms have been submitted to the Bank, and the selected firm is to be hired within 30 days of project effectiveness.

D. Special Account

IBRD loan and Global Environment Facility grant funds will be disbursed into separate Special Accounts, in US Dollars, at a state-owned commercial bank, which will administer FONAFIFO-project financial resources, provided that the state-owned commercial bank selected meets conditions acceptable to the Bank (e.g., providing a "comfort letter" acceptable to the Bank).

E. Disbursements:

FONAFIFO would be responsible for preparing withdrawal applications and the related SOEs, or PMRs, as applicable. If, by project effectiveness, FONAFIFO has not implemented a financial management system with PMR capabilities, but which meets minimum Bank requirements, the traditional disbursement mechanisms (Statement of Expenditures, SOEs) will be used for the first two quarters of the project implementation. After the second quarter, or earlier if FONAFIFO requests, disbursement requests will be PMR based (see Annex 6).

Project Monitoring and Evaluation:

The project will be guided by bi-annual reviews of results, on which basis FONAFIFO and the World Bank supervision mission will identify specific measures to: (i) address any areas of implementation weaknesses; and (ii) accommodate changes in priorities. These measures for improvement will be reflected in the FONAFIFO proposal for the forthcoming year's project budget.

D: Project Rationale

1. Project alternatives considered and reasons for rejection:

1. Project alternatives considered and reasons for rejection:

- (1) The project originally proposed to promote expansion of the ESP program at the national level to gain support for forest conservation, sustainable forest management and reforestation activities. It was decided that the demand for ESP program contracts exceeded the supply of resources for the ESP program and that a project sub-component focusing upon promotion of the ESP program was not needed. Furthermore, it was decided that the project should focus instead on effective

implementation in existing contracted areas by strengthening local NGOs and associations that provide technical assistance to small landowners relating to ESP contract compliance.

- (2) The proposed project initially included a component to support the creation and initial capitalization of a Fund for Renewable Energy Resources (FRER) for the purchase of Emissions Reductions generated through renewable energy (RE) projects in Costa Rica. The purchase of Emissions Reductions would allow participating projects to become more competitive with thermal power alternatives in Central America. Furthermore, given that participating projects will support forest conservation efforts in upstream watersheds, these activities would directly support improved natural resource management in key forest ecosystems.

At the request of the GEF Secretariat (prior to the GEF Council meeting in December 1999), all activities relating to the purchase of Emissions Reductions were removed from the proposed project. It is expected that these activities will be financed under the proposed Fund for Renewable Energy (FRER) project (to be submitted to Bank management upon approval of the Ecomarkets project by the Costa Rican Assembly).

- (3) The proposed project originally targeted all GEF incremental cost support to three conservation areas within the MBC/CR (Tortuguero, La Amistad Caribe and Osa Peninsula). During final preparation and appraisal, it was determined that targeting only these three areas would have unnecessarily tied a very large proportion of all conservation funds under the Environmental Service Payment (ESP) program, thus reducing the overall impact of the program and likewise diminishing domestic political support. Consequently, it was decided to expand the scope of GEF incremental support for forest conservation easements to other priority areas within the MBC/CR as identified in the GRUAS report. The quality and quantity of global biodiversity benefits is expected to remain the same under the revised project formulation.

2. Major related projects financed by the Bank:

(completed, ongoing and planned)

Sector issue	Project	Latest Supervision (Form 590) Ratings	
		Implementation Progress (IP)	Development Objective (DO)
Environment (GEF)	Biodiversity Resources Development	HS	HS
Environment (IDF)	Certified Tradable Offsets	HS	HS
Transport	Transportation Sector Investment	S	S
Education	Basic Education	S	S
Water Supply	Water Supply	S	S
Health	Health Sector Reform	S	S

IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory)

3. Lessons learned and reflected in the project design:

One of the most important lessons learned from activities associated with the projects within the MBC includes the importance of involving local populations and institutions (e.g., local government, community and sectoral organizations, NGOs) in project design and implementation in order to ensure long-term conservation of biodiversity outside of national parks and biological reserves. As such, the project includes technical assistance for local NGOs and associations to support forest conservation activities carried out by small landowners, rural women's organizations and indigenous groups. Consultations have taken place in priority areas to strengthen local participation in the project.

A World Bank review of deforestation in Costa Rica carried out in the early 1990s identified three principal types of forest intervention in Costa Rica: (i) clear cutting to change the use of lands under forest cover; (ii) selective cutting of large, valuable trees in primary or secondary forest; and (iii) exploitation by owners of pasture areas that contain patches of forest. The study confirmed that clear-cutting and selective logging are principally driven by economic interests. While loggers play an important role in such activities, the main motivation for these processes comes from landowners seeking to obtain revenue from timber sales or agricultural activities; environmental concerns tend to be external to decisions made by landowners when they are not directly related to on-site productivity. Hence, the project supports the internalization of local (hydrological and scenic beauty) and global (biodiversity and climate change) environmental values derived from intact forest ecosystems.

The experience of projects throughout the MBC with buffer zone communities indicates the importance of: (i) clearly defining the roles of the project and the communities in project administration, decision making, and implementation in order to avoid creating false expectations or leaving ambiguities which cause implementation delays; and (ii) providing for a strong administrative and coordinative capacity supported by adequate technical assistance and, initially, close implementation supervision. Project preparation has focused upon consolidating the gains made by FONAFIFO in recent years, including supporting administrative capacity at the local levels (e.g., local NGOs and associations as well as local SINAC offices) and at the national level (e.g., FONAFIFO's administrative capacity).

4. Indications of borrower commitment and ownership:

The Costa Rican government has shown tremendous foresight in developing activities related to carbon emissions reductions and carbon forestry in recent years, including the implementation of an IDF directed towards the development of Certified Tradable Offsets (CTOs). The idea for the proposed project originated in requests made to the World Bank to support the design, implementation, and financing of a program to market national and global environmental services provided by forest ecosystems. These requests have been presented by then-President José María Figueres during the visit of World Bank President James D. Wolfensohn to Costa Rica in March 1998; by Vice President-elect Elizabeth Odio and members of the Rodríguez Administration during an April 1998 visit with President Wolfensohn in Washington, DC; by Costa Rica's GEF focal point for biodiversity in October 1998; and through official letters from President Rodríguez to President Wolfensohn in 1998 soliciting World Bank support for the proposed project. Borrower commitment is also demonstrated by: (1) the existing ESP program; (2) the GoCR's ongoing commitment to fund the ESP program at current levels; and (3) the approved funding mechanisms for the ESP program (including the fuel tax and new electricity law).

5. Value added of Bank and Global support of this project:

The World Bank brings to the proposed project the ability to serve as a catalyst for protecting forest ecosystems throughout Central America as well as knowledge of forest programs both regionally and worldwide. The MBC initiative, spearheaded in part by the World Bank, is supporting actions on the part of national ministries, non-governmental organizations, the private sector, local groups, and indigenous communities in support for the conservation and sustainable use of biological diversity. GEF support is warranted because of the global significance of the MBC/CR and the need for incremental financing for biodiversity conservation outside of national parks and biological reserves.

The value-added of Bank support includes the availability of in-house natural resources management expertise, ability to mobilize global experts with significant experience in the field, technical support for preparation, supervision capacity, coordination with regional technical assistance efforts, and development of linkages with other sources of expertise and funding.

E: Summary Project Analysis (Detailed assessments are in the project file, see Annex 11)

1. Financial:

a. Fiscal Impact (see Annex 5)

The counterpart contribution of the GoCR to the project is US\$8.6 million over five years. The majority of these resources (US\$6.9 million) is for SINAC monitoring and a smaller portion is for FONAFIFO administration expenses (US\$1.7 million). The ESP program has been under implementation since 1995 with expenditures by SINAC and FONAFIFO comparable to the amounts required during the execution of the project. Therefore, based on historic resource allocation, the fiscal impact of the project on local resources is limited. The GoCR has committed to continue funding of the ESP program at approximately current levels of financing, thereby ensuring the ongoing availability of resources for SINAC and FONAFIFO operations beyond the life of the project.

b. Financial Analysis (see Annexes 4 and 5)

Cost-Benefit Analysis Cost Effectiveness Analysis Incremental Cost Other

Given the difficulty in quantifying and valuing the environmental services generated by the proposed project, a cost-effectiveness analysis is used for both the financial and economic analysis of the project. In the cost-effectiveness analysis, the discounted cost of the ESP program is compared with the discounted cost of establishing a national park. In the financial version of the cost-effectiveness analysis, land costs are included among national park costs. In the economic version, the opportunity cost of land is included among both ESP and national park costs. Instead of estimating the opportunity cost of land for the two alternatives, the economic analysis assumes the two opportunity costs are equal and simply excludes this cost from both ESP and national park costs. This implies that the key difference between the financial and economic cost-effectiveness analyses is that land costs are included for national parks in the financial analysis but excluded in the economic analysis.

Data collected on the ESP program included: (1) payments on conservation and management contracts; (2) FONAFIFO management costs; and (3) SINAC monitoring costs. An average ESP cost was calculated by taking the average of the costs for conservation and management contracts. For the national park alternative, data was collected at five represented national parks. Total investment and operating costs were then divided by the number of hectares in the park for comparison with the ESP program.

The results from the financial cost-effectiveness analysis indicate that the ESP program is the financially lower cost means of generating environmental services. Sensitivity analysis indicates that ESP program costs would have to increase by more than 140 percent before the national park alternative becomes more financially cost-effective. This sensitivity analysis indicates that the base case financial results are robust to relatively large increases in costs. Therefore, national parks would have to generate significantly more environmental services (per hectare) or be significantly more effective at conserving forest to be financially more cost-effective relative to the ESP program.

2. Economic:

The results from the economic cost-effectiveness analysis indicate that national parks are a lower cost means of generating environmental services. By excluding land costs, the economic analysis simply compares the management costs of the two alternatives. The lower national park management costs reflect the ability of parks to take advantage of economies of scale in conservation efforts and to spread fixed costs over a larger area.

This result from the economic analysis assumes that the opportunity cost of land is equal in the ESP program and national parks. However, given the demand-driven nature of the ESP program, it is likely that private landowners chose to incorporate land which has a low opportunity cost. Sensitivity analysis

indicates that the opportunity cost of land in the ESP program must be 65 percent of the opportunity cost of land in national parks (estimated at the financial cost of land in parks) for the ESP program to be the economically lower cost means of generating environmental services.

Even if the two alternatives have the same opportunity cost of land, political and budget constraints likely have forced the GoCR to generate environmental services through the ESP program rather than through an expansion of the national park system. With twenty-five percent of its land area already in the protected area system, including approximately ten percent in national parks and biological reserves, there is little political will to add more national parks and biological reserves. Similarly, facing severe budget constraints, the GoCR has chosen the financially least cost means of conserving forest by implementing the ESP program.

Although it was not possible to conduct a quantitative benefit-cost analysis of the proposed project, it is possible to assess qualitatively these benefits and costs. In general, a well-designed environmental service payment program would target the inclusion of land that maximizes the generation of environmental services while minimizing opportunity costs. The demand-driven nature of the ESP program ensures that private landowners face the necessary incentives to minimize the opportunity cost of land included in the program. Additionally, the criteria used to select land to include in the ESP program work to increase the generation of environmental services. These criteria include: (1) targeting land identified in priority areas of the MBC/CR and of the GRUAS Report as having high biodiversity conservation values; and (2) creating mechanisms to ensure the funding of contracts in watersheds above run-of-river hydroelectric projects.

3. Technical:

The project will strengthen FONAFIFO's organizational and administrative capacity. During project preparation, an evaluation of the administrative structure of FONAFIFO was carried out, which identified principal weaknesses of the present operational structure and procedures. A technical strengthening plan was prepared, which will guide institutional strengthening activities during project implementation. From the technical standpoint, the project will improve targeting of the ESP program to priority areas in order to increase environmental and social benefits; and improve monitoring and evaluation through an improved Geographic Information System (GIS). This monitoring and evaluation system will permit FONAFIFO to keep track of the location and distribution of the contracts as well as to allow them to estimate the amount of "carbon offsets" generated by the ESP program. A mid-term review is scheduled for 2002.

4. Institutional:

For information on institutional arrangements, see section C.4 above.

5. Social:

Consultations regarding socio-economic benefits of the ESP program identified key stakeholders in the MBC/CR as well as assessed satisfaction on the part of participants and compliance with contractual obligations. The Social Assessment determined that these priority biological corridors in the MBC/CR are inhabited by among the poorest members of Costa Rican society, who likewise have limited access to public services. The main source of income for these persons is derived from nearby banana plantations.

In November and December, regional stakeholder seminars were organized by SINAC which included approximately twenty NGOs, private sector groups, as well as academic and private institutions. The principal conclusion of these seminars was that the participants consider the prioritized biological corridors as critical for maintaining environmental services.

Independently, fifty-seven interviews were carried out within three of the Conservation Areas targeted to receive GEF resources. Interviews were conducted with 38 beneficiaries, 5 non-governmental organizations, 5 foresters (whose work covers a total of 112 ESP contracts and 8,014 hectares of forest area), 7 sub-regional SINAC offices and 3 regional SINAC offices. The interviews indicate that small- and medium-scale landowners participating in the program are largely supportive of the ESP program and are in compliance with the ESP contracts that they have signed. These landowners are generally satisfied with the work of the foresters who they contract to prepare forest management plans and to provide technical assistance. These consultations likewise indicate that local NGOs who are likely to benefit from the project offer useful, low-cost services to small- and medium-scale landowners; nonetheless, these organizations typically lack administrative and financial capacity. GEF support to local NGOs would include technical assistance to strengthen administrative capacity as well as incentives for improved service to small-scale landowners.

Furthermore, consultations were carried out with local indigenous communities in priority areas targeted to receive GEF financing and, in particular, with the *Mesa Indigena*, which represents the interests of all indigenous groups in Costa Rica. In coordination with indigenous specialists in Costa Rica, a Monitorable Action Plan for Indigenous Participation was prepared, which is included in Annex 7b. Other findings from the Social Assessment may be found in Annex 7a.

6. Environmental assessment:

Environmental Category A B C

The project will have highly beneficial impacts upon the environment, supporting improved natural resource management and biodiversity conservation. Although the conservation of biological diversity depends on a multiplicity of factors, the outlook for its successful implementation is positive due in large part to a strong policy framework at the national level supporting the protection of forest ecosystems. The project complies fully with the objectives of OP 4.36 Forestry, namely, “to reduce deforestation, enhance the environmental contribution of forested areas, promote afforestation, reduce poverty, and encourage economic development.”

What are the main features of the Environmental Management Plan (EMP) and are they adequate?

The project is expected to have highly beneficial impacts upon the environment, supporting improved natural resources management and biodiversity conservation. Therefore, an EMP is not applicable in this situation.

Status of Environmental Assessment?

An Environmental Assessment (EA) for the project was finalized in February 2000. The EA is based upon the findings of the program as evaluated by the World Bank, including an independent OED report, the Regional Office on Technical Assistance (RUTA), the United Nations Development Programme, the Ministry of Environment and Energy and other analyses (see Annex 8).

How have stakeholders been consulted at the stage of (a) environmental screening and (b) draft EA report on the environmental impacts and proposed environmental management plan? Describe mechanisms of consultation that were used and which groups were consulted?

The proposed project will support the ESP program which benefits small- and medium-scale farmers and the rural poor in buffer zones of national parks and biological reserves throughout the country. Stakeholders have been consulted throughout the project preparation (see Annexes 7 and 8).

7. Participatory approach:

Primary beneficiaries and other affected groups:

During project preparation, a wide variety of consultations and regional stakeholder seminars were carried out with government offices (e.g., MINAE, FONAFIFO, SINAC, OCIC), national and international non-governmental organizations (e.g., GTZ, WCS, IUCN, ANDAR, CONABIO, *Red de Reservas Privadas*, *Centro Científico Tropical*, NAMASOL, *Fundacion Neotropico*, and local *Centros Agrícolas* as well as local biological corridor committees), indigenous organizations (e.g., *Mesa Indígena*, CONAI, local indigenous associations), private sector organizations (e.g., ACOPE, *Camara Costaricense Forestal*), and small- and medium-scale landowners to discuss the value of the ESP program, strategize on the optimal use of program resources, and ensure buy-in by key stakeholder groups. Project preparation included an estimation of the value of the ESP program to local stakeholders in terms of livelihoods and other perceived benefits, technical studies to determine the value of environmental services provided outside of the contracted areas, as well as an assessment of the impact of the program on land use decision-making. Likewise, stakeholder seminars were carried out specifically related to gender-related issues to determine program priorities as well as to augment participation of women in the ESP program (See Annex 7a).

To identify priority areas for ESP, regional consultations were conducted in 1999. Approximately twenty non-governmental organizations, private sector groups, academics, as well as private and public institutions attended these consultations. These stakeholders identified the Tortuguero, Barbilla and Osa Conservation Areas as well as GRUAS Report biological corridors as priority areas. Participating non-governmental organizations discussed and approved the project's NGO strengthening strategy. Three indigenous reserves are located within the target areas. In coordination with the preparation of the indigenous profile for Costa Rica, a participatory strategy for these indigenous communities was drafted, consulted and approved by leaders of these communities (see Annex 7b).

Program Participants in Tortuguero, La Amistad-Caribe, and Osa Conservation Areas

The ESP program will finance 50,000 hectares of conservation easements in La Amistad-Caribe, Tortuguero and Osa Conservation areas. *Cabecar* indigenous peoples, Afro-Caribbean, and *Ladino* communities are located in the La Amistad-Caribe Conservation Area. The majority of these persons tend to reside in or around urban areas, where they receive wages from non-subsistence agricultural activities. For those who live in the rural areas, the main source of income comes from banana plantation production.

The Tortuguero Corridor has a population of 80,000, of which 20% reside in urban areas. In the 1970s, the population density was 10.1 persons per square km, which tripled in the 1990s to 33 persons per square km. 70% of the population is under 30 years of age. Small communities depend on a subsistence coastal economy of limited exotic woods and products derived from sea turtles.

Communities in the Fila Costeña Corridor rely on small-scale fishing, subsistence agriculture, and incipient tourism for income-generation. The population growth in this area has accounted for one third of the total population growth in the last two decades. Located in the Osa Conservation Area, the Fila Costeña Corridor has a total population of 13,202 inhabitants of which 61% are located in the District of Jimenez. Sixty-nine percent of economic activities include agriculture, silviculture and fishing followed by 11% in gold mining activities. This last activity increased after 1984, when a principal banana company in the area closed down its operations. Poor soils and high precipitation in the area challenge agricultural activities in the areas.

Program Participants at the National Level

A study conducted between 1995 and 1997 concluded that 60% of all the beneficiaries accessed environmental services through community-based contracts. While community-based contracts

represented a significant majority of ESP program participants, these contracts accounted for only 22% of the land incorporated in the ESP program. Community-based facilitators include cooperatives (30%), NGO associations (20%), and *Centros Agrícolas Cantonales* (50%).

Of the total 671 projects accessed for forest protection, management, and reforestation in 1997, 12% of program participants were women. In 1998, the number of woman contracted declined, whereas their percentage of the total remained the same. Since inception, the majority of woman contracted in the ESP program have received community-based contracts. The proposed project will increase women's participation by at least 30 percent.

The ESP program approved 46,314 hectares for forest protection in 1998, of which 1.1% incorporated indigenous reserves. The proposed project will increase indigenous participation by at least 100 percent.

8. Safeguard Policies

Policy		Applicability
	Environmental Assessment (OD 4.01)	No
	Natural Habitats (OP/BP/GP 4.04)	No
	Forestry (OP 4.36)	No
	Pest Management (OP 4.09)	No
	Cultural Property (OPN 11.03)	No
	Indigenous Peoples (OD 4.20)	No
	Involuntary Resettlement (OP 4.30)	No
	Safety of Dams (OP 4.37)	No
	Projects on International Waterways (OP 7.50)	No
	Projects in Disputed Areas (OP 7.60)	No

F: Sustainability and Risks

1. Sustainability:

Costa Rica has extensive experience in the development and implementation of innovative forestry-related programs. As such, the country has developed the technological and administrative capacity to implement the ESP program. Likewise, the country has developed the capacity to prepare and implement projects relating to greenhouse gas mitigation. Nonetheless, the ESP program will depend upon the continued commitment of the Government of Costa Rica with respect to implementation of Forestry Law No. 7575 and, more broadly, to forest conservation particularly through continued commitment to finance the ESP program at current levels. At the institutional level, the project includes training programs for staff of public sector institutions relating to conservation and sustainable management of forest ecosystems and supports coordination between responsible public sector agencies at both the national and local levels.

The ultimate goal of the proposed project is to develop self-sustaining markets for environmental services. Three elements are key to ensuring such markets: (1) financial sustainability of FONAFIFO to continue to play its market clearing role; (2) financial sustainability of SINAC to monitor ESP contracts; and (3) sustainable sources of funding for ESP payments (likely differentiated by the various specific environmental services). The first two elements are required to create and sustain the marketplace for environmental services while the last element ensures there will be sustained effective demand for environmental services.

It is extremely unlikely that markets for environmental services can be created and sustained without the ongoing market-clearing role of FONAFIFO. While the demand for environmental services is often

concentrated in a limited number of actors (for example, hydropower producers demand for sufficient and timely water flows and international NGO and multinational demand for biodiversity conservation), the provision of environmental services is scattered over a large number of private land owners. Transaction costs would be prohibitively high if each actor demanding environmental services had to write contracts with each individual supplier. Thus the nature of the transaction costs for environmental services requires an institution such as FONAFIFO to play a market-clearing role. Through strengthening FONAFIFO, the proposed project improves its ability to play this market-clearing role. More importantly, the US\$6.8 million commitment by the GoCR (5 percent of which goes to cover FONAFIFO administrative costs) ensures that financing will be available for FONAFIFO to play its role after the proposed project ends.

In addition to market clearing, ongoing institutional support for monitoring ESP contracts is necessary to create confidence that the contracted environmental services are actually provided. Within the ESP program, SINAC plays this role and the ongoing GoCR commitments to finance SINAC ensures that it will be able to play this role of monitoring ESP contracts beyond the end of the proposed project.

While the financial sustainability of FONAFIFO and SINAC ensures a sustained marketplace for environmental services, effective demand for environmental services is required to finance ESP payments. The GoCR commitment of US\$6.8 million per year for ESP contracts ensures the ongoing funding over at least 100,000 hectares in the ESP program. Therefore, the GoCR commitment is sufficient to guarantee the financial sustainability of the contracts written during the proposed project.

Additional sources of financing are likely to be differentiated by the four environmental services. The GEF contribution to the proposed project provides funding for the biodiversity conservation content of ESP payments. Contributions to the ESP trust fund from international NGOs and multinational agencies concerned with biodiversity conservation also will promote sustainable financing of the biodiversity content of ESP contracts. Hydropower producers are already expressing demand for ESP contracts in the watersheds above their projects. Additionally, the proposed electricity law will require all hydropower producers to pay one percent of their post-tax profits to FONAFIFO for ESP contracts in their watersheds. Municipalities also are expected to provide financing for ESP contracts in watersheds that supply municipal drinking water. Financing for the carbon sequestration content of ESP payments is being pursued through the sale of CTOs. Finally, financing for the scenic beauty content of ESP contracts could be provided by local eco-tourism industry (for example, hotels and guide companies) demanding conserved forests located in key eco-tourism sites.

There is a risk that landowners whose ESP participation has until now been financed in five-year blocks may renege on their obligations after this period, if GoCR is unable to find adequate resources to renew the contracts. This finance most likely will have to be sought from extra-governmental sources, as GoCR does not expect to be able to expand the scope of the program beyond the current level of program financing. This risk would be mitigated by several measures: (a) capacity building within FONAFIFO and SINAC to ensure contract compliance during the life of individual contracts; and (b) the design and establishment of a trust fund by year 5 of the project, to support contracts targeting biodiversity conservation. It is expected that capitalization of this trust fund will come from international support for biodiversity conservation.

2. Critical Risks:

<u>Risk</u>	<u>Risk Rating</u>	<u>Risk Minimization Measure</u>
<p>Annex 1, cell “from Outputs to Objective”</p> <ul style="list-style-type: none"> • ESP program incentives are not sufficient to motivate private landowners to conserve and sustainably manage forest ecosystems. • Limited demand for the new twenty year ESP contracts. • Significant delays in effectiveness due to delayed approval by the National Assembly. • Regulations within Kyoto Protocol do not permit financing of carbon forestry programs. • Failure to identify long-term sources of financing (e.g., markets for CTOs fail to develop, new ICE law not implemented). • FONAFIFO and SINAC are incapable of enforcing conservation easements over the life on contracts. 	<p>Substantial</p> <p>Substantial</p> <p>High</p> <p>High</p> <p>Substantial</p> <p>Substantial</p>	<p>The project supports implementation of Forestry Law No. 7575, which combines traditional command and control measures with economic incentives to promote forest conservation. Furthermore, the project supports technical assistance and resources for on-the-ground monitoring.</p> <p>The project supports campaigns to promote ESP contracts (including the new twenty-year contracts).</p> <p>The project is to be approved by the World Bank prior to the August 2000 extraordinary session of the National Assembly. The Bank has received assurances from the Ministry of Finance and the Ministry of Environment and Energy that the project will be presented in the extraordinary session.</p> <p>The project directly supports the analysis, design, and implementation a diverse set of revenue capture mechanisms to minimize dependence upon carbon forestry as a long-term financing source.</p> <p>The project directly supports the identification of a variety of methods to finance the ESP program. Likewise, the Bank has received assurances that the GoCR will continue the program at the same level of financing beyond the life of the project.</p> <p>The project supports technical assistance and training to FONAFIFO, field-based SINAC, and NGOs to support contract enforcement.</p>
<p>Annex 1, cell “from Components to Outputs”</p> <ul style="list-style-type: none"> • The distribution of the demand for ESP contracts and land titles does not allow effective targeting of ESP contracts. • Government commitment to Environmental Service Payments program and contracts for conservation easements is not maintained. 	<p>Substantial</p> <p>Substantial</p>	<p>(1) The project supports campaigns to promote ESP contracts in targeted areas; (2) The project supports land titling efforts in targeted areas.</p> <p>The project builds on the broad acceptance within civil society for the ESP program, including local beneficiaries, indigenous communities, NGOs and governmental entities.</p>
<p>Overall Risk Rating</p>	<p>Substantial to High</p>	<p>The project is considered to be a priority by the Ministry of Finance, Ministry of Environment and Energy, and local communities. The project serves to consolidate an existing program rather than to propose significant changes to the ESP program. Incremental financing is in the form of grants rather than loan financing.</p>

3. Possible Controversial Aspects:

None identified.

G: Main Loan and Grant Conditions

1. Effectiveness Conditions:

- (i) That an adequate accounting and financial management system for the project has been implemented within FONAFIFO which is acceptable to the World Bank, which includes procedures for its operation and maintenance during project implementation. (See Section C.4: Institutional and Implementation Arrangements.) If, by project effectiveness, FONAFIFO has not implemented a financial management system with PMR capabilities, but which meets minimum Bank requirements, the traditional disbursement mechanisms (Statement of Expenditures, SOEs) will be used for the first two quarters of the project implementation.
- (ii) Qualified personnel, acceptable to the World Bank, contracted as (i) natural resource management specialist, (ii) procurement specialist, and (iii) financial analyst to strengthen project-specific activities within FONAFIFO.

2. Other:

Counterpart Funds

Counterpart funds from the Government of Costa Rica will be available in the amounts and at the times specified within the agreed project-financing plan. Counterpart funds from the Government will be budgeted annually in the National Budget.

Procurement

Procurement under all components of the project will be carried out in accordance with the agreed categories detailed in the Procurement and Disbursement Arrangements and will follow the Guidelines for Procurement under IBRD Loans and IDA Credits (January 1995, revised January and August 1996 and September 1997). All contracting of consultants and consulting services will be in accordance with the Guidelines for Use of Consultants (January 1997 and revised September 1997).

Accounts/Audits

The project will implement an agreed plan of accounts and auditing. A short list of proposed accounting firms and their terms of reference already have been submitted to the Bank.

Annual Work Programs

Annual work programs for all components of the project will be submitted to the World Bank for no-objection.

Monitoring

Quarterly and annual reports will be prepared by FONAFIFO according to agreed formats and submitted to the World Bank within 45 days of the end of each quarter, and by January 31, for quarterly and annual reports, respectively. The Government of Costa Rica and the Bank will conduct a mid-term review of project implementation not later than the end of PY3 to review the attainment of the project's objectives and implementation goals.

Conditions for Disbursement to FONAFIFO

- (i) That the Projects Operations Manual, acceptable to the Bank, has been issued by FONAFIFO.
- (ii) That the Annual Work Program for PY1, acceptable to the Bank, has been furnished to the Bank.
- (iii) That Special Accounts have been opened within the selected state-owned commercial bank for the disbursement of loan and grant resources for project activities.
- (iv) That model ESP contracts (both 5 and 20 year contracts for conservation, sustainable forest management and reforestation), acceptable to the Bank, has been drafted and approved by MINAE.
- (v) Signed subsidiary agreement between FONAFIFO, SINAC and MINAE reflecting responsibilities of participating agencies, submitted and acceptable to the Bank.

H. Readiness for Implementation

The engineering design documents for the first year's activities are complete and ready for the start of project implementation. Not applicable.

The procurement documents for the first year's activities are complete and ready for the start of project implementation.

A draft Project Implementation Plan has been reviewed and found to be realistic and of satisfactory quality. The final Project Implementation Plan will be completed by project effectiveness.

The following items are lacking and are discussed under loan conditions (Section G):

I. Compliance with Bank Policies

This project complies with all applicable Bank policies.

Task Team Leader: John Kellenberg

Sector Manager/Director: John Redwood

Country Manager/Director: Donna Dowsett-Coirolo

Annex 1: Project Design Summary
Costa Rica: Ecomarkets

Hierarchy of Objectives	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
<p>Sector-related CAS Goal:</p> <p>Strengthening the outward-orientation of the economy and supporting sustainable natural resource management.</p>	<p>Sector Objectives</p> <ol style="list-style-type: none"> 1. Healthy and sustainably managed forest ecosystems. 	<p>Sector / Country Reports</p> <ul style="list-style-type: none"> • ESW in the forestry sector 	<p>(from Goal to Bank Mission)</p>
<p>Project Development Objective:</p> <p>A. 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.</p> <p>B. To contribute to the long-term conservation and sustainable use of biodiversity outside of national parks and biological reserves in the MBC/CR.</p>	<p>Outcome / Impact Indicators</p> <ol style="list-style-type: none"> 1. 100,000 hectares of land contracted as conservation easements in MBC/CR priority areas by EOP. 2. Establishment of a financial instrument to support conservation easements by EOP. 3. Six NGOs working in priority areas in the MBC/CR strengthened 4. 30% increase in participation of women landowners and women's organizations in ESP program by EOP. 5. 100% increase in the participation of indigenous communities in the ESP program by EOP. 	<p>Project Reports:</p> <ul style="list-style-type: none"> • State of the Nation Annual Reports • FONAFIFO Annual Reports 	<p>(from Objective to Goal)</p> <ul style="list-style-type: none"> • Macroeconomic stability • Sufficient political will exists for marketization of environmental services and the ESP program.

<p>Outputs:</p> <p>1.a Environmental Service Payments Program supported.</p> <p>1.b Mesoamerican Biological Corridor consolidated.</p>	<p>Output Indicators</p> <p>1.1 Existing contractual obligations fulfilled by 2003.</p> <p>1.2 100,000 hectares of land contracted as conservation easements in MBC/CR priority areas by EOP.</p> <p>1.3 Increased local capacity to value and market environmental services, as measured through technical studies and introduction of market mechanisms by EOP.</p> <p>1.4 Trust Fund for contracts targeting biodiversity conservation established in accordance to GEF's best practice by EOP.</p> <p>1.5 Six local NGOs providing services to ESP program, and facilitating its access to small landowners in priority areas of the MBC/CR.</p>	<p>Project Reports</p> <ul style="list-style-type: none"> • FONAFIFO Annual Reports. • MINAE Annual Reports • Project Supervision Reports. • ESP technical and administrative audits. 	<p>(from Outputs To Objective)</p> <ul style="list-style-type: none"> • Government commitment and legal framework for internalizing the cost of environmental services maintained. • Regulations within Kyoto Protocol permit financing of carbon forestry programs. • FONAFIFO and SINAC capable of enforcing conservation easements over the life on contracts. • Management and staff of MINAE, SINAC, and FONAFIFO internalize training. • ESP program incentives are sufficient to motivate private landowners to conserve and sustainable manage forest ecosystems.
<p>Project Components/Sub-components:</p> <p>1. Strengthen Market Development for Environmental Services</p> <p>1.1 Programmed payments for ESP program.</p> <p>1.2 New ESP contracts in MBC/CR priority areas</p> <p>1.3 Development of revenue capture mechanisms, including establishment of a trust fund to finance contracts targeting biodiversity conservation beyond the life of the project</p>	<p>Inputs: (budget for each component)</p> <p>1.1 US\$14.8 million</p> <p>1.2 US\$22.5 million</p> <p>1.3 US\$0.4 million</p>	<p>Project Reports:</p> <ul style="list-style-type: none"> • Annual and quarterly reports • Procurement records • Evaluation reports • Copies of contracts • Bank supervision reports • Field management reports 	<p>(Components to Outputs)</p> <ul style="list-style-type: none"> • Political commitment to ESP program maintained.

<p>2. Strengthen Administration and Field Supervision of ESP Program</p> <p>2.1 ESP Administration, including monitoring, supervision and evaluation of ESP program and GIS technical monitoring system</p> <p>2.2 SINAC forest protection and field supervision</p> <p>2.3 Strengthening of local and regional NGOs supporting the ESP program.</p>	<p>2.1 US\$2.5 million</p> <p>2.2 US\$7.9 million</p> <p>2.3 US\$0.8 million</p>	<ul style="list-style-type: none"> • Annual and quarterly reports • Procurement records • Evaluation reports • Copies of contracts • Bank supervision reports • Field management reports 	<ul style="list-style-type: none"> • Political commitment to ESP program maintained.
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Annex 2: Project Description

Costa Rica: Ecomarkets

The proposed project aims 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, including protection of biological diversity, greenhouse gas mitigation, and provision of hydrological services. As such, the project will support the implementation of environmental policies in the forest and energy sectors and contribute to sustainable human development. Furthermore, the project will strengthen offices within the Ministry of Environment and Energy (MINAE) as well as local and regional non-governmental organizations responsible for the execution, promotion, supervision, and monitoring of the environmental service program.

Costa Rica's pioneering efforts to achieve environmental goals through the sustainable use of forest ecosystems entails developing commercially viable activities, which are based upon the environmental services. The project will assist in developing markets, attracting financing and investment, and consolidating the institutional framework for:

- a. marketing environmental services at the global level relating to the conservation of biodiversity in privately-owned buffer zones surrounding national parks and biological reserves, thereby protecting the MBC/CR;
- b. marketing environmental services at the global level relating to the mitigation of greenhouse gases, through support for forestry initiatives promoting carbon sequestration;
- c. marketing environmental services at the local level relating to hydrological services provided by forest ecosystem, including the protection of water quality and dry season stream flows in watersheds where small hydroelectric projects are presently operating or planned.

The project will have the following components:

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

Costa Rica has developed novel financial mechanisms to promote financial sustainability in the medium-term for the ESP program executed through FONAFIFO with close coordination with SINAC (see Section B.2 above). This component will support committed expenditures of the Government of Costa Rica's ESP program while long-term financing mechanisms for the program are developed and institutionalized. This financing will permit the Government of Costa Rica to meet its long-term commitments to private landowners that have been incorporated into the ESP program.

- (i) **Programmed ESP contracts: 1995-1999.** Since 1995, the Government of Costa Rica has signed environmental service contracts incorporating 224,191 hectares of privately owned forest ecosystems throughout Costa Rica into the ESP program. Of this total, 195,128 hectares of land incorporated into the ESP program have pending payments to be paid over the next four years (see Annex 2a). The project will finance remaining commitments on these contracts as well as incorporate into the ESP program approximately 100,000 hectares of land in MBC/CR priority areas (see below).

The principal criteria for the prioritization and assignment of resources were developed by SINAC-MINAE. The principal document detailing coverage and representivity of priority areas is the 1996 GRUAS Report; in 1999, SINAC updated these priorities in each of the ten Conservation Areas. 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 which provide critical hydrological services; degraded forests or those at high risk of fire; (iv) wildlife refuges; and (v) priority areas for recuperating forest ecosystems.

(ii) **New ESP Contracts.** Beginning in 2000/2001, the ESP program will finance: (A) 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-scale landowners in forest ecosystems relating to biodiversity conservation; (B) 50,000 hectares of conservation easements in areas of high biological importance as identified in the 1996 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 (C) additional hectares of land outside of GRUAS Report areas based upon priorities established by SINAC-MINAE, ensuring regional representivity within the ESP program.

Priority local corridors for targeting within Tortuguero, La Amistad-Caribe, and Osa Conservation Areas (see Map 3) include:

- a) The Tortuguero Biological Corridor connects the Reserva del Maíz protected area in Nicaragua with Tortuguero National Park and Barra del Colorado protected area in northeastern Costa Rica. Within Costa Rica, this local corridor covers 87,200 hectares of land, two-thirds of which are public lands belonging to Tortuguero National Park. Approximately 29,000 ha are privately owned and suitable for participation in the ESP program.
- b) The Barbilla Biological Corridor connects Barbilla National Park with La Amistad International Park and Cordillera Volcánica Central Biosphere Reserve; in addition, the local biological corridor is adjacent to the Chirripo Reserve, the largest indigenous reserve in Costa Rica. This local corridor covers 106,647 hectares of land, eighty-five percent of which includes private lands covered by dense primary and secondary forests appropriate for inclusion in the ESP program.
- c) The Corcovado—Piedras Blancas Biological Corridor located in the Osa Conservation Area connects Corcovado National Park and the Piedras Blancas National Park. This local corridor covers 29,984 ha of privately owned land within the Golfo Dulce Forest Reserve. Eighty-nine percent of the local biological corridor is eligible to be included in the ESP program for conservation easements; the remaining land is suitable for natural forest restoration.
- d) The Fila Costeña Biological Corridor located in the Osa Conservation Area includes primary and second growth forest in the Southern Fila Costeña Mountain Range of Costa Rica. The corridor covers an area of 15,000 ha, and it is one of the few remaining forests

in the southern part of Costa Rica and it has unique biological populations that have developed on this mountain range. The ESP program has strong support from local environmental groups in the area. This particular corridor has received strong support from local organizations, mainly because it will make viable the development of present and future ecotourism activities of the area, it supplies water to the communities and hotels in the zone, and because it is the refuge of the remaining wildlife populations in the area.

Priority local corridors for targeting outside of Tortuguero, La Amistad-Caribe, and Osa Conservation Areas include areas of high biological importance within the MBC as identified in the GRUAS Report (see Annex 2b and Map 5). This targeting will support SINAC's and FONAFIFO's efforts to move progressively from a "scattered" approach of ESP contracting to one in which conservation easements can be contracted to support explicit policy goals of SINAC (i.e., conservation and consolidation of Costa Rica's MBC sites throughout the country in coordination with other environmental priorities).

The above-mentioned conservation easements will be contracted with small- and medium-sized landowners for twenty years under Article 69 of Forestry Law No. 7575. GEF resources will be utilized to reimburse FONAFIFO US\$10/hectares/yr. for each hectare of priority area integrated into the ESP program during the life of the project. In return for the twenty-year commitment on the part of small- and medium-sized landowners in these areas, the Government of Costa Rica will seek continued financing beyond the five-year life of the project. Table 4 indicates the existing contracts for conservation easements in the MBC/CR as well as priority areas awaiting contracts and potential areas for inclusion should increased financial resources be available to the ESP.

Outside of GRUAS Report priority areas, SINAC-MINAE has expressed regional priorities for remaining areas to be incorporated into the ESP program. These include: protection of watersheds, and in particular watersheds that provide water for human consumption and hydroelectric production; and biodiversity protection in local biological corridors.

(iii) **Development of revenue capture mechanisms.** Incremental resources will support 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 (i.e., hydrological services and scenic beauty).

Furthermore, the sub-component will support the design and establishment of a trust fund—to be established by 2004—to capture and provide funds to pay for contracts targeting biodiversity conservation beyond the life of the project. This trust fund will be designed in accordance to GEF's "best-practice" guidelines; the project will also support initial fundraising efforts through the development of a capitalization plan and fundraising.

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

FONAFIFO and SINAC will carry out day-to-day management and supervision of the ESP program, in coordination with MINAE. Projected expenditures will finance program administration, coordination, financial management, direct contracting of landowners, geographic information systems, and field supervision.

(i) **ESP supervision.** Project resources, including a 5% administrative fee currently paid to FONAFIFO, will be used to support monitoring, supervision and evaluation of the ESP program as well as implementation of a financial management system for project activities. GEF co-financed activities include refining the administrative organization, the operational system, and the financial controls and disbursements within FONAFIFO, as well as technical training for personnel within FONAFIFO and SINAC.

Furthermore, the project will support technical support for FONAFIFO's GIS system, such that the monitoring system will allow for the generation of technical data relating to land ownership, 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 utilizing satellite imagery and geographic information systems with field verification to monitor changes in land use. This type of monitoring is additional to FONAFIFO's and SINAC's ongoing monitoring efforts, and will provide information to better correlate ecological variables with the level of payments for environmental services.

(ii) **SINAC forest protection and field supervision.** Committed expenditures of the Government of Costa Rica will be 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 ESP program, and field-based monitoring of compliance with existing environmental legislation relating to conservation of forest ecosystems.

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

Incremental GEF resources will be 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, as well as assistance to individuals lacking land titles. Furthermore, this component will support organizational and technical strengthening of local women organizations to develop capacity to promote natural resources management and increased participation in the ESP program. Prospective activities include recompilation and systematization of the experiences of organizations of woman farmers as well as training of rural woman regarding the political and legal framework of the natural resources sector.

Annex 2a: Project Description
Costa Rica: Ecomarkets

Disbursement schedule for the programmed ESP contracts signed by
 FONAFIFO-MINAE between 1995 and 1999 pending payments (in US\$¹).

Type of Contract	YEAR				Total
	2000	2001	2002	2003	
Forest Conservation Easements	6,051,744	6,051,744	4,090,586	2,280,282	18,474,357
Sustainable Forest Management	796,402	613,422	417,222	182,980	2,010,026
Reforestation A	842,539	578,210	313,882	109,126	1,843,757
Reforestation B	56,172	56,172	56,172	45,286	213,803
CAF	22,150	0	0	0	22,150
Total	7,769,008	7,299,549	4,877,863	2,617,674	22,564,093

¹ Exchange Rate 1 US\$ = 300.00 colones

Annex 2b: Project Description

Costa Rica: Ecomarkets

Priority GRUAS Report biological corridors
outside of Tortuguero, La Amistad-Caribe, and Osa Conservation Areas

Area de Conservación Cordillera Volcánica Central	<ul style="list-style-type: none"> • Corredor Biológico Braulio Carrillo-Poás • Cubujuquí • Horquetas • Los Arrepentidos • Cordillera-Amistad • Faldas Volcán Irazú
Area de Conservación La Amistad-Pacífico	<ul style="list-style-type: none"> • Faldas del Chirripó hacia el Pacífico
Area de Conservación Pacífico Central	<ul style="list-style-type: none"> • Cuenca del Río Barranca • Zona Protectora El Rodeo y Zona Protectora Cerros de Escazú • La Potenciana • Zapatón • Zona Protectora Carraigres • Fila Chonta • Los Santos • Cuenca Baja del Río Savegre
Area de Conservación Pacífico Central	<ul style="list-style-type: none"> • Nacientes del Río Abangares • Nacientes del Río Cañas • Bosque Nacional Diría • Monte Alto • Cerros de Rosario, Caballito, El Obispo y Jesús • Cuenca alta del Río Potrero • Zona Protectora Península de Nicoya • Las Morocochas • Corredor Biológico Palo Verde-Taboga
Area de Conservación Tempisque	<ul style="list-style-type: none"> • Nacientes del Río Abangares • Nacientes del Río Cañas • Bosque Nacional Diría • Monte Alto • Cerros de Rosario, Caballito, El Obispo y Jesús • Cuenca alta del Río Potrero • Zona Protectora Península de Nicoya • Nuevas Areas en la Península de Nicoya • Las Morocochas • Corredor Biológico Palo Verde-Taboga
Area de Conservación Arenal	<ul style="list-style-type: none"> • Corredor Biológico Rincón de la Vieja-Miravalles • Corredor Biológico Miravalles-Tenorio • Corredor Biológico Tenorio-Volcán Arenal • Corredor Biológico Reserva Biológica Alberto M. Brenes-P.N. Juan Castro • Corredor Biológico Reserva Biológica Alberto M. Brenes-Z.P. Montes de Oro • Corredor Biológico Monte Verde-Golfo de Nicoya • Corredor Biológico Tenorio-Caño Negro-Frontera • Comunidades aledañas a las áreas silvestres • Medio Queso • Las Camelias

Annex 3: Estimated Project Costs
Costa Rica: Ecomarkets

<u>Project Component</u>	Local	Foreign	Total
	-----US \$ million-----		
A. Strengthening Market Development for Environmental Services			
1. Programmed ESP contracts	0.0	14.0	14.0
2. New ESP contracts	0.0	23.3	23.3
3. Development of revenue capture mechanisms	0.2	0.1	0.3
B. Program Management & Field Supervision			
1. FONAFIFO Administration and Monitoring	0.5	1.9	2.4
2. SINAC Forest Protection and Field Supervision	0.6	7.2	7.8
3. Strengthening local non-governmental organizations	0.6	0.1	0.7
<u>Total Baseline Cost</u>			
Physical Contingencies	0.0	0.0	0.0
Price Contingencies	0.3	0.1	0.4
Front-end Fee	0.0	0.3	0.3
TOTAL PROJECT COSTS	2.2	47.0	49.2

*Note: Price contingencies apply to all goods and services financed under sub-components A3, B1, B2, and B3.

Annex 4a: Cost-Effectiveness Analysis Summary

Costa Rica: Ecomarkets

Summary of Benefits and Costs

The proposed project would increase forest conservation in Costa Rica by supporting the development of markets and private sector providers of environmental services supplied by privately owned forests. As such, the project directly supports the implementation of Forestry Law No. 7575 by 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, biodiversity conservation, scenic beauty, and hydrological services.

The project aims to contribute to environmentally sustainable development in Costa Rica through: (i) supporting the supply of and demand for environmental services provided by forest ecosystems; (ii) strengthening management capacity and assuring financing of public sector forestry programs administered by the Ministry of Environment and Energy (MINAE), including the National Forestry Financing Fund (FONAFIFO) and the National System of Conservation Areas (SINAC); and (iii) strengthening management capacity of local non-governmental organizations.

Benefits - By conserving forest on private land, the proposed project expects to increase the provision of four environmental services:

- **Biodiversity conservation.** The proposed project targets the conservation of forest on private land located in high biodiversity areas identified in the GRUAS report (including land in the Mesoamerican Biological Corridor and land in buffer zones adjacent to national parks and in corridors connecting national parks).
- **Hydrological services.** Forest cover maintained in watersheds will help regulate the quality, quantity and timing of hydrological flows, thereby providing water for human consumption, irrigation, and energy production and avoiding sedimentation, landslides and flooding.
- **Carbon sequestration.** Slowing deforestation on private land will mitigate greenhouse gas emissions.
- **Provision of scenic beauty.** Conserved forest cover will provide scenic beauty for recreation and tourism, which is the second-largest source of foreign exchange in Costa Rica.

The quantification and valuation of these environmental services is difficult both in theory and practice. Adding to the challenge is the fact that previous environmental service payment (ESP) contracts have not been focused in a compact geographic area (e.g., a distinct watershed or administrative region). Instead, ESP contracts have been written for small plots spread throughout the country. This diffusion of ESP contracts complicates the valuation of benefits provided by the proposed project. First, since the quantity and value of environmental services can vary dramatically over even short distances, the scattered nature of ESP contracts would require collecting detailed information at a very large number of sites. Second, instruments to measure the quantity and value of environmental services generally have been applied to large contiguous areas and the diffuse nature of ESP contracts raises complex methodological issues. Finally, the process of selecting plots to include in the ESP program has been demand-driven with generally weak criteria for maximizing environmental services. For these reasons, a cost-effectiveness analysis is used to assess whether project benefits are being achieved at least cost.

Costs - ESP program costs include: (1) payments on conservation and management contracts; (2) FONAFIFO management costs; and (3) SINAC monitoring costs. Conservation ESP contracts pay 12,000 colones each year. Over a fifteen-year period, management contracts make payments only in the first five years (the schedule of payments is 47,000 in year one, 18,800 in year two, and 9,400 in years three to five, and no payments for the next ten years). FONAFIFO and SINAC costs are assumed at five percent of the ESP payments. Average ESP costs were calculated by averaging conservation and management contract costs (see Table 4a.1).

Table 4a.1 Average ESP costs (colones)

<i>year(s)</i>	<i>ESP management payments</i>	<i>ESP conservation payments</i>	<i>average ESP payments</i>	<i>FONAFIFO admin costs</i>	<i>SINAC monitoring costs</i>	<i>average ESP total costs</i>
1	47,000	12,000	29,500	1,475	1,475	32,450
2	18,800	12,000	15,400	770	770	16,940
3	9,400	12,000	10,700	535	535	11,700
4	9,400	12,000	10,700	535	535	11,700
5	9,400	12,000	10,700	535	535	11,700
6-15	0	12,000	6,000	300	300	6,600

Cost-effectiveness indicator: national park establishment

The establishment of new protected areas (i.e., national parks) is used as the cost-effectiveness indicator in the analysis. Establishing a new national park was chosen as the most appropriate alternative policy to the ESP program since the primary objective of both policies is forest conservation.

Costs - Costs were collected for five national parks in Costa Rica. The five parks were selected to span a range of characteristics including: large parks (La Amistad); new parks (Barbilla); old parks (Volcán Poas); parks with management problems (Corcovado); and parks with conflicts with neighboring communities (Braulio Carrillo). Average protected area costs were calculated by averaging the costs of these five parks.

At each park, investment and operating costs were collected. Investment costs included: land; buildings; vehicles; and boundary demarcation. Vehicles were assumed to be replaced every five years and boundary demarcation to occur every three years. Operating expenses included: salaries; per diems; training; uniforms and basic equipment; fire breaks; trails and roads; educational materials; radios and other equipment; and maintenance of buildings, roads, and vehicles. In addition, 25 percent was added for administrative and other operating costs. Total costs were then divided by the number of hectares in the park for comparison with the ESP program. In general, per hectare operating costs were largely determined by park size, with the smallest park, Volcán Poas, costing 8,043 colones per hectare per year and the largest, La Amistad, costing 560 colones per hectare per year.

Table 4a.2 National Park Costs (colones)

<i>Costs</i>	<i>park average</i>	<i>La Amistad</i>	<i>Barbilla</i>	<i>Corcovado</i>	<i>Volcán Poas</i>	<i>Braulio Carrillo</i>
Investments						
land	283,600	250,000	218,000	300,000	400,000	250,000
construction	2,213	316	2,759	1,602	4,841	1,545
vehicles	775	90	935	250	1,844	757
boundary demarcation	8	1	12	3	23	3
investment total	286,596	250,407	221,706	301,855	406,709	252,304
Operating Expenses						
salaries	2,100	323	2,303	1,208	4,311	2,358
per diems	289	45	304	169	599	328
training	24	4	25	14	50	27
uniforms & basic equip	82	13	91	47	167	91
roads, trails & fire-breaks	283	9	390	218	768	32
maintenance	160	51	305	57	281	187
equipment	76	3	53	203	104	14
educational materials	51	0	78	0	154	21
administration	766	112	887	479	1,609	744
operating expense total	3,831	560	4,436	2,394	8,043	3,722

Base Case Results

The discounted cost is used to compare ESP and protected area (PA) costs. A time horizon of 105 years (i.e., seven, 15 year ESP management contract cycles) is used to ensure that terminal values do not significantly affect the results. The base case results illustrate the large impact land costs have on the financial and economic analyses. In the financial cost-effectiveness analysis (where land costs are included with national park costs), the ESP program is more cost-effective. In the economic analysis (where land costs are excluded from both national park and ESP costs), the national park alternative is the lower cost means of generating environmental services.

Financial cost-effectiveness analysis - In the financial analysis (see Table 4a.3), the discounted cost of the ESP average cost is less than half the discounted cost of the protected area average. Even comparing the more expensive conservation ESP contracts with the least expensive national park (La Amistad) indicates that the ESP program is less expensive (at a discount rate of 12 percent, conservation ESP contracts are still less than half the discounted cost for La Amistad).

Table 4a.3 Financial Discounted cost of ESP and Protected Area Costs (colones discounted to present)

<i>discount rate</i>	<i>ESP average</i>	<i>ESP management</i>	<i>ESP conservation</i>	<i>park average</i>	<i>La Amistad</i>	<i>Volcán Poas</i>
8	147,036	129,124	164,949	311,251	238,516	473,363
9	133,188	119,726	146,649	303,326	235,593	458,319
10	122,096	112,198	131,994	296,545	232,868	445,661
11	113,013	106,028	119,998	290,610	230,297	434,759
12	105,436	100,874	109,999	285,320	227,850	425,188

Economic cost-effectiveness analysis - The economic analysis assumes that the opportunity cost of land is equal for both national parks and the ESP program (equivalently, land costs are simply excluded from the analysis). The results from the economic cost-effectiveness analysis indicate that protected area costs are significantly less than ESP costs (see Table 4a.4).

**Table 4a.4 Economic Discounted cost of ESP and Protected Area Costs
(colones discounted to present)**

<i>discount rate</i>	<i>ESP average</i>	<i>ESP management</i>	<i>ESP conservation</i>	<i>park average</i>	<i>La Amistad</i>	<i>Volcán Poas</i>
8	147,036	129,124	164,949	48,658	7,035	102,992
9	133,188	119,726	146,649	43,142	6,235	91,346
10	122,096	112,198	131,994	38,727	5,596	82,024
11	113,013	106,028	119,998	35,115	5,072	74,398
12	105,436	100,874	109,999	32,106	4,636	68,045

One interpretation of these economic results is that they represent the additional cost of forest conservation if it is no longer possible (for social or political reasons) to increase the amount of land in the national park system. The economic costs of the two alternatives only include management costs (since land costs are excluded). In contrast to the ESP program, national parks are able to spread management costs over a large number of hectares (reducing the per hectare cost of the park) and take advantage of any economies of scale in forest conservation efforts. For these reasons, it should not be surprising that national parks have lower per hectare management costs than the ESP program. This difference is the additional cost that must be paid if it is no longer feasible to expand the national park system.

These results also are consistent with the history of forest conservation efforts in developing countries in general and Costa Rica in particular. National parks have traditionally been the primary instrument of forest conservation and the results from the economic analysis indicate that, in the absence of other constraints, it is economically cost-effective. More recently, budget and social constraints, as well as in avoidance of displacing local communities in creating new national parks, have forced many governments to look for a means of achieving forest conservation at a lower financial cost and the financial results indicate that the ESP program is cost-effective means of doing this.

Main Assumptions

A number of assumptions were made in designing the cost-effectiveness analysis. The first main assumption behind the cost-effectiveness analysis is that the ESP program and national parks generate equal quantities of environmental services on a per hectare basis. If this assumption holds, then it is possible to directly compare the costs of the ESP program and national parks. However, issues of scale and targeting suggest that this assumption does not necessarily hold. ESP contracts tend to be written for relatively small, isolated plots of forest (this is the scale issue) and past ESP contracts generally have not been targeted to maximize the generation of environmental services. In contrast, national parks tend to conserve large, contiguous plots of forest and tend to target land with high biodiversity conservation values. The impact of these scale and targeting issues on the value of environmental services generated depends upon the specific characteristics of each environmental service.

The ESP program targets the provision of four types of environmental services: carbon sequestration; biodiversity conservation; hydrological services; and the provision of scenic beauty. For some of these environmental services, the difference between conserving small, isolated plots and conserving large, contiguous plots would not affect the quantity of the service provided. For example, the carbon sequestered on a one-hectare plot of forestland does not depend on whether that hectare is surrounded by forest or by agricultural land. However, targeting may allow land with higher timber yields to be conserved (and hence greater carbon sequestration), but such land would likely have higher opportunity costs. Therefore, for carbon sequestration, the scale and targeting issues do not appear to be particularly significant (on a cost per hectare basis) and hectares conserved through the ESP program and through national parks would likely generate similar amounts of this environmental service.

In terms of biodiversity conservation, the theory of island biogeography suggests that less biodiversity is conserved on small, isolated plots relative to large, contiguous plots. In contrast, alternative theories suggest that a mosaic of forested and other land uses support higher biodiversity than large expanses of uninterrupted forest. While the impact of scale on biodiversity is ambiguous, it is clear that targeting can increase the amount of biodiversity conserved. However, both national parks and the new contracts financed by the GEF target biodiversity conservation.

For the provision of scenic beauty, it is unclear whether small isolated plots provide a larger or smaller flow of benefits than large contiguous plots. On the one hand, large plots of contiguous forest would likely be preferred by ecotourists wanting a “wilderness” experience. On the other hand, many countries (e.g., Switzerland) have been successful promoting the scenic beauty of mixed agricultural and natural landscapes. In general, the lack of research on this environmental service makes it very difficult to determine, *a priori*, which will dominate. In contrast, it is likely that targeting will be important since the value of scenic beauty will depend to a great extent on the number of people who can enjoy it. While it is clear that the ESP program has not been designed specifically to target the provision of scenic beauty, it is also unclear that national parks are located to maximize this environmental service either.

Finally, hydrological services likely require relatively small plots to achieve their maximum provision of services: conserving plots the size of a few meters squared likely would generate fewer hydrological services than conserving entire hectares (for example, in hillside areas, very small plots may not reduce the speed of surface water flows sufficiently to regulate overall water flows). However, it is possible that the scale of the plots included in the ESP program is sufficiently large that they provide similar hydrological services as large contiguous areas. In contrast, targeting is likely to have a large impact on the flow of hydrological services. Targeting can take place at the watershed scale (e.g., targeting watersheds with large populations or investments) as well as within watersheds (e.g., targeting upper watersheds and riparian areas). The ESP program targets some hydrological benefits by encouraging run-of-river hydropower projects to pay for ESP contracts in the watersheds above their water deviation sites. Since national parks do not generally target the provision of hydrological services, it is unclear which program would provide more of this service.

Looking across the four environmental services, it is possible to conclude that targeting is more important than scale. While it does not appear that national parks are significantly more successful at targeting these four environmental services, it is clear that the ESP program could do more to target its contracts to increase the generation of environmental services.

The second assumption necessary for the cost-effective analysis to be valid is that the ESP program and national parks are equally effective at actually conserving forest. Both approaches to forest conservation face threats that reduce their ability to conserve forests. National parks in Costa Rica (and around the world) lose forests to agricultural encroachment and other illegal land use changes. In national parks, park guards are the primary method of monitoring and enforcing forest conservation. In the ESP program, while it is possible that actors other than land owners could deforest ESP plots, the more significant threat is likely the failure of the land owner to live up to their contractual agreement to conserve the forest. However, since landowners choose to participate in the ESP program and conservation easements are written into land titles, it is likely that the ESP program will be at least as effective at forest conservation as national parks.

The final assumption is related to the opportunity cost of land included in national parks and the ESP program. In the financial cost-effectiveness analysis, this issue is not relevant since financial values are used and only national park costs include the cost of purchasing land. In the economic analysis, however, the opportunity cost of land should be included in the costs of both national parks and the ESP program. If the opportunity cost of land is equal in both national parks and the ESP program, then converting the financial cost-effectiveness analysis to the economic cost-effective analysis simply requires dropping land costs from national parks. If land opportunity costs differ, however, then the differential opportunity costs need to be included for both national parks and the ESP program.

Sensitivity Analysis

The results of the cost-effectiveness analysis will change if any of these assumptions fail to hold and sensitivity analysis is used to assess this impact. The first sensitivity analysis increases the base-case ESP financial costs which simulates both: (i) the ESP program generates fewer environmental services (failure of assumption one); (ii) the ESP program is less effective at conserving forest (failure of assumption two). The second sensitivity analysis considers differential opportunity costs of land to test how much lower the opportunity cost of land needs to be in the ESP program for it to be economically cost-effective.

Increased ESP costs - The results from increasing ESP costs in the financial cost-effectiveness analysis from 100 to 180 percent are shown in Table 4a.5. This sensitivity analysis shows that ESP costs need to increase by more than 140 percent to be greater than the average national park costs at a 10 percent discount rate. Thus, the ESP program can generate less than half the environmental services and still be financially cost-effective. Similarly, even if the ESP program conserves less than half the forest than what would be conserved through a national park, it is still cost-effective. This sensitivity analysis indicates that the base case financial results are robust to relatively large increases in costs. Therefore, national parks would have to generate significantly more environmental services (per hectare) or be significantly more effective at conserving forest to be financially cost-effective relative to the ESP program.

**Table 4a.5 Financial Discounted cost of ESP and Protected Area Costs
(colones discounted to present)**

<i>discount rate</i>	<i>park average</i>	<i>ESP average plus 100%</i>	<i>ESP average plus 120%</i>	<i>ESP average plus 140%</i>	<i>ESP average plus 160%</i>	<i>ESP average plus 180%</i>
8	311,251	294,073	323,480	352,887	382,294	411,702
9	303,326	266,375	293,013	319,651	346,288	372,926
10	296,545	244,192	268,611	293,030	317,449	341,868
11	290,610	226,026	248,628	271,231	293,833	316,436
12	285,320	210,873	231,960	253,047	274,135	295,222

Opportunity cost of land - The base case economic cost-effectiveness results indicate that national park establishment is cost-effective relative to the ESP program. This base-case analysis assumes that the opportunity cost of land is equal in national parks and the ESP program. It is likely, however, that this is not the case given the different criteria for selecting land to be included in the two programs. The boundaries of national parks generally are drawn to maximize biodiversity conservation. With such selection criteria, it is possible that high opportunity cost land is included within the boundaries of national parks (as indicated by the significant difficulties Costa Rica presently faces in paying for land expropriated into national parks).

In contrast, the process of selecting land to include in the ESP program is demand-driven and ensures that relatively low opportunity cost land is included. In general, private landowners do not put all of their land into the ESP program. Instead, landowners choose which hectares to include and which to exclude. Since landowners do not realize all of the benefits from forest conservation, they will choose to include those hectares that have the lowest opportunity cost (i.e., the least productive land). Therefore, while the ESP program encourages the inclusion of low opportunity cost land, national parks have no mechanism for targeting low opportunity cost land (and may include high opportunity cost land in some cases). Overall, it is likely that, on average, land in the ESP program will have a lower opportunity cost than land in national parks. This is the other aspect of targeting that should be incorporated in designing the ESP program: a well targeted program should both maximize benefits (i.e., by targeting land that generates large amounts of the four environmental services) and minimize costs (i.e., by targeting land that has a low opportunity cost).

The impact of a lower opportunity cost of land in the ESP program on the economic cost-effectiveness analysis is presented in Table 4a.6. The opportunity cost of land for national parks is taken as the financial cost and the opportunity cost for the ESP program is taken as a fraction of the national parkland cost. At a 10 percent discount rate, the opportunity cost of land in the ESP program needs to be 65 percent of the opportunity cost of land in national parks for the ESP program to be economically cost-effective. In other words, if the demand-driven approach of the ESP program reduces opportunity costs by 35 percent, then the ESP program will be the economically cost-effective means of achieving forest conservation in Costa Rica.

**Table 4a.6 Economic Discounted cost (including opportunity costs)
of ESP and Protected Area Costs
(colones discounted to present)**

<i>discount rate</i>	<i>park average</i>	<i>ESP average 60% op cost</i>	<i>ESP average 65% op cost</i>	<i>ESP average 70% op cost</i>	<i>ESP average 75% op cost</i>	<i>ESP average 80% op cost</i>
8	311,251	304,592	317,721	330,851	343,981	357,110
9	303,326	289,298	302,307	315,316	328,325	341,335
10	296,545	276,787	289,678	302,569	315,459	328,350
11	290,610	266,310	279,085	291,860	304,634	317,409
12	285,320	257,365	270,026	282,686	295,347	308,008

These two sensitivity analyses treated the opportunity cost of land and the generation of environmental services as independent. However, land characteristics and location will affect both opportunity costs and the generation of environmental services. Through targeting, the ideal hectare to be included in the ESP program would simultaneously maximize the generation of environmental services and minimize opportunity costs. The interdependence between opportunity costs and environmental services, however, suggests that there may be tradeoffs that imply the need to balance maximizing benefits with minimizing costs.

Qualitative Benefit-Cost Assessment

Although it was not possible to conduct a quantitative benefit-cost analysis of the proposed project, it is possible to assess qualitatively these benefits and costs. In general, a well-designed environmental service payment program would target the inclusion of land that maximizes the generation of environmental services while minimizing opportunity costs. The demand-driven nature of the ESP program ensures that private landowners face the necessary incentives to minimize the opportunity cost of land included in the program. Additionally, the criteria used to select land to include in the ESP program work to increase the generation of environmental services. These criteria include: (1) targeting land identified in the GRUAS report as having high biodiversity conservation values; and (2) creating mechanisms to ensure the funding of contracts in watersheds above run-of-river hydroelectric projects. While more could be done to improve the targeting of ESP contracts (including improving: (i) the micro targeting for biodiversity conservation values; (ii) the micro and macro targeting of hydrological services; and (iii) criteria for targeting scenic beauty values), the current criteria help to increase the generation of environmental services.

It is also possible to assess qualitatively the likelihood that the benefits generated by the ESP program will exceed the costs. The current level of payments in the ESP program were based on estimates of the value of the environmental services generated (the payments likely underestimate the value since it is not possible to value all of the environmental services). Given the demand-driven nature of the ESP program and the excess demand for ESP contracts, it is clear that private landowners calculate that the ESP payments (and hence the value of the environmental services) is greater than the opportunity costs. Improved targeting of ESP contracts (while maintaining its demand-driven features) will increase the net benefits from the ESP program.

Annex 4b: Incremental Cost Analysis

Costa Rica: Ecomarkets

Overview

The global environment objective of the proposed project is to foster improved management and conservation of biodiversity and important forest ecosystems on privately owned lands outside of national parks and biological reserves in the MBC/CR. The project development objective 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. As such, the project directly supports 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 biodiversity conservation, carbon sequestration, and provision of hydrological services. The project aims to accomplish the global environmental objective through activities that include:

- financing conservation easements utilizing established mechanisms within the National Fund for Forestry Finance (FONAFIFO) to contract small- and medium-sized landowners for conservation easements in the MBC/CR;
- increasing local capacity within governmental and non-governmental institutions involved in the valuation and marketing of environmental services designated within Forestry Law No. 7575;
- strengthening technical capacity for monitoring, supervising and evaluating Costa Rica's innovative Environmental Service Payments (ESP) program carried out by FONAFIFO and the National System of Conservation Areas (SINAC);
- strengthening forest protection programs and field supervision activities carried out by SINAC; and
- strengthening regional NGOs which are promoting activities compatible with the conservation and sustainable use of biodiversity in forest ecosystems and providing solutions to problems resulting from deforestation and environmental degradation.

The GEF Alternative intends to achieve these outputs at a total incremental cost of approximately US\$8 million.

Context and Broad Development Goals

Costa Rica is one of the world's leading proponents of sustainable development, pursuing social and economic development in conjunction with a strong and healthy environment. Environmental policies in Costa Rica include surcharges on water consumption, reforestation incentives, and introduction of conservation credits targeted at protecting biologically important forest ecosystems throughout the country. These policies provide the policy framework and programs that support the conservation and sustainable use of Costa Rica's vast wealth of environmental resources. In particular, despite the country's small size, Costa Rica contains at least 500,000 million species in habitats that range from near desert to exceedingly wet rain forests and cloud forests. It is estimated that there are 13,000 species of plants, 10,000 fungi, 1,500 vertebrates, 290,000 insects, 75,000 aquatic organisms in water which ranges from fresh to brackish, 15,000 marine invertebrates, up to

50,000 spiders, mites and other terrestrial invertebrates, as many as 10,000 nematodes, and innumerable species of bacteria and viruses.

More than half of Costa Rica was covered by forest ecosystems in 1950, which contributed to the various habitats in which many of these species thrived. However, the Central American country was beset with one of the highest rates of deforestation worldwide during the 1970s and 1980s. Agricultural expansion, especially for pasture, was the leading cause of forest conversion. Conversion was driven by rapid expansion of the road system, cheap credit for cattle, and land titling laws, which rewarded deforestation. As a result, Costa Rica lost one-half of its forested areas between 1970 and 1995. Deforestation and inappropriate land uses (e.g., overgrazing) outside of national parks and biological reserves continue to cause serious losses in terms of loss of biodiversity, ecological integrity of forests, and environmental services supplied by forest ecosystems.

The expansion and strengthening of Costa Rica's protected area system was vital in arresting conversion of forests on public lands. Currently, 13% of the national territory consists of national parks, biological reserves, and wildlife refuges, while an additional 12% is under legal decree related to conservation. These areas are critical for conserving the country's vast biological wealth; although it is not a large country, Costa Rica has an estimated six-percent of the world's tropical plant species. Outside of state-owned lands, however, deforestation and forest degradation continues to result in fragmented forest landscapes in which the long-term maintenance of biodiversity is in doubt and critical environmental services are threatened. Since sixty percent of the nation's forest cover—which serves as habitat for the majority of biodiversity in Costa Rica—exists in private lands outside national parks and biological reserves, the maintenance of naturally functioning ecosystems and corridors on these lands is essential. On these lands is required to achieve sustainable biodiversity conservation over the long term.

Costa Rica's efforts to promote forest conservation date back to 1979, with the passage of the first Forestry Law and the establishment of economic incentives for reforestation. Subsequent laws strengthened such incentives, broadening opportunities for landowners to participate in reforestation programs and making the program accessible to small landowners. In 1996, Costa Rica adopted Forestry Law No. 7575, which explicitly recognizes four environmental services provided by forest ecosystems: biodiversity conservation; mitigation of GHG emissions such as CO₂; hydrological services, including provision of water for human consumption, irrigation, and energy production; and provision of scenic beauty for recreation and ecotourism.

From a conservation perspective, the ESP program provides market-based incentives to conserve natural forest ecosystems. As such, these incentives help maintain habitats that are critical to a rich, globally-important biodiversity, as well as help maintain biological corridors linking national parks and biological reserves. Approaching biodiversity conservation through the ESP mechanism is akin to the sophisticated system of easement payments that are widely used in the United States and several European countries. By rewarding private landowners that maintain forest cover, the program acts as a marketplace where incentives are provided to investors who “produce” and “sell” ecological services and values that are important at local, national, and global levels.

The broad development goals of the Government of Costa Rica include strengthening the outward-orientation of the economy and increasing the role of the private sector. The proposed project, which will be financed by (i) Government of Costa Rica funds; (ii) a loan from the World Bank for conservation and sustainable management of the nation's forests, (iii) the purchase of Emissions Reductions by the Prototype Carbon Fund from renewable energy projects, and (iv) a grant from the Global Environment Facility for contracting conservation easements in the MBC/CR, directly

supports these development goals through strengthening integration with Central American electricity markets and international carbon offset markets while likewise supporting improved natural resource management on privately owned lands. The project also promotes and specifically targets the participation of women's groups and indigenous populations, disproportionately affected by poverty and unemployment. Furthermore, the project supports poverty alleviation through targeting small farmers and the rural poor for environmental service contracts. GEF financing will ensure that priority areas outside of national parks and biological reserves within the MBC/CR will be covered through the innovative program.

Baseline Scenario

Costa Rica initiated an outward-oriented, export-led growth strategy in the 1980s, which led to GDP growth of approximately 4.3% in the late 1980s and approximately 5% during the early 1990s. However, the economy remained vulnerable to periodic macroeconomic imbalances during the 1990s, leading to increasing inflation and increased fiscal deficit. Stringent measures in the latter half of the 1990s served to reign in these imbalances, thereby reducing fiscal deficits and, increasing foreign investment, commerce and construction. Arrival of firms such as INTEL and IBM regional sales and service confirm the country's attraction as a destination for foreign investment. Increased exports, such as electricity to other Central American countries via the System of Electrical Interconnection of the Countries of Central America (SIEPAC) project, will allow for continued economic growth and further stimulate private sector-led investment.

Regarding natural resources, a 1996 Environmental Law was an important step towards the restructuring and redefinition of environmental in Costa Rica. A process of dividing the country into conservation regions has been successfully implemented. While there is scope for a clearer legal definition of competencies between the central government and local agencies, regionalization has resulted in a more focused and efficient management of resources, greater budgeting autonomy for local agencies, better cooperation between the central government and private enterprises, and more careful attention to demands from civil society. Likewise, the 1996 Forestry Law solidified the institutional framework for improving environmental management in the forestry sector and further strengthened mechanisms for forest conservation.

Under the Baseline Scenario, the Government of Costa Rica—including MINAE, FONAFIFO, SINAC, and the Costa Rican Office for Joint Implementation (OCIC)—the Government of Costa Rica is mobilizing resources directed to the conservation and sustainable management of forest ecosystems. Over the next five years, it is expected that the sum of disbursements for environmental service contracts through the ESP program in priority biodiversity areas will total approximately US\$27.5 million.

In addition, Government of Costa Rica resources directly related to forest conservation include: (i) program administration expenditures by FONAFIFO – US\$1.7 million; (ii) field supervision and administration by SINAC – US\$6.9 million; (iii) activities related to financial sustainability of the ESP program (e.g., OCIC, ODE) – US\$1.0 million; (iv) other activities related to forest conservation and sustainable use at the national level (e.g., ONF, CCF) – US\$0.3 million; and (v) activities carried out by municipalities (e.g., water commissions, environment and forestry commissions) – US\$2.0 million. The total cost of these activities is approximately US\$11.9 million.

Activities underway by other donor agencies/NGO partners in Costa Rica are targeted towards forest conservation and sustainable forest management in priority areas. Activities expected to be on-going during the life of the proposed project (2000-2005), which total approximately US\$7.3 million, include:

- ◆ GTZ activities support national activities related to the MBC; improved forest management and timber harvesting practices; development of a Sustainable Forestry Management training program with CATIE; and implementation of the Sustainable Agricultural and Natural Resources Management Program with IICA. The estimated cost of these activities between 2000 and 2005 is US\$4.0 million.
- ◆ Conservation International has concentrated its activities relating to sustainable resource management (including soil conservation, sustainable forest management, and ecotourism) on buffer zones in La Amistad-Caribe, Tapanti and Osa Conservation Areas. Anticipated programmatic expenditures are expected to total \$875,000.
- ◆ Wildlife Conservation Society activities in Costa Rica focus upon environmental education and public awareness regarding biodiversity conservation. Expenditures are expected to total US\$300,000 from 2000 to 2005.
- ◆ The Nature Conservancy program is concentrated in the La Amistad and Tortuguero regions. The Land Purchase Program has purchased private lands and is transferring them to community-based associations; the Community-Based Natural Resource Management program is providing training in buffer zones and community reserves. Estimated total expenditures for programmatic activities and administration are expected to total US\$1,000,000.
- ◆ Government of the Netherlands activities in the La Amistad Caribe and Osa Peninsula areas promoting knowledge and sustainable use of biodiversity are expected to total \$1,100,000 between 2000 and 2002.

Costs. Total expenditures under the Baseline Scenario are estimated at US\$46.7 million, including (i) contracts for conservation easements within the ESP program totaling US\$27.5 million; (ii) activities related to financial sustainability of the ESP program – US\$1.0 million; (iii) technical assistance related to sustainable forest management, biodiversity conservation, and environmental awareness at the local level – US\$7.3 million; and (iv) program administration, field supervision, and other activities carried out by the Government of Costa Rica and municipalities totaling US\$10.9 million.

Benefits. Implementation of the Baseline Scenario will result in (i) financing for conservation and sustainable management of forest ecosystems throughout Costa Rica; (ii) limited financing of strategies for financial sustainability of the ESP program; and (iii) program administration and field supervision of forest conservation and sustainable management programs working with small- and medium-sized farmers. As a consequence of the Baseline Scenario, Costa Rica will continue to finance forest conservation, sustainable forest management, and reforestation under Forestry Law No. 7575. However, in the absence of financing from the Global Environment Facility, it is unlikely that there will be explicit targeting of corridors within the national segments of the MBC/CR, nor that 20-year easements will be introduced. As such, financial resources devoted to protect the large quantity of critical biodiversity dependent on habitats outside of national parks and biological reserves in high priority segments of the MBC/CR will be less and the loss of biodiversity dependent upon intact forest ecosystems may continue.

Global Environmental Objective

The GEF Alternative will support the conservation and sustainable management of forest ecosystems throughout Costa Rica through explicitly targeting resources for conservation easements in buffer zones of national parks and biological reserves within the MBC/CR, including forests with high biodiversity values, forests which are important for watershed protection, and other priority areas. As a result of conservation easements on privately owned lands in these areas, it is expected that habitat quality and species richness will be maintained. Furthermore, investments in institutional strengthening of public sector institutions and non-governmental organizations, as well as mobilization of investments that support sustainable development and biodiversity conservation, will support the long-term sustainability of the ESP program.

Scope. The GEF Alternative will build on the Baseline Scenario by supporting conservation easements within priority areas of the MBC/CR; promoting the long-term financial sustainability of the ESP program; providing technical support for forest monitoring and forest management supervision; technical strengthening of field staff for forest protection; training of regional judges on environmental conservation; increased local capacity within public sector institutions, non-governmental organizations and private sector associations involved in the valuation and marketing of environmental services; and strengthening of regional non-governmental organizations and private sector associations in priority areas of the MBC/CR which are promoting activities compatible with the conservation and sustainable use of biodiversity and which are providing solutions to problems stemming from deforestation and forest degradation.

Costs. The total cost of the GEF Alternative is estimated at US\$54.7 million, detailed as follows: (i) contracts for conservation easements through the ESP program – US\$32.5 million (*GEF financing - US\$5.0 million*); (ii) design and implementation of strategies related to financial sustainability of ESP program – US\$1.4 million (*GEF financing - US\$0.4 million*); (iii) technical assistance related to sustainable resource management and biodiversity conservation at the local level – US\$8.0 million (*GEF financing - US\$0.7 million*); and (iv) program management and field supervision, including monitoring, supervision, and evaluation of the ESP program, technical assistance for regional field staff – US\$12.8 million (*GEF financing - US\$1.9 million*).

Benefits. Implementation of the GEF Alternative will protect important forest ecosystems and species dependent upon intact forests. Benefits generated from the project will include those classified as “national”—increased local participation in managing environmental resources and reduced activities which lead to deforestation and forest degradation; increased hydrological services to local and sub-national consumers; improved institutional capacity within public sector institutions as well as within civil society to support biodiversity conservation; and economic benefits from sustainable forest management—as well as those considered “global” in nature. Global benefits include the conservation of forest ecosystems which support a large number of endemic plant and animal species; outreach to and involvement of local communities and local institutions in biodiversity conservation; and improved monitoring of forest ecosystems, forest types, forest quality and conservation of priority ecological hotspots outside of national parks and biological reserves. GEF cofinancing will support targeted selection of conservation easements in priority areas of the MBC/CR; likewise, forest conservation contracts co-financed by the GEF will be written for a period of twenty years, under Article 69 of Forestry Law No. 7575, rather than the traditional five-year contracts.

Incremental Costs

The difference between the cost of the Baseline Scenario (US\$46.7 million) and the cost of the GEF Alternative (US\$54.7 million) is estimated at US\$8.0 million. This represents the incremental cost for achieving global environmental benefits related to biodiversity conservation through conservation easements on privately owned lands in buffer zones and interconnecting biological corridors outside of national parks and biological reserves, in particular through contracting conservation easements in priority areas of the MBC/CR.

Incremental Cost Matrix

Component Sector	Cost Category	US\$ Million	Domestic Benefit	Global Benefit
Contracts for Conservation Easements through ESP program	Baseline	27.5	Increased protection and sustainable management of forest ecosystems and improved provision of environmental services.	
	With GEF Alternative	32.5	Same as above.	Conservation easements targeted to priority areas of the MBC/CR, including clustering to achieve biological corridors. Meaningful participation of local stakeholders in biodiversity conservation in explicitly targeted areas.
	Incremental	5.0		
Design and Implementation of Strategies related to Financial Sustainability of ESP program	Baseline	1.0	Development of mechanisms to market environmental services in local, national and international markets.	
	With GEF Alternative	1.4		Improved knowledge of value of environmental services provided by forest ecosystems; increased sustainability of ESP program through establishment of a "biodiversity conservation" trust fund; increased institutional capacity for marketing environmental at the national and international level.
	Incremental	0.4		
Sustainable Resource Management at the local level	Baseline	7.3	Increased support at the local level for biodiversity conservation and sustainable forest management.	
	With GEF Alternative	8.0		Increased support from civil society for biodiversity conservation and natural resource management. Meaningful participation of local organizations in biodiversity conservation in priority areas.
	Incremental	0.7		
Program Administration and Field Supervision	Baseline	10.9	Strengthened environmental institutions; increased public sector capacity to manage natural resources and administer natural resource management programs.	
	With GEF Alternative	12.8		Increased management capacity of natural resource management agencies (including FONAFIFO and SINAC) as well as non-governmental organizations. Improved knowledge of forest ecosystems, forest types, forest quality and identification of priority ecological hotspots outside of national parks and biological reserves. Increased application of environmental protection at the judicial level in support of forest conservation. Effective management of investments aimed at long-term conservation and sustainable use of globally significant biodiversity.
	Incremental	1.9		
Totals	Baseline	46.7		
	With GEF Alternative	54.7		
	Incremental	8.0		

Annex 5: Financial Summary

Costa Rica: Ecomarkets

Years Ending June 30
(US\$ millions)

	Implementation Period					Operational Period				
	PY1	PY2	PY3	PY4	PY5	2006	2007	2008	2009	2010
Project Costs										
Investment Costs	8.3	8.2	8.2	8.1	7.2	6.5	5.6	4.4	4.0	4.0
Recurrent Costs	1.8	1.8	1.8	1.9	1.9	1.7	1.7	1.7	1.7	1.7
Total	10.1	10.0	10.0	10.0	9.1	8.2	7.3	6.1	5.7	5.7
Financing Sources (% of total project costs)										
Government	17.1	17.2	17.2	17.3	19.0					
IBRD	67.4	64.4	64.1	64.7	70.9					
GEF	15.5	18.4	18.7	18.0	10.1					
Total	100.0	100.0	100.0	100.0	100.0					

Operational Period Main Assumptions

During the operational period, financing will be required to cover three expenses: (1) ESP contract payments; (2) FONAFIFO administrative expenses; and (3) SINAC administrative expenses. The ESP contract payments make up the projected investment costs while the FONAFIFO and SINAC administrative expenses together make up the recurrent costs.

The ESP contract payments during the Operational Period represent the “tails” of contracts committed during the implementation period. Since traditional ESP contracts are written for 5 years, contracts written in 2002 imply payments through 2006. Payments made in 2006 represent the “tail” of contracts that fall outside the implementation period. Furthermore, contracts financed with GEF resources will be written for a twenty-year period. The total annual payments on these contracts sum to US\$4.0 million per year, as seen in years 2009 and 2010 of the operational period (in fact, these commitments extend through 2023, 20 years after the last contract financed with GEF resources is written in 2004).

The recurrent costs include US\$1.7 million for FONAFIFO administrative expenses over the life of the five year project (this figure represents 5 percent of total ESP contract payments during the life of the project) and US\$6.9 million for SINAC administrative expenses over the life of the five year project.

Annex 6: Procurement and Disbursement Arrangements

Costa Rica: Ecomarkets

Procurement

All procurement of goods under the Project would be carried out in accordance with the “*Guidelines, Procurement under IBRD Loans and IDA Credits*” dated January 1995 and revised in January and August 1996, September 1997, and January 1999. Consultants would be employed in accordance with the *Guidelines, Selection and Employment of Consultants by World Bank Borrowers*, dated January 1997 and revised in September 1997 and January 1999.

Procurement Responsibilities and Capacity

The implementing agency, FONAFIFO, will carry out procurement under the project and award and supervise environmental service contracts. FONAFIFO has a small administrative unit comprising two professionals and one support staff which handles a limited amount of procurement required to meet the institution’s operational needs. Contracts for environmental services are handled by a dedicated unit with a staff of four. The staff person responsible for managing the unit is capable, delegation of authority is appropriate and the unit’s capacity appears adequate to handle the present level and type of procurement. However, FONAFIFO has very limited experience with procurement of consulting services and no experience with open bidding for goods. The institution has no prior experience with Bank operations or knowledge of Bank procurement policies and procedures.

Currently, FONAFIFO’s entire budget is channeled through a trust fund managed by the National Bank of Costa Rica, which under the trusteeship agreement makes payments and exercises a control of legality of all expenditures. Transactions carried out under this trust fund arrangement are regulated by the Costa Rican Commercial code rather than the “General Law of Public Administration” and the “Financial Administration Law”, Costa Rica’s legal framework for public sector procurement. This arrangement would apply also to the project’s funds facilitating implementation since there would be no potential conflict between domestic law and Bank procurement policies and procedures. In addition, FONAFIFO has an internal manual, which describes procedures applicable to the transactions currently handled. The trust fund arrangement will also apply to the project’s proceeds but the fee charged by the state-owned commercial bank will be paid by FONAFIFO with other funds. The institution is audited annually and legal advice is provided, as needed, by outside counsel but there are no internal controls, financial management capabilities, a monitoring system, nor additional technical and administrative support available to the unit.

Based on the above, FONAFIFO’s present capacity is deemed inadequate to plan, implement and monitor procurement for the Project. In order to strengthen its capacity, FONAFIFO will recruit a procurement specialist with substantial experience in Bank procurement. Several Bank loans are now closing and offer the best pool of Bank expertise available in the country. If no experienced procurement specialist can be identified, FONAFIFO will hire an individual with strong administration skills who is familiar with procurement. In the latter case, both current and new staff should attend the first available “Basic Procurement”, “Procurement of Consulting Services”, and “Disbursement Operations” courses. In addition, FONAFIFO should retain on a short-term basis an international consultant with substantial Bank procurement experience to help prepare the Administrative Unit for the Project providing on-the-job training to staff, preparing the procurement section of the

Implementation Manual with a detailed description of procurement responsibilities and processes, drafting standard documents, including NCB documents, a format for shopping, and a contract for individual consultants acceptable to the Bank, and coordinating with the financial management consultant to establish a LACI compatible financial management and monitoring system. Additional actions required to strengthen FONAFIFO's capacity to implement the project include designing appropriate internal control procedures, defining an integrated management system to help control and report on project activities, including financial, physical performance and procurement, defining appropriate monitoring procedures including performance and quality indicators on which the monitoring system will be based, and arranging for a periodic evaluation of the Project's impact by an external entity. The following timetable has been agreed:

Action	Deadline
Retain procurement consultant	May 15, 2000
Manual ready	July 15, 2000
Recruit additional procurement staff	June 15, 2000
Appropriate technical and administrative controls in place	July 15, 2000
Financial management system in place	Project effectiveness

Procurement methods (Table A)

Goods

The Project would finance contracts for the purchase of vehicles, computers and software, small boats and motors, and small amounts of miscellaneous equipment for a total estimated amount of US\$295,008 equivalent. Contracts estimated to cost more than US\$50,000 equivalent up to an aggregate amount of US\$151,509 equivalent would be awarded on the basis of National Competitive Bidding (NCB) procedures acceptable to the Bank. Two NCB packages for vehicles and no International Competitive Bidding (ICB) packages are anticipated. Contracts estimated to cost less than US\$50,000 equivalent up to an aggregate amount of US\$143,499 equivalent, would be procured following shopping procedures in accordance with paragraphs 3.5 and 3.6 of the Guidelines. These include several small packages for computers and various equipment needed during different years of the Project.

Standard documents and procedures for NCB and shopping would be agreed before the first tender is advertised and the first invitation to submit quotations issued, respectively.

Consultant Services

The loan would finance technical assistance, studies and capacity building. Consulting services would be required to strengthen management capacity of central institutions and local non-governmental organizations (NGOs), monitoring of environmental services contracts, studies on land use change, forest audits and biodiversity, updating the management plan data base, and designing a strategy to control poaching.

Several NGOs with strong ties to local communities in various parts of the country (approximately eight) will be selected following a Fixed-Budget process to promote the

Project with small land owners, assist them in preparing proposals for FONAFIFO and implement land management plans, and monitoring environmental contracts concluded with them by FONAFIFO.

In all other cases, consulting firms would be selected following a Quality and Cost Based Selection process, in accordance with Section II of the Consultant Guidelines.

Individual consultants would be used for assignments that meet the requirements of Paragraph 5.1 of the Consultant Guidelines. Individual consultant contracts will include procurement, financial management, and natural resource management specialist positions to assist FONAFIFO during project implementation. Individual consultants would be selected on the basis of a competitive process acceptable to the Bank and described in the implementation manual.

Environmental Services Contracts

Contracts for payments for environmental services would be issued on the basis of the criteria set forth in Annex 8b to eligible beneficiaries, as defined therein. Under these contracts, landowners will receive payments based on specified activities and commitments regarding the use of forested land and agreed forest management plans. Environment services contracts would be based on a standard contract model acceptable to the Bank and monitored in accordance with appropriate procedures established in the Implementation Manual.

Prior review thresholds (Table B)

The first contract awarded following NCB procedures, and the first procured through shopping would be subject to prior review. In addition, prior review procedures would apply to all contracts with consulting firms estimated to cost more than US\$50,000 equivalent, and contracts with individual consultants estimated to cost more than US\$25,000 equivalent.

Any contract awarded on a single-source basis, assignments of a critical nature, and amendments raising contract values above the said thresholds would be subject to prior review.

The Operational Manual (OM) will be prepared and adopted by the FONAFIFO prior to the first disbursement to ensure acceptable procedures for procurement, accounting, disbursement and auditing, as agreed for all IBRD operations, and provide proper guidance for the project operations. The OM will also be updated to include specific operating and control mechanisms agreed under the financial and physical monitoring system.

Financial Management and Disbursement

Allocation of loan and grant proceeds (Table C)

Accounting, Financial Reporting, and Auditing Arrangements

As a result of the October 1999 financial management assessment, carried out by a Bank consultant, it was identified that FONAFIFO does not have an adequate financial management system, thus an action plan was agreed upon, which includes key actions to implement an adequate financial management system including: (a) design and implementation of a financial management system that meets Project Management Reporting

as required by the Bank LACI requirements; (b) hiring of additional staff; (c) drafting a project operations manual and administrative procedures; and (d) identification of the flow of funds for the IBRD loan. (See Table D below.) It was agreed that a PMR-compatible Financial Management System (FMS) would be operational prior to the project effectiveness.

FONAFIFO will implement an adequate integrated financial management system for the project, including internal control systems that: (i) are in accordance with international accounting standards; (ii) reliably record and report all assets, liabilities and financial transactions of the project; (iii) provide sufficient financial information for managing and monitoring project activities; and (iv) integrates financial information, disbursements, purchasing, procurement, and control of contracts, to allow the generation of quarterly programmatic financial reports on the financial and physical advance of each component, as well as financial information by disbursement category. This system will also integrate procedures for FONAFIFO's own requirements. The detail of these procedures will be contained in the Operational Manual

Auditing Arrangements:

An external auditor, acceptable to the Bank, will be contracted by FONAFIFO to carry out an annual financial audit of the project, as required by OP/BP 10.02. The auditor will be selected according with the Bank's "Guidelines for the Selection and Employment of consultants by the World Bank Borrowers" dated January 1997, revised in September 1997, so that the interim audits can be performed throughout each year of project implementation. The project financial statements, the Special Accounts, SOEs (if applicable), and the PMRs will be audited at the end of each fiscal year during project implementation. A consolidated audited report for all project components will be submitted to the Bank within 120 days of the close of the project's financial year. The "Guidelines and Terms of Reference for Audits of Projects with Financing by the World Bank in the Latin American and the Caribbean Region" should be followed by FONAFIFO when preparing the terms of reference for the audit and these guidelines should be provided to the selected auditors.

Disbursement Procedures:

The Bank and the Borrower have agreed that if by project effectiveness, FONAFIFO has not implemented a PMR compliant system, the traditional disbursement procedures will be used for the first two quarters of project implementation, in accordance with the guidelines set in the Disbursement Procedures Handbook. SOEs documentation will be maintained by FONAFIFO for post-review and audit purposes. The authorized allocation(s) to the Special Accounts, IBRD and GEF funds, for Non-PMR disbursements will be set at a level sufficient to cover approximately four months of estimated expenditures eligible for financing by the Bank, up to a maximum authorized allocation of US\$2,000,000 for the Bank Loan and US\$500,000 for the GEF Grant. Replenishments of funds will be made on evidence of satisfactory utilization of the previous advance(s) as evidenced by the documentation submitted in support of disbursement applications. Deposits into the Special Accounts and its replenishments, up to the Authorized Allocations will be made initially on the basis of Applications for Withdrawals (Form 1903) accompanied with the supporting and other documentation specified in the Disbursement Handbook. Withdrawal applications will be fully documented, except for expenditures under contracts costing less than US\$50,000 equivalent for goods, and US\$50,000 and 25,000 equivalent for consulting firms and individual consultants, respectively.

Use of Project Management Report (PMRs):

By the end of the second quarter of project implementation, or earlier if FONAFIFO is compliant and requests transition to a full Project Management Report (PMR) system, the PMRs would serve as disbursement requests. Transition to PMR will be subject to the satisfactory results of new financial management and procurement assessments. Once the borrower becomes PMR compliant, disbursements would be in accordance with guidelines set in the Loan Administration Change Initiative (LACI) Implementation Handbook. Each application for withdrawal should separately identify the funds requested from the Loan and Grant (GEF) Accounts, and would be supported by a Project Management Report (PMR) or such other documents and evidence as the Bank may request. PMRs should be submitted within 45 days from the preceding quarter. Upon receipt of each application for withdrawal, the Bank, on behalf of the Borrower, shall withdraw from the Loan and Grant Accounts and deposit into the Special Accounts, Loan and Grant, an amount equal to the lesser: (a) the amount requested; and (b) the amount the Bank has determined, based on the PMR accompanying the application, is required to be deposited in order to finance eligible expenditures during the six month period following the date of the report, but in no case should exceed 20% of the total loan and grant funds, without prior authorization from the Loan department. FONAFIFO would be responsible for preparing withdrawal applications and the related PMRs. All supporting documentation authenticating the expenditures reported in the PMRs would be maintained by FONAFIFO and made available for review by independent auditors and by the Bank supervision missions. Direct Payments and Special Commitments should be clearly identified in the PMRs and FONAFIFO shall include the documentation required for these types of payments.

Special Account:

Two separate Special Accounts in US Dollars, for IBRD and GEF funds, will be established in a state-owned commercial bank, which will administer project financial resources through a trust fund agreement entered with FONAFIFO. The state-owned commercial bank should meet conditions acceptable to the Bank (e.g., providing a "comfort letter" acceptable to the Bank). FONAFIFO will be responsible for submitting appropriate separate disbursement applications to request these transfers to the respective accounts. Replenishments of funds under SOEs will be made on evidence of satisfactory utilization of the previous advance(s) as evidenced by the documentation submitted in support of disbursement applications. Deposits into the Special Account and its replenishments, up to the Authorized Allocations will be made initially on the basis of Applications for Withdrawals (Form 1903) accompanied with the supporting and other documentation specified in the Disbursement Handbook. Once FONAFIFO is PMR compliant, and is certified as such by the Bank, and disbursements are PMR based, any subsequent disbursement from the loan and grant accounts would be to cover estimated eligible expenditures for the next six-months of cash forecast reported in the PMR, as described hereafter.

FONAFIFO will implement an Integrated Project Monitoring System, with accounting and financial information, disbursements, purchasing, procurement, and control of contracts to allow the generation of quarterly programmatic financial reports on the physical advance of each component, as well as financial information by disbursement category. This system will also establish the procedures for its own operation and maintenance throughout project implementation. The detail of these procedures will be contained in the Operational Manual.

FONAFIFO will have in place accounting and internal control systems that accord with such accounting standards or agreed format and that (a) reliably record and report all assets and liabilities and financial transactions of the project and, as appropriate, the entity, including those transactions involving the use of Bank funds; and (b) provide sufficient financial information for managing and monitoring project activities.

Annex 6, Table A: Project Costs by Procurement Arrangements¹
(in US\$ million equivalent)

Expenditure Category	Procurement Method				Total Cost (Including Contingencies)
	ICB	NCB	Other	N.B.F	
IBRD					
1. ESP Contracts Payments		-	32.300 (32.300) ²	-	32.300 (32.300)
2. Front End Fee			0.326 (0.326)		0.326 (0.326)
IBRD Total:			32.626 (32.626)		32.626 (32.626)
GEF & GOCR					
1. Biodiversity Content of ESP Contracts	-	-	5.000 [5.000]	-	5.000 [5.000]
2. Goods					
Vehicles		0.152 ³ [0.152]		-	0.152 [0.152]
Equipment			0.143 ⁴ [0.143]	-	0.143 [0.143]
3. Consulting Services					
Consulting Firms			1.336 ⁵ [1.336]	-	1.336 [1.336]
Individuals			0.647 [0.647]	-	0.647 [0.647]
4. Training	-	-	0.137 [0.137]		0.137 [0.137]
5. Operating Cost	-	-	0.584 ⁶ [0.584]	8.639 [0.000]	9.288 [0.584]

¹ For details on presentation of Procurement Methods refer to OD11.02, "Procurement Arrangements for Investment Operations." Details on Consultant Services can be shown more easily in the Table A1 format (additional to Table A, where applicable).

² ESP contracts will be issued by FONAFIFO on the basis of the criteria described in Annex 7b and further detailed in the Project Implementation Manual.

³ Two packages, one during the first and the other during the fourth year of the Project.

⁴ Small packages of computer and miscellaneous equipment needed during different years of the Project.

⁵ QCBS and FBS.

⁶ Includes salaries and operating costs for both IBRD and GEF funds.

GEF Total:		0.152	7.848		8.000
GOCR Total:				8.639	8.639
Project Total		0.152 (0.000) [0.152]	40.474 (32.626) [7.848]	8.639 (0.000) [0.000]	49.265 (32.626) [8.000]

Note: Figures in parenthesis are the amounts to be financed by the IBRD loan. Figures in square brackets are the amounts to be financed by the GEF grant.
N.B.F. excludes both IBRD and GEF financing (i.e., N.B.F. only includes GoCR financing).

Annex 6, Table A1: Consultant Selection Arrangements (optional)
(in US\$ million equivalent, financed by GEF)

Consultant Services Expenditure Category	Selection Method and Total Cost (including contingencies)						
	QCBS	QBS	SFB	LCS	CQ	other	N.B.F
A. Firms							
Development of a new financial mechanism	0.023						
Identification of priority zones for ESP contracts	0.029						
Development of ESP for Complementary services	0.076						
Land use change study	0.112						
ESP Monitoring	0.099						
FONAFIFO's Administrative Strengthening	0.087						
Forest Auditing	0.058						
Preparation of Didactic Materials	0.063						
Flora and Fauna population study	0.15						
Awareness Campaign	0.019						
Evaluation of Technical and administrative capacity of NGOs and Preparation of Operating Manuals	0.028						
Contracts with Local NGOs to Serve as Small Owners Advocates and Monitor Contracts (approximately 8 contracts with different local NGOs)			0.368				
Identification of Forest Owners without title and Initiation of Titling			0.224				
Total Firms	0.744		0.592				
B. Total Individuals	0.647						
TOTAL CONSULTING SERVICES	1.391		0.592				

Note: QCBS = Quality- and Cost-Based Selection
QBS = Quality-based Selection
SFB = Selection under a Fixed Budget
LCS = Least-Cost Selection
CQ = Selection Based on Consultants' Qualifications
Other = Selection of individual consultants (per Section V of Consultants Guidelines), Commercial Practices, etc.

N.B.F. = Not Bank-financed.

Figures in parenthesis are the amounts to be financed by the Bank loan.

Annex 6, Table B: Thresholds for Procurement Methods and Prior Review⁷

Expenditure Category	Contract Value (Threshold)	Procurement Method	Contracts Subject to Prior Review
	US \$ thousands		US \$ millions
1. Goods	>50	NCB	First contract
	<50	Shopping	First contract
3. Services			
	<u>Firms</u>		
	>50	QCBS/FBS	All
	<50	QCBS/FBS	None
<u>Individuals</u>	>25		All
	<25	Chapter V of Consultant Guidelines	None

Overall Procurement Risk Assessment:

High	<input checked="" type="checkbox"/>
Average	<input type="checkbox"/>
Low	<input type="checkbox"/>

Frequency of procurement supervision missions proposed: One every six months. It is recommended that one of every five contracts be reviewed for each type of procurement. Procurement supervision will be performed by a Procurement Specialist (PS) or Procurement Accredited Staff (PAS) and will include a review of: (i) the Administration Unit capacity; (ii) the procurement plan for the project, including a timetable for procurement actions anticipated during the next 12 months; (iii) the Administration Unit monitoring system; and (iv) complete records for one in every five contracts (for goods, works, and consulting services, respectively). In addition the PS or PAS will perform selected physical inspections of the goods received or works performed, and meet with selected suppliers/contractors, whenever possible.

⁷ Thresholds generally differ by country and project. Consult OD 11.04 "Review of Procurement Documentation" and contact the Regional Procurement Adviser for guidance.

Annex 6, Table C: Allocation of IBRD Loan and GEF Grant Proceeds

Expenditure Category	Amount in US\$ million	Financing Percentage
IBRD Loan⁸		
1. ESP Payments	32.30	100
Total IBRD Project Cost	32.30	
Front-end Fee	0.33	100
Total	32.63	
GEF Grant		
1. Biodiversity Content of ESPs	4.50	100
2. Goods	0.30	100 ⁹
3. Consultants	1.80	100
4. Training	0.10	100
5. Incremental Recurrent Costs	0.50	5 ¹⁰
6. Unallocated	0.80	100
Total GEF Project Costs	8.00	

⁸ The Government's contribution for this loan (30%) is represented by the GEF grant and government counterpart covering total operating expenses. The latter expenses were included under the GEF Grant below.

⁹ FONAFIFO is completely tax exempt.

¹⁰ GOCR financing of incremental recurrent costs, which includes salaries and other operating expenditures of FONAFIFO, SINAC, and other MINAE offices totals US\$8.6 million.

Annex 6, Table D: Financial Management, Action Plan

	Action	Responsible	Estimated Completion Date
1.	Definition of the flow of funds for special account of the loan agreement, and to the trust fund	FONAFIFO	Complied
2.	Provide evidence to the Bank of the availability of the GoCR counterpart funds, first year of project execution	FONAFIFO	Complied
3.	Physical Project Monitoring a) Identification of project indicators by sub-component, for financial and physical progress report (No indicators needed for the operating expenses). b) Selection of PMR format, 2-A or 2-B, to be used for projects progress sub- components 1.c, 2.b, and 2.c.	Bank/ FONAFIFO	05/30/00 05/30/00
4.	Document in writing the procedures for management of project funds by the Trust Bank: a) Maintain separate special accounts in US Dollars for the loan and GEF grant agreement. b) Separate accounts for: (i) environmental services payments (ESP) for loan funds; (ii) ESP for GEF funds; (iii) technical assistance, loan funds; (iv) technical, assistance, GEF funds; and (v) operating expenses, segregated GEF from GoCR funds. d) Financial reports to be submitted on monthly basis to FONAFIFO by the Trust Bank	FONAFIFO	05/05/00
5.	Trust fund agreements a) Trust Fund agreement is approved by the Bank. b) Trust fund agreement is signed	FONAFIFO	05/05/00 08/30/00
6.	Hiring of Financial Management and technical staff: (a) Terms of reference are prepared: Natural resource management specialist (technical assistant) Financial Analyst Procurement specialist (b) Hiring of financial analyst (c) Hiring of Natural resource management specialist and procurement specialist	Technical Coordinator/Bank FONAFIFO FONAFIFO	04/28/00 06/05/00 Effectiveness condition
7.	Preparation of Operations Manual, incorporating administrative, PMRs, and procurement procures, and fixed assets controls.	Technical Coordinator/Bank	Disbursement Condition
8.	Nomination of the financial management system (FMS) administrator. This person should act as counterpart during the implementation of the FMS	FONAFIFO	Complied
9.	Contracting of the consultant for the design and implementation of the financial management system (FMS): (a) Terms of reference are prepared (b) Bank's no-objection (c) Evaluation of proposals (d) Consultant contracted (e) System implemented and functioning	FONAFIFO FONAFIFO FONAFIFO Consultant/ FONAFIFO	Complied Complied 05/15/00 05/30/00 09/30/00
	(f) First Project Management Report (PMR) is submitted to the Bank	FONAFIFO	31/10/00
10.	Minimum project accounting records are in place, in case de financial management system would not be ready as estimated in action No. 9 above.	FONAFIFO	08/30/00

**Annex 6, Table D: Financial Management, Action Plan
(continued)**

	Action	Responsible	Estimated Completion Date
11.	Minimum project accounting records are in place, in case de financial management system would not be ready as estimated in action No. 9 above.	FONAFIFO	08/30/00
12.	Data base for the control of ESP, credits and CFAs: a) Decision to improve the current system or contract the design of a new one b) Information in database is reviewed and corrected c) System working efficiently d) Audit of the data base contracted e) Audit of system is completed	FONAFIFO FONAFIFO FONAFIFO FONAFIFO Consultant	04/30/00 Complied 08/30/00 08/30/00 09/30/00
13.	A projection of payments for years 2000 and 2001 is prepared.	FONAFIFO	<i>08/30/00</i>
14.	Contracting of external auditors: a) Terms of Reference (TORs) are prepared b) Bank's No-Objection of TORs and short list c) Proposals are evaluated d) External auditors are contracted	FONAFIFO Bank FONAFIFO FONAFIFO	Complied 04/28/00 07/30/00 30 days after loan effectiveness
15.	Special Account a) Comfort letter is provided by state-owned commercial bank. b) Special account(s) are open, loan and grant	FONAFIFO/ Trust Fund Bank FONAFIFO	08/20/00 Disbursement Condition

Annex 7a: Social Analysis and Participatory Approach

Costa Rica: Ecomarkets

The objectives of the Social Assessment include: (1) setting priorities for project implementation based on the findings; (2) designing a participation strategy for NGOs and civil society; (3) designing a participation strategy for indigenous communities (see Annex 7b); and (4) ensuring consultation and promotion activities related to the project. In particular, the Social Assessment aims to ensure that stakeholders in priority areas have access to the Environmental Services Payments (ESP) program, implemented through the National Forestry Fund (FONAFIFO) and the National Conservation Areas System (SINAC). The Social Assessment prioritizes communities within biological corridors which are considered of highest biological and social importance: Tortuguero, Barbilla, Corcovado—Piedras Blancas, and Fila Costeña.¹¹ In addition, the project will finance other areas of high biological importance within areas identified in the GRUAS Report. These easements aim to ensure the proper conservation of high priority biological corridors and explicit biodiversity habitat quality characteristics. Finally, the ESP program will contract at least 50,000 hectares of land outside GRUAS Report areas based upon priorities established by SINAC-MINAE, ensuring regional representation within the ESP program.

Executive Summary

The social assessment indicates that the population in the above-mentioned priority biological corridors are among the poorest in the country, with the worst access to public services. Although NGO presence varies amongst the priority corridors, approximately ten non-governmental organizations are active in promoting the ESP program in Tortuguero, La Amistad-Caribe and Osa Conservation Areas. The involvement of these NGOs in promoting and facilitating ESP in their regions was identified as key for the success of the program in those areas. In consultation with local organizations, key regional NGOs, a strategy for institutional strengthening was developed and incorporated into the project design.

Gender studies were commissioned during project preparation to evaluate the participation of men and women in the ESP program in the above-mentioned priority areas. Detailed terms of reference and preliminary reports are available in project files. Findings indicate that approximately twelve percent of the direct beneficiaries of the ESP program are women, who account for six percent of the total area contracted within the program. The majority of female landowners access the ESP program through community-based contracts. Target indicators to increase participation of women in the ESP program by thirty percent will be required from the NGOs selected for technical strengthening.

Three indigenous reserves are located within the prioritized corridors in Tortuguero, La Amistad-Caribe and Osa Conservation Areas, while additional indigenous reserves are located in priority areas identified in the GRUAS report. These indigenous communities have varying degrees of organizational capability in order to participate in the ESP program. Although there is no indigenous census and the country lacks reliable data on indigenous communities, project preparation was coordinated with the World Bank team preparing the country's indigenous profile, which conducted an in-depth field study in 1999. The conclusions lead to an indigenous participation strategy detailed in Annex 7b. Detailed description of these indigenous communities and of the strategy agreed with their leaders is available in project files.

To identify the priority areas for ESP conservation easements, regional stakeholder seminars were held during November and December of 1999. These seminars were organized by SINAC and included approximately twenty non-governmental organizations, private sector groups, as well as academic and private institutions. The core project team, including the project coordinator, participated in these meetings. A key conclusion of these seminars was that the participants considered the corridors as

¹¹ These priority areas will receive funds for 50,000 hectares, while the rest of the country will receive funds for 100,000 hectares.

priority areas. Participants suggested allocating project resources for promoting the project in those areas. The list of participants and detailed description of the seminars' results are available in project files.

Poverty Level and Basic Social Indicators:

The biological corridors prioritized for the Ecomarkets project are amongst the poorest areas in Costa Rica. These are located in the rural areas with significantly lower social indicators than urban areas (Table 1). The Talamanca area, where the Barbilla Biological Corridor is located, was identified by the Ministry of Planning as the region with the lowest social development index in the whole country.

Table 1: Percent Poverty in Rural and Urban Areas of Costa Rica

	1990		1998	
	<i>Poor</i>	<i>Extreme Poor</i>	<i>Poor</i>	<i>Extreme Poor</i>
Urban	23.6	5.4	16.1	2.9
Rural	30.1	12.4	22.4	7.1

According to the home census of 1997, 20% of Costa Rican homes do not have an income that would have allowed them to satisfy their basic needs. The percentage of poor homes in the Huetar Atlantica region, where both the Tortuguero and the Barbilla Corridors are located, increased from 17% to 26% between 1995 and 1997. While the overall poverty level decreased significantly during that same period in the Brunca region, where the two Osa Conservation Area biological corridors are located – dropping from 36% in 1995 to 32% in 1997 – it remained much higher than the national average.

The ESP program will finance 50,000 hectares of conservation easements in La Amistad-Caribe, Tortuguero and Osa Conservation areas. *Cabecar* indigenous peoples, Afro-Caribbean, and *Ladino* communities are located in the La Amistad-Caribe Conservation Area. Average land plots in this area range from 25 to 40 hectares. The majority of program beneficiaries tend to reside in or around urban areas, where they receive wages from non-subsistence agricultural activities. For those who live in the rural areas, the main source of income comes from banana plantation production on nearby farms. Sixty percent of program beneficiaries are contracted via community-based contracts, with an average land size of 68 hectares per beneficiary. Community-based contracts such as these account for approximately forty-percent of land contracted in the program.

The Tortuguero Corridor has a population of 80,000, of which 20% reside in the urban areas. In the 1970s, the population density was 10.1 persons per square kilometer, which tripled in the 1990s to 33 persons per square kilometer. 70% of the population in the Tortuguero Conservation is under 30 years of age. Small communities depend on a subsistence coastal economy of limited exotic woods and products derived from sea turtles.

Communities in the Fila Costeña Corridor rely on small-scale fishing, subsistence agriculture, and incipient tourism for income-generation. The population growth in this area has been one third of the national territory in the last two decades. Located in the Osa Peninsula area, the Fila Costeña Corridor has a total population of approximately 13,200 inhabitants of which 61% are located in the District of Jimenez. Sixty-nine percent of economic activities include agriculture, silviculture and fishing followed by 11% in gold mining activities. This last activity increased after 1984, when a principal banana company in the area closed down its operations. Poor soils and high precipitation in the area challenge agricultural activities in the areas.

FONAFIFO lacks social indicators for their beneficiaries. The only available indicator is the size of the properties that have been incorporated into the ESP program. Basic social information was gathered from secondary sources. Additional data on the project's beneficiaries will be collected during the first, third and fifth year of the project. This will allow the evaluation of the social impacts of the project.

NGO Participation

FONAFIFO allows for community-based and individual participants. Community-based beneficiaries are groups of small landholders joined under a facilitator, who assists in meeting ESP program requirements. Individual participants include single persons or companies that apply for entry into the ESP program. This has proven useful, as transaction costs in Costa Rica are high, particularly for small landholders. FONAFIFO is in the process of simplifying procedures and requirements for the ESP program. A study conducted between 1995 and 1997 concluded that 60% of all the beneficiaries accessed environmental services through community-based contracts. While community-based contracts represented a significant majority of ESP program participants, these contracts accounted for only 22% of the land. Community-based facilitators include cooperatives (30%), NGO associations (20%), and *Centros Agrícolas Cantonales* (50%).

Within the priority corridors, a short-list of facilitators was identified for potential strengthening, based upon the following criteria: (i) strong regional presence; (ii) sustainable development and/or conservation as their main objective; (iii) experience in natural resource management/protection; (iv) acceptance within the communities; (v) basic management capacity; (vi) multidisciplinary staff; and (vii) interest and/or experience in facilitating ESP. In consultation with these NGOs, a technical strengthening strategy was designed and included into the project. The strategy includes evaluating the technical and administrative capacity of these NGOs for strengthening activities; preparing manuals for facilitating ESP; issuing and distributing promotional materials; and assisting land holders in legalizing their land titles.

Indigenous Communities

There are three indigenous territories located within the priority Corridors, while additional indigenous reserves throughout Costa Rica are located in priority biodiversity areas identified in the GRUAS Report. *Nairi-Awari* and *Chirripo* (which, for management reasons was split into *Chirripo* and *Bajo Chirripo*) are located within the Barbilla Corridor. *Guaymi de Osa* is located within the Osa Conservation Area. The ethnicity of the inhabitants of the first two territories is *Cabecar*, while a small *Guaymi* community inhabits the third one. There are no indigenous communities in the Tortuguero Corridor. A detailed description of each community can be found in project files. A monitorable action plan for increasing indigenous participation is included in Annex 7b.

In general, there are important unfulfilled needs in all of the territories. *Nairi Awari* is the territory with the most dramatic needs for basic services. These include education, health services, transportation, and communication. Each territory has a development association. These associations are sometimes popular and sometimes not so popular, but in general they have become the representatives of their indigenous communities, even shadowing their traditional authorities. Of the total land area within the *Chirripo* reserve (which includes 74,677 hectares of land and 4,800 inhabitants), 20% is located within the Barbilla Corridor. Of the existing organizations, the inhabitants said they trust their school associations the most. They also mentioned with high respect and expectation the *Mesa Indígena*.

Bajo Chirripo has 1800 inhabitants in 19,710 hectares of land; *Nairi-Awari* (which includes 5,038 hectares of land and 500 inhabitants) separated from *Bajo Chirripo* in 1991. With no schools and only one health post, *Nairi Awari* is the most isolated community, and has successfully maintained their native language throughout the indigenous reserve. Inhabitants in *Bajo Chirripo* estimate that only 70% of the inhabitants speak *Cabecar*. Both territories elect their Development Associations, and have elderly councils called *Jamas* or *Sukias*, who also serve as the keepers of traditional medicine and rituals.

The *Guaymies* have the oldest and strongest ethnic organizations at the national and regional levels. Of the 5,474 *Guaymies* in the four indigenous territories in the southern border area of Costa Rica, only about 150 live in the *Guaymi de Osa* territory (2,757 hectares). The Development Association of the territory was particularly active until 1991, when the *Guaymies* became Costa Rican citizens. Their

traditional organizations include a Council of *caciques*, masters of culture and traditional medicine groups. At the national level the Guaymi organization is the *Ngöbe-Buglé*, the southern region group is called *ARADIKES*, and many Guaymi leaders, including the President of the Development Association of *Guaymi de Osa*, are active in the Board of the *Mesa Indígena*.

FONAFIFO's Policies and Experience with Indigenous Communities

FONAFIFO has incorporated indigenous communities into the ESP program both inside and out of the indigenous territories. Despite a 600 hectares per year limit for indigenous territories, contracting of these territories has been modest. In 1998, ESP contracts incorporated 560 hectares comprising of 3 indigenous territories, or 1.1% of the total approved contracts.

Thus far, the experience with ESP contracts in indigenous territories has provided at least three important lessons: First, the rules applicable to western landowners do not necessarily apply to indigenous communities. For instance, not every indigenous associations has title of their territory, despite the fact that land boundaries are clearly determined by law. Hence, FONAFIFO has exempted indigenous communities from land title requirements. Second, community-based, technically qualified facilitators for the ESP program are not abundant within indigenous communities and indigenous development associations have modest management capacity. This is especially true in the territories located within priority corridors. Third, one of the main challenges of indigenous communities is to identify priority land for ESP program participation. FONAFIFO's regulations define a 600-hectare/year limit in terms of land area that can be incorporated into the ESP program from each indigenous community. This is due in part to funding constraints as well as the dimensions of particular territories. However, this limit has not affected the demand from the indigenous communities, which has been somewhat modest during the initial years of the ESP program. Goals of the project include doubling the participation of indigenous communities in the ESP program during the next five years as well as strengthening local non-governmental organizations providing technical assistance to indigenous communities participating in the ESP program.

Project's Strategy

The suggested methodology to work with the indigenous communities located within the priority corridors was discussed with and approved by the *Mesa Indígena* in November 1999. The proposal assumes that (i) there is an interest from the indigenous communities in learning and eventually participating in the ESP program; (ii) the communities would be interested in conservation easements on both individually-held and community-held land; (iii) the leaders would be interested in obtaining technical information to determine the priority regions for the ESP program; and (iv) aside from fulfilling the contractual commitments derived from the ESP program agreement, the communities have autonomy on how to use generated resources.

Decision-Making Process

In contrast to non-indigenous communities—where individuals and families make decisions—indigenous communities engage in a collective decision-making process on issues of communal lands. The communities reach decisions during annual assemblies, or during assemblies called by the indigenous association board. During project implementation, the *Mesa Indígena* and other indigenous organizations will provide information relative to the advantages and commitments of the ESP program, and the technically adequate priority areas, to the indigenous leaders prior to these annual meetings.

Regional Stakeholder Seminars

In late 1998, an inter-institutional commission was created to improve the management and promotion of the ESP program. This commission is lead by SINAC and has active participation of private and public

sector representatives. One recommendation was to hold annual regional seminars to identify the priority areas for the ESP program in a participatory fashion. The project preparation team has maintained close ties with this commission and participated in the regional seminars where the priority corridors are located. These seminars were held in November and December of 1999, with a broad and active participation of regional NGOs, private and public sector, academia and indigenous representatives.

The key results of these seminars for project design include: (i) the priority corridors were indeed accepted as priority ESP areas by the participants themselves; (ii) enthusiastic support and useful suggestions from the participants on projects' scope and implementation mechanisms; and (iii) identification of key NGOs that have interest and experience in ESP, with whom the NGO strategy was prepared. The detailed list of participants and results are available in project files.

Annex 7b: Monitorable Action Plan for Indigenous Participation Costa Rica: Ecomarkets

Background

Costa Rica is home to eight indigenous cultures of approximately 40,000 inhabitants distributed in the following indigenous peoples: *Bribris* (35%), *Cabecares* (25%), *Brunkas* (15%), *Guaymies* (13%), *Chorotegas* (4%), *Malekus* (3%), *Ngobes* (3%) and *Terrabas* (2%). These groups are distributed in 24 reserves recognized by law as indigenous territories.¹²

FONAFIFO's policy allows for contracting of 600 hectares per year for indigenous communities. Despite clearly defined legal land boundaries, not all indigenous associations have title of their territory. FONAFIFO has therefore exempted indigenous reserves from land title requirements in the ESP program. The number of hectares in each community and the size of the population will determine, in consultation with indigenous representatives, to which extent each indigenous community can benefit from the ESP program.

The objective of this action plan is to double the participation of indigenous communities within the ESP program and increase indigenous peoples participation through capacity building efforts. Thus far the demand for the ESP program in indigenous territories has been quite modest. In 1998, three of the largest incorporated only 120, 150 and 200 hectares into the ESP program. Technically qualified foresters working with indigenous communities to support the ESP program are not abundant and like the majority of community-based NGOs in Costa Rica, indigenous development associations have modest management capacity. The strategy outlines an increase of assistance for the *Mesa Indígena Nacional*, which will provide capacity building to warrant and ensure increased participation of indigenous communities during project implementation. In particular, two non-governmental organizations working with indigenous communities (i.e., one in the La Amistad-Caribe Conservation Area and one in the Osa Conservation Area) will be contracted to provide technical assistance to indigenous communities under project component 2.iii (Local and Regional NGOs). Terms of reference for technical assistance to NGOs working with indigenous communities will be developed in consultation with the *Mesa Indígena* and the World Bank's indigenous specialist for Latin America.

Three of the 24 indigenous reserves are located within the ESP program targeted priority areas of Osa Peninsula, Osa Fila Costeña, and La Amistad Caribe,¹³ with an estimated population of 1,610 inhabitants. Of the *Chirripo* Reserve (74,677 hectares or 48,000 inhabitants), 20% of the land is located within the Barbilla Corridor or 1160 inhabitants. The *Nairi Awari* has 500 inhabitants in 5,038 hectares. The *Cabecar* culture inhabits both reserves. 150 *Guaymies* live in a territory of 2,757 hectares within the *Guaymi de Osa* Reserve in the Osa Peninsula. No indigenous communities are located in the Tortuguero biological corridor.

¹² The number of indigenous communities may vary among different sources. As a reference, information is based on a draft report of Marcos Guevara Berger *et al*, "Profile of Indigenous Peoples in Costa Rica," January 2000.

¹³ For a description of each community, please see project files.

Table 1 Profile of Costa Rica's Indigenous Peoples with Potential to Enter ESP Program

Community	Territory	Number of Hectares	Population (e)
Bribris	Talamanca	43,690	6,579
	Salitre	11,700	1,200
	Cabagra	27,860	2,100
	Kekoldi	3,500	180
Cabecares	Chirripo	77,973	8,000
	Bajo Chiripo	18,783	N/A
	Nairi-Awari	5,038	1000
	Tayni	16,216	2,500
	Telire	16,216	N/A
	Kekoldi ¹⁴	3,538	180
	Talamanca	22,729	N/A
	Ujarras	19,040	1,700
Ngobes	Abrojos-Montezuma	1,280	400
	Coto Brus	7,500	1,1000
	Conte Burica	11,910	1,500
	Osa	2,757	76
	Altos de San Antonio	75	104
Huetares	Quitirrisi	1000	1000
	Zapaton	2800	800
Terrabas	Terraba	9,300	1,200
Borucas	Boruca	12,400	2000
	Curre	10,600	1000
Malekus	Guatuso	2,993	800
Chorotegas	Matumbu	1,710	1,400

Economic activities carried out by indigenous community include the production of a variety of goods and services, a percentage of which pertains to conservation and sustainable use of forest ecosystems. Each territory has a development association, which is generally perceived as a legitimate entity. Communities have autonomy on how to use resources derived from the ESP program as long as contractual commitments are fulfilled.

Challenges to define priorities within the territory

Indigenous people are owners of communal land as well as private territory. Indigenous development associations face as a primary challenge how to define place and target populations for ESP services, and manner in which funds are used and distributed. Table 2 indicates how indigenous communities will benefit from the project.

¹⁴ Shared with Bribri community.

Table 2: Benefits of ESP Program to Indigenous Communities

Component	Activities	Benefit to Indigenous Communities	Indicators	Cost Estimates	Implementation Schedule	Responsible Institution
1. ESP contracts	Contracts for conservation, sustainable forest management, and reforestation	The project will support at least a 100% increase in the number of hectares managed by indigenous communities within the ESP program.	1. # of indigenous communities participating in ESP program. 2. # of hectares of land incorporated into ESP program.	\$250,000	Years 2 – 5	FONAFIFO
2. SINAC Activities	Studies/Assessments: Water supply issues; socioeconomic studies; community NRM experience; Training: Community educators; community & voluntary groups in environmental issues; development of alternative sustainable activities; sustainable forest management; strengthening of communal and women's groups; poaching and fishing control training.	Incorporation of issues pertinent to local indigenous groups in studies and assessments carried out in La Amistad-Caribe and Osa Conservation Areas.	1. Coverage of issues pertinent to indigenous communities in La Amistad-Caribe and Osa Conservation Areas.	\$250,000	Years 1 – 5	SINAC
3. Strengthening Local & Regional NGOs	Technical assistance to small landowners and communities in priority areas.	Increased participation in the ESP program and increased technical capacity of indigenous communities for the conservation and sustainable management of forest ecosystems.	1. Two non-governmental organizations contracted to promote increased participation of indigenous communities in the ESP program.	\$265,000	Years 1 – 5	FONAFIFO with selected non-governmental organizations

Annex 8a: Summary of Environmental Analysis

Costa Rica: Ecomarkets

The goal of the proposed project is to promote the development of markets and private sector providers for environmental services supplied by privately owned forests. As such, the project directly supports the implementation of Forestry Law No. 7575: providing market-based incentives to forest owners in buffer zones for environmental services in forest ecosystems; and assisting and strengthening management capacity to continue and assure sustainable financing of public sector forestry programs administered by the Ministry of Environment and Energy (MINAE), including the National Forestry Financing Fund (FONAFIFO) and the National System of Conservation Areas (SINAC).

The main services supplied by forest ecosystems in Costa Rica outlined in Law No. 7575 cover carbon sequestration, water resources protection, biodiversity protection, and scenic beauty. Based on the overall significant positive environmental benefits of the project, alleviation on deforestation and protection of biodiversity, the quality assurance team (QAT) within LCSES gave the project an environmental rating of Category “B.” By providing national economic incentives to preserve priority forest ecosystems, the project contributes to national, regional, and global conservation goals. At the regional level it supports the biological corridor through the support of conservation easements in three areas and at the global level it contributes to management of climate change.

Environmental Services Payments Supported by Forestry Law 7575

During the 1960s and 1970s, Costa Rica suffered a steady decline in forest cover, driven mainly by inappropriate Government Policies. A shift in policy began to take place in the 1980s and early 1990s culminating in the Forestry Law 7575, which was passed in 1996. The Government initiative recognized the value of environmental services. Forest ecosystems provide a variety of environmental services. In general, forests provide a higher quality of environmental services in comparison with other natural or artificial systems. Among these services are: stream flow regulation, aquatic environments protection; slope stabilization; sediment retention and erosion control; soil formation; nutrient cycling; flood regulation; climate and biological control; fauna refuge; food production; provision of scenic beauty; biodiversity protection; and cultural protection.

Hydrological Resources. The forest cover effects the hydrological balance of a watershed because it affects the amount of time that the water stays in the ecosystem before it is released into the stream. Forest soils have high infiltration capacity because of the accumulation of organic material on the soil, and the presence of a deep root system by which water may percolate. Secondly, forest soils act at times as a sponge or a medium for water retention that release water gradually and equitably, in comparison to shallow soils that release water swiftly. Essentially, forests ecosystems maintain more even water quantity during the year, assuring better distribution of water and mitigating the potential for floods of high intensity and short duration. Furthermore, forests maintain a low rate of erosion and sedimentation, increasing water quality, due to the high capacity for infiltration.

Mitigation of GHG Emissions. Globally, forests play a central role in that they store great quantities of carbon in its vegetation and soils, and exchange carbon with the atmosphere through photosynthesis and respiration. In general terms, ecosystems store 20 to 100 more times’ carbon per area unit than agricultural ecosystems. Tropical forests contain approximately 52% of carbon reserves from the world. Thus, forests can be an alternative for maintaining or reducing carbon dioxide levels in the atmosphere. The project sets the stage to assist in formulating mechanisms for international marketing and sale of Certified Emissions Reductions produced by small renewable energy projects in light of growing demand as well as forest-based carbon.

Biodiversity. Protection of biodiversity in forests is as important for the multiple economic services that it offers as it is for the role that it plays in the health and stability of the forest ecosystem. Costa Rica has an extremely wide representation of plant and animal species and ecosystems—a total of 85,891 species have been identified, representing 6% of the world's total known species. Biodiversity uses include scientific research, food consumption, medicinal purposes, and agriculture. Biodiversity also serves as a source for education and research and particularly as a source of cultural value for society. The project will have a positive impact on biodiversity by preserving privately-owned buffer zones surrounding national parks and biological reserves that can serve to protect the Costa Rican portion of the Mesoamerican Biological Corridor.

Protection of Scenic Beauty. Closely linked to biodiversity protection, scenic beauty of forests carries subjective aspects that are linked to conservation and enjoyment of the national patrimony: mountains, forests, waterfalls, lakes, rivers, flora and fauna. Scenery and its elements (such as forest ecosystems) have an intrinsic potential to generate services of ecotourism, adventure tourism, and recreation. The project maintains and enhances scenic beauty.

Deforestation Rates and Actions Taken Prior to the Payment of Environmental Services

Annual rates of deforestation in the country prior to 1980 vary from 40,000 to 70,000 hectares. Such deforestation rates caused forestland in Costa Rica to decrease from 53% of the national territory in 1961 to 31.1% in 1977. By June 1983, the forest cover in general had diminished to 26.1% or approximately 1,133,710 ha. Remaining forest ecosystems in the country were those that had been placed under some protective regime such as forest reserve, national parks, and others.

The Government of Costa Rica began to regulate the cutting of trees from native forests starting in 1969. But it was not until 1979, when the first National Plan for Forest Development was introduced, that activities of the sub-sector were integrated with the activities of the country. The strategy aimed to pursue three main objectives: i) producing forests in exploitation; ii) protecting forest ecosystems; and iii) reforestation in areas of forest vocation. Subsequently, the Government of Costa Rica introduced and passed several laws and regulations devoted to the use of forest resources in State land as well as in private properties, marking the introduction of increasingly technical requirements and restrictions for those who wished make use of forest products.

While the incentives created by Forestry Law No. 7032 passed in 1986 facilitated forest plantations in the country, these incentives benefited largely large landholders and companies. One of the principal changes that took place after the passage of this law was the creation of the Forestry Credit Certificate or CAF. Under this system, the State awarded permits to those farmers who reforested their properties, transferring the incentive from wealthier landowners to farmers. The system allowed greater involvement of land owners in the reforestation and forest protection, and of small land owners who lacked the financial capacity to establish plantations with their own resources. The CAF allowed reforestation of 26% of the area covered by plantations and was available to any farmer. FONAFIFO records indicate that the series of incentives passed resulted in the reforestation and protection of more than 115,000 ha, at an average of 12,800 ha per year; while the plan of income tax deductions resulted in the reforestation of approximately 35,000 ha over a term of fifteen years. The system of incentives established by the laws passed previous to Forestry Law No. 7575 set the stage for the current system of Payment of Environmental Services.

Analysis of Why Environmental Services Payments will Ease Deforestation

Contrary to the command-and-control model that typifies many agencies in Latin America, the Government of Costa Rica has worked to facilitate and provide incentives for private sector participation in forest protection and management. After 1995, subsidies were cancelled, including CAFs and other certificates for forest protection, while the Government's forestry strategy shifted to Payments of

Environmental Services as established under Forestry Law No. 7575. State subsidies generated uncertainty in the sector and general government dependency. Subsidies also encouraged a fixation on a single product, typically wood, valued in monetary terms, with a tendency to neglect other forest services. On the other hand, the EPS system incorporates the “polluter pays” principle to shift the burden to the beneficiaries of environmental services. Two Bank studies conducted in early 1993, highlighted the importance of environmental services: the value of environmental services is high, the global community receives the major benefits of these services, and owners of resources that provide these services are not compensated for their full value. In the few years of implementation, the EPS system has yielded highly positive results for the environment.

The trend indicates that Costa Rica’s financial system for implementing the ESP program executed through FONAFIFO with close coordination of SINAC encourages conservation of natural forests and reforestation. Private landowners in the country are already committed to conservation. Costa Rica’s consistent forestry strategy delegates responsibility of forest management to private landowners, eliminating many of the incentives for agriculture that was previously encouraged. Moreover, the system for conservation and management provides standards based on technical criteria for sustainable forest management, which have been internationally recognized by the Forest Stewardship Council. Through site specific contracts with individual small-and medium-sized farmers, participants must present a sustainable forest management plan certified by a licensed forester, and carry out sustainable forest management activities throughout the life of the individual. The project supports the contracting of conservation easements in priority Conservation Areas under Article 69 of the Forestry Law. Social participation in the protection and environmental management has found fertile and stimulating ground in the country in the past decade. Different groups concerned with the use of natural resources have emerged in the political landscape as well as ecotourism and environmentally friendly projects and a way of conducting business that will not harm the environment. The project will further strengthen Costa Rican forest owners’ organization and local NGOs with technical support for forest management and forest conservation.

The rate of deforestation rate has fallen dramatically. Costa Rica’s deforestation rate decreased from about 46,500 ha/year in 1950 to approximately 16,000 ha/year in 1997. Secondary forests increased at a rate of 13,000 ha/year from 1987 to 1997. More than 22,000 small and medium-sized forest landowners, with a total area of 279,000 ha have benefited from forest incentives and ESP contracts. Support from the private sector investments under Article 87 reached at least US\$32.8 million. Private sector participation grew rapidly between 1980 and 1999, further illustrated by the creation of Costa Rican Network of Private Reserves (CNPR) in 1996, with 44,026 ha of land. The Group is concerned with deforestation and the use of secondary forests, and is formed of NGOs, education centers, environmentalists who own forests, and small and medium-sized properties.

Forest cover corresponds to 824,091 ha within national parks and biological reserves and 1,193,021 ha in private ownership. The concept of providing incentives for private sector protection of land is particularly important because most Costa Rican forest ecosystems are on private property. The ESP program strengthens the participation of the private sector, democratizes and decentralizes the incentive mechanism by delegating responsibilities to other private and public entities.

Preparation work will explicitly look at any potential risk of ESP payments for encouraging investment in agricultural activities and thus promoting forest clearing. Similarly, the project will monitor whether payments for reforestation encourage deforestation in order to participate in the program. The Bank team will monitor this issue closely as the project gets underway.

Annex 8b: Eligibility Criteria for Beneficiaries and Environmental Service Contracts Costa Rica: Ecomarkets

1. Objective:

To establish all the applicable procedures for environmental service payment (ESP) contracts from the forests and forestry plantations in the country, by promoting reforestation, management and forest cover protection activities.

2. Priority Areas:

The Conservation Areas shall evaluate and identify the priority regions for the ESP program (for protection, forest management and forestry plantations).

The following criteria shall be taken into account in prioritizing the regions that would benefit from the ESP program:

2.1 Criteria for the development of management plans for reforestation:

ESP contracts may be issued:

- Where there is high potential for concentration of plantation blocks, which may allow for industry development.
- Where there is availability, at the regional level, of areas without forest coverage due to neglect of agriculture and cattle rising.
- Where there are successful experiences from individual beneficiaries or organizations in establishing and managing forestry species.
- Where the management plan is located in areas with potential for forestry production:
 - Steps up to 60%, as far as the effective deepness is equal or greater than 70 cm.
 - The areas subjected to management plan shall be located outside a protected area,
 - The species to be utilized shall have a good productive potential.

2.2 Criteria for the development of management plans for plantations established with own resources:

ESP contracts may be issued:

- Where there are established plantations that require management resources.
- Where there is a high potential of concentration of plantation blocks, which may allow for industry development.
- The evaluation of the plantation shows satisfactory results and potential for production.
- That the management plan is located in areas with potential for forestry production:
 - The areas subjected to management plan shall be located outside a protected area,
 - Plantations with blocks of at least 400 trees per hectare, in good shape and in good sanitary conditions], and with at least two years of age. Additionally, the owner shall guarantee the permanency of the plantation for all the payment period.

2.3 Criteria for the development of management plans for natural forests:

ESP contracts may be issued:

- Management of forested areas with or without intervention, with technical aptitude for exploitation, will be allowed.
- It is allowed to manage all forests under private ownership. In the case of wildlife areas protected by the State, the restrictions established for each management category shall prevail.
- The forests subjected to management, shall have productive potential measured through the following criteria:

- For primary forests the basal area shall be equal or greater than 15 m², measured in trees with diameters at chest height equal or greater than 30 cm.
- For secondary forests, the total number of trees per hectare shall be equal or greater than 60 measured in trees with diameters at chest height equal or greater than 15 cm.
- The principles, criteria and indicators for the sustainable management of forests (executive decree 27388-MINAE of Nov. 2, 1988) apply. In the case of secondary forests, Principle 11 of such regulation applies.

2.4 Criteria for prioritization of management plans for forest protection:

ESP contracts may be issued:

- The conservation easements located within the Biological Corridors identified in the Mesoamerican Biological Corridor GRUAS Report shall be priority.
- Forestry areas protecting water resources for human consumption, irrigation and hydroelectric production.
- Privately owned land located within wildlife refuges, protected areas and buffer zones.

3. Minimal and Maximum Areas:

The minimal and maximum areas to be eligible for ESP are the following:

- For established forestry plantations which have not received funds from property tax-break or forestry incentives, or under Article 87 of Forestry Law 7174, or Articles 29 and 30 of Forestry Law 7575, and reforestation management plans to be implemented, the minimum area for ESP is one hectare and maximum 300 hectares per year, per beneficiary per year.
- ESP for natural forest management, minimum area is two hectares and maximum is 300 hectares per year, per farm or group of adjacent farms or close within a five kilometers radius when owned by the same beneficiary.
- ESP for forestry protection, minimum area is two hectares and maximum of 300 hectares per year, per farm or group of adjacent farms when owned by the same beneficiary.
- For community-based reforestation and protection projects, the maximum area per producer will be up to 50 hectares.
- The maximum area for indigenous reserves per each ESP contract category is 600 hectares.

4. Beneficiaries and Land Holders:

Beneficiaries are all physical or legal entities, owners or holders of forests, forestry plantations, that wish to be eligible for ESP contracts, according to article 3 c) of the Forestry Law, in exchange of ceding their environmental services rights. The interested beneficiaries can issue their request in the following manners:

- Individually, for protection and management of natural forests and for established or to be established forestry plantations.
- Globally, through an organization of small or medium-size landowners: for the protection of natural forests and for forestry plantations to be established.

5. Commitments:

5.1 Beneficiaries:

The beneficiaries that access ESP, either individually or globally, will subject the area under compensation to the following commitments:

- To prevent and control forest fires.
- To prevent and support the control of illegal hunting.

To prevent cutting and extraction of forestry products in areas declared as protected according Article exception of specific instances according to Article 19 of the Forestry law.

- To assist the State's Forestry Management (SFM) in research and education activities in areas under ESP contracts.
- To fulfill all commitments established in the Forestry law, its regulations and any other applicable norm.
- To follow all technical recommendations issued by SFM and the forestry inspector. These shall be appropriately justified in writing.
- To cede to FONAFIFO all rights derived from paid ESP contracts as long as the contract is in force.
- To attend contractual aspects regarding environmental services individual beneficiaries and organizations with MINAE and FONAFIFO shall register that accordingly.

5.2 Organizations:

All organizations eligible for ESP for natural forestry protection and forestry plantations:

- Must be regulated under the Associations Law, *Centros Agrícolas Cantonales* Law and Cooperatives Law, and shall be legally established and with current legal representation inscribed in the corresponding registry.
- Must lack pending commitments with forestry projects, financing programs, incentives or credits provided by MINAE or any of its decentralized institutions. It is the responsibility of the corresponding Conservation Area to verify and to certify these requirements regarding CAFA, FDF and ESP contracts when it refers to global projects (reforestation or protection); and it is the responsibility of FONAFIFO regarding credits. The organization shall request this information to the Conservation Areas and to FONAFIFO before submitting the ESP contract request.
- Must have an organizational structure that allows enough administrative, accounting and technical capacity for directing and implementing projects. They shall have at least one full-time manager, an accountant and a forestry professional, the latter two working at least half time, transportation (at least a motorcycle), basic computer equipment and basic administrative and accounting manuals. An external auditor shall audit their procedures at least once a year. It is the responsibility of the Conservation Areas to verify and certify the fulfillment of these requirements previous to allowing the organization to manage a community project. The organization shall request this information to the Conservation Areas and to FONAFIFO before submitting the ESP contract request.
- Must commit to charge, as a maximum, 18% of the annual tranche for each beneficiary, for the technical services, preparation of studies or any other administrative cost for ESP in global reforestation and protection projects. The organization shall prove successful experience in forestry projects (reforestation and protection). This requirement does not apply to new organizations, but it does to its members, or full-time staff.
- Must have an exclusive account in any bank of the national banking system, to receive and distribute the resources from the ESP program.
- Must, before processing further requests, send to the appropriate Conservation Area and to FONAFIFO an annual externally audited report specifying the income received from ESP contracts, disbursements to beneficiaries, and the general use of the funds.
- Follow up all commitments established in the contract with the State.

5.3 Forestry Inspector

The forester credited as forestry inspector shall fulfill the requirements established in the forestry law, its regulations, and the regulations for Forestry Inspectors issued by the Professional Association of Agriculture Engineers of Costa Rica.

subjected to ESP (status of the project, follow-up of management plan, etc), when the management plan requires so.

Annex 8c: Minimum Requirements for Drafting Management Plans for ESP Costa Rica: Ecomarkets

A. FOR FORESTRY PROTECTION: INDIVIDUAL OR COMMUNITY

For community projects, only one technical document per sub-region shall be presented, which shall include all information and recommendations. Individual information on each beneficiary is required for topic 7 of the proposal (see below). From topics eight to 13, the technical recommendations shall be presented for all the beneficiaries as a group.

1. GENERAL DESCRIPTION

Name of the management plan.

Name, qualities, and address of the interested party. For community-based projects, legal personality number, legal representative, address to receive notices, telephone and fax.

Area in hectares and current use of land.

Data on the legal inscription of the property(ies):

- Boundaries,
- Volume, page and entry of inscription of land title,
- Legal procedure id number for legalizing land title,
- Total dimension of the land.

Administrative location:

- Province
- Canton
- District
- Neighborhood

Geographic location:

- Vertical coordinates (Lambert projection)
- Horizontal coordinates (Lambert projection)
- Official map indicating the exact location of the land

2. REASONS FOR THE MANAGEMENT PLAN

Brief description of the resource to be protected according to the project objective.

3. FOREST FIRE PREVENTION

In medium to high fire risk areas, the establishment of fire breaking clearance will be required. These will be described, located and explained in the management plan. Other prevention measures will be described there as well.

In high-risk areas, fire-breaking clearance shall have a width of at least eight meters, in medium fire risk areas; these clearings shall have a width of at least for meters. The low risk areas do not require these clearings. Clearings shall be kept free of vegetation or combustible material during the dry season, which is also when the greatest fire hazard occurs. All these activities shall be included in the chronogram.

4. MONITORING

The forestry inspector shall visit the project at least once a year and provide the sub-regional office with a report in which he recommends, or does not recommend, ESP.

5. ACTIVITIES SCHEDULE

The scheduling of activities will be planned for the contract duration. It will include at least the establishment of fire breaking clearings and fences, their maintenance, supervision visits and presentation of reports by forestry inspector.

6. OTHER LAND PROTECTION MEASURES

Describe the prevention activities to control illegal hunting, cutting and extraction of forest products and any other.

7. SURVEILLANCE

Indicate surveillance activities planned.

8. SIGNS

Signs shall be erected, indicating that the land is contracted within the ESP program with due requirements regarding forest fire prevention, and prohibition of hunting, illegal cut and extraction of forest products. The minimal size of these signs shall be of 40 cm. x 60 cm.

B. FOR REFORESTATION: INDIVIDUAL OR COMMUNITY

1. INTRODUCTION

Objectives and nature of the management plan

2. GENERAL DESCRIPTION OF THE PROPERTY

Legal status of the property (ownership or rental). For community-based projects, legal personality number, legal representative, address to receive notices, telephone and fax.

Data on the legal inscription of the property(ies):

- Boundaries,
- Volume, page and entry of inscription of land title,
- Legal procedure id number for legalizing land title,
- Total dimension of the land.

Data from Land Title (*Registro de Propiedad*)

Administrative location:

- Province
- [Canton]
- District
- Neighborhood

Geographic location:

- Vertical coordinates (Lambert projection)
- Horizontal coordinates (Lambert projection)

- Official map indicating the exact location of the land

Access, established and planned roads (approximate location in the property map).

For community-based projects, a list of the beneficiaries shall be included, with the information previously requested.

3. PHYSICAL AND ECOLOGICAL CONDITIONS

Topography, quantify the areas for each category (locate them in map).

Soils:

- Description of the depth, texture, structure, rockiness, superficial and underground drainage up to one-meter depth, pH, flooding risk.
- Physical and chemical soil analysis, issued by the appropriate soils laboratory.
- For community-based projects, a soil analysis (sampling and lab analysis), only for beneficiaries with areas greater than 25 hectares.

Weather:

- Rainfall (annual distribution, dry months)
- Temperature
- Wind, fog, relative humidity when this information is available
- Land elevation (m)
- Life zones.

Drainage:

- Description of the natural drainage, rivers, creeks, ponds, wetlands, etc (location within the property or mapped by forestry professional).

Current and previous use (agriculture, cattle grazing, forest etc.)

Capacity of land use (refer to the manual for determining the land use capacity of Costa Rica). Show map of land use capacity. For community-based projects determining the land use capacity will not require chemical soil analysis.

4. PROJECT DESCRIPTION

Area to be reforested

Description and location of the area to be reforested, by stages and by specie accordingly (show map with plantation stages).

Vegetative material: the use of certified seed will be required for those species in which there is enough seed to respond to the country's demand. The National Seed office will communicate the State's Forestry Management, the forestry inspectors and the forestry sector the availability of this material.

Selection of the specie/(s).

Explanation of the density of the plantation (the minimal density shall be 800 trees per hectare. A lesser density will only be accepted if the applicant can prove that the material has been genetically improved).

Description of the land plot preparation.

Silvicultural projection until harvest.

Chronogram of works by trimester during the forest two years, semester during the next three years, and annual until harvest of each specie, including fire prevention activities.

In the case of community-based projects, only the first three items will be required. The remaining items will be done as a group.

5. FIRE PREVENTION PLAN:

The following items will be required only in areas of high or medium fire risk:

Management of vegetable fuel, previous to establishing forestry plantation.

Establishment of artificial firebreaks.

Treatment of residual fuel, produced by appropriate silvicultural practices.

Installation of signs,

In the case of community-based projects, a list of beneficiaries will indicate the fire risk level and a general description of the activities to be carried out per level will be included.

6. PREVENTION PLAN AGAINST PLAGUES AND FORESTRY ILLNESSES

Description of preventive activities for controlling plagues and illnesses in the different development stages of the management plan (nursery, planting, maintenance and silvipastoral activities). For community-based projects, a general description of the measures to be undertaken shall be presented.

Annex 9: Institutional Analysis and Implementation Arrangements

Costa Rica: Ecomarkets

1. The main institutions involved in implementation would include the National Forestry Financing Fund (FONAFIFO), the National System of Conservation Areas (SINAC), and various local NGOs. FONAFIFO, as implementing agent for GoCR, would have full responsibility for overall management and supervision of the loan/grant, as well as monitoring and evaluation. This responsibility would be carried out in close collaboration with SINAC regarding activities executed in the Conservation Areas, and with non-governmental institutions (NGOs) for which proper agreements and accords would be signed.
2. The institutional framework for the Project would be legally defined by a Cooperation Agreement for Project Execution between SINAC and FONAFIFO, which would incorporate (a) legal agreements between GEF/Bank and FONAFIFO; (b) a document entitled Institutional and Organizational Aspects (summarized below); and (c) a Subsidiary Agreement between FONAFIFO, SINAC, and MINAE which will specify details of operations and operational arrangements in each Conservation Area (CA) of SINAC. The Project would be implemented within the existing organizational framework of FONAFIFO and SINAC, with specified division of responsibilities between them and assignment of management authority over specific project components to existing subunits. Overall coordination would be performed by the office of the Executive Director within FONAFIFO, also to be described below.

Institutional Analysis

3. **FONAFIFO Organization.** FONAFIFO was created by Forestry Law No. 7575 (February 13, 1996) as a relatively autonomous or deconcentrated body within the structure of the State Forestry Administration (a general superstructure within MINAE which includes SINAC as a component) to finance a variety of forestry activities and environmental services provided by forests and forest plantations through credit and other mechanisms directed to small- and medium-sized producers. FONAFIFO has the legal power and independence to enter into legal contracts, including constitution of trust funds, as required for administration of the resources entrusted to it (currently it administers five trust funds totaling US\$4 million). The institution is headed by an Executive Director under a Board of Directors, which has majority representation of the public sector. The executive entity is currently divided into three divisions, the first two having a Coordinator: Administration, Environmental Services, and Credit (totaling 18 staff in December 1999).
4. The activities of the three main divisions are:
 - (a) Administration. Responsible for strategic planning and budgeting, development of manuals of procedures, personnel management, training, computer services, and other routine administrative and financial management of FONAFIFO;
 - (b) Environmental Services. Responsible for coordination and management of individual projects delivering environmental services (with payments totaling US\$3.9 million in 1998), including evaluation of contracts solicited and the value of services offered, conclusion of agreements with companies or institutions to pay for hydrologic services, and cooperation with SINAC/MINAE among other institutions;
 - (c) Credit. Responsible for analysis and approval of applications for credit by forest-sector entities (totaling about US\$33 million approved in 1999); for disbursements of credit, and for technical and financial monitoring of activities financed by the credit.
5. **SINAC Organization.** SINAC is a decentralized and participatory institutional management system that unifies MINAE's competencies regarding forestry, wildlife and protected area issues, in order to plan and execute processes aimed at the sustainable management of the country's

natural resources. Administratively, SINAC is a system made up by ten subsystems called Conservation Areas (CAs), and a General Bureau. A CA is a territorial unit ruled by the same development and management strategy, where private and Government sectors participate together in the management and conservation of natural resources and seek to find sustainable development solutions together with civil society.

6. SINAC's Directorate consists of a General Director, Director (i.e., Deputy), a support staff, an advisory team and a Technical Unit, totaling about 40 staff. The Technical Unit consists of a professional group whose main responsibilities are to support the CAs through implementation of marketing processes, plans and projects; international treaties and conventions on biodiversity; financing; quality of management; and information systems. At the Central Office of SINAC, the General Director is responsible for liaison with FONAFIFO and its projects.

7. Each CA is comprised of a Regional Bureau and Subregional Offices. The Regional Bureau, which includes a Director and Coordinators for strategic areas of Control, Promotion, and Protected Wildlands, as well as an administrative support group and legal advisers, has strategic decision-making responsibilities. The Control function relates mainly to enforcement of law and regulations; Protected Wildlands with processes to ensure biodiversity conservation; and Promotion to encouraging management and conservation on privately-owned lands within CAs, including most activities relating to this project. A Technical Committee, composed of the Director, Subdirectors, various program coordinators, and a Local Council (not yet fully functioning at some of the CAs), operates as a collegial body in making decisions and defining policies for technical management and operations, and serves as a channel for consultation and diffusion of information to local society. The Local Council is composed of representatives of local communities, governmental and non-governmental institutions or groups in the region of influence, and is usually selected by comparable Councils at the level of the individual National Park or equivalent reserve. The Council operates under an elected Board of Directors, which has the responsibility of approving plans and programs of conservation and development in the area. Finally, a CA's administration also functions through other departments which may include Accounting and Finance, Human and Topographical Resources, and Land Tenancy; and support sections for Computer Services, a Research Center, and Biological Stations (varying by CA).

Implementation Arrangements

8. **Project Coordination.** As the activities financed by the project are integral and central to FONAFIFO's responsibilities, FONAFIFO would not create a distinct Project Coordinating Unit. Rather the Executive Director would function as Project Coordinator, with assistance from staff with the appropriate specialties. This project would finance a natural resource management specialist, procurement specialist, and accountant to strengthen project-specific competencies. A Coordinating Committee, composed mainly of representatives of FONAFIFO and SINAC (see below), would build on experience from on-going joint programs, and would oversee FONAFIFO in terms of policy, planning and technical operations. FONAFIFO would maintain separate project accounts and retain strict financial controls and contractual authority over all components, while routine supervisory authority over contractual staff, material inventories, and daily work programs would be undertaken through existing systems within FONAFIFO. These implementation arrangements would be precisely defined in a Project-specific Cooperative Agreement between FONAFIFO and SINAC satisfactory to the Bank and/or a Subsidiary Agreement signed by FONAFIFO, SINAC, and MINAE would detail operating arrangements in each participating CA.

9. **FONAFIFO Responsibilities.** FONAFIFO's direct responsibilities under the Project would include the implementation of project sub-component 1a, 1b, 1c, 2a, and 2b (see section C: Project Description Summary). FONAFIFO, in coordination with identified local NGOs, will also be responsible

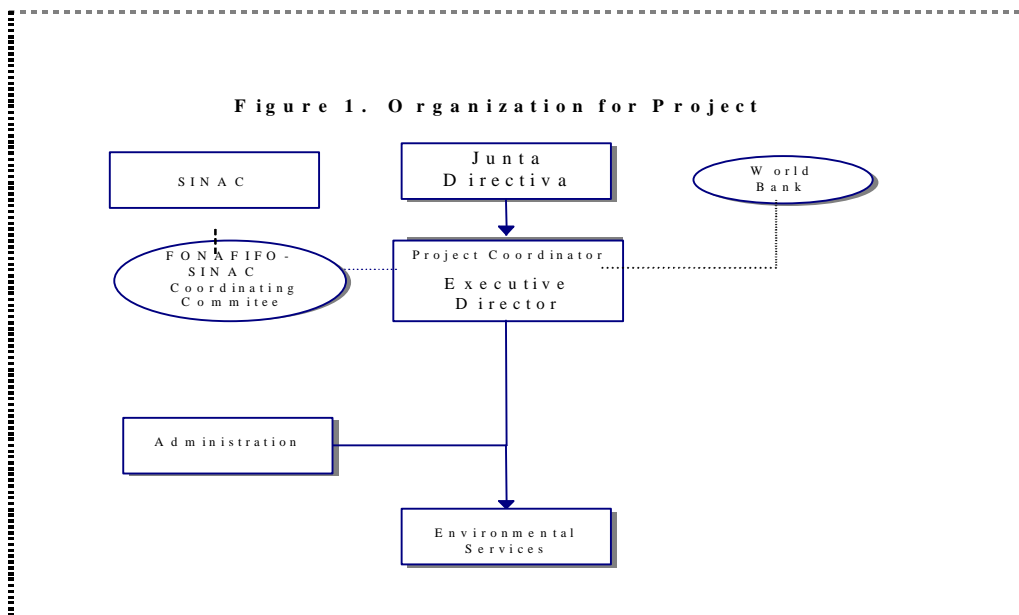
for the implementation of the project sub-component 2.d. *Strengthening of non-government organizations* (see Section C). In terms of functions, FONAFIFO would be responsible for:

- Administering project funds based on guidelines established by the Bank, including, among others: the periodicity of reports, auditing, control and information systems;
- Approving, executing, and evaluating the project's programs and plans; in the case of aspects relating to SINAC, this will be done in coordination with the FONAFIFO-SINAC Commission;
- Managing personnel assigned to the project by FONAFIFO;
- Administering assets and services assigned to the project for activities based at FONAFIFO;
- Supervising work done at FONAFIFO or work that is part of FONAFIFO's program;
- Organizing, publishing, and distributing information and results generated by the project according to the characteristics and needs of its users;
- Coordinating, in conjunction with SINAC and within the limits of FONAFIFO's competencies, the operations of NGOs in support of the project; and
- Developing permanent monitoring and evaluation mechanisms for the ESP program, together with other organizations.

10. **SINAC Responsibilities.** SINAC would be responsible under the Project for:

- In the case of activities taking place in the participating CAs, providing the infrastructure and planning logistical services (accommodations, meeting rooms, food and transportation, among others) for the development of workshops and other training activities;
- Participating in the approval, execution, coordination and evaluation of project plans and programs, through its representation in the FONAFIFO-SINAC Committee;
- Managing contracted project personnel located mainly in the CAs, such as those responsible for administering and monitoring contracts at the field level;
- Administering assets and services assigned by the project for the activities programmed within the CAs, and reporting to FONAFIFO following procedures established for the project (ref. Subsidiary Agreement);
- Organizing, publishing, and distributing, through the programs or processes in the individual CAs or through the central office of SINAC, information and results generated by the project according to the characteristics and needs of CA users;
- Participating in the activities of monitoring and evaluation of the project.

11. **Non-Governmental Organizations.** FONAFIFO lacks a field presence for purposes of promotion, monitoring, and provision of technical assistance to individual landowners. For these purposes, local NGOs would be contracted to participate in the project. NGOs willing to participate would be pre-qualified by FONAFIFO based on legal registration, extent of local activity, and evaluation of capacity in the above program elements, i.e., promotion through sponsoring farmer cross-visits and assisting with the application process; monitoring of ESP contract compliance, in cooperation with CA staff; and technical assistance in land titling, identification of livelihood alternatives, and implementation of forestry activities. There would be two levels of NGOs, those responsible for direct outreach to landowners but lacking in technical capacity and those with the technical strengths to assist the former. Assistance to NGOs would include provision of some equipment (mainly vehicles and computers) and contractual expertise required to strengthen their capacity, and otherwise contracts would be let with NGOs for specific services.



Project Organizational Structure

12. **Direction.** An organization chart for the Project (Figure 1) indicates that highest authority would reside in the Board of Directors of FONAFIFO, which would delegate executive responsibility to the Executive Director, supported by the executive divisions (primarily Environmental Services). The Board of Directors would approve annual work plans and global proposals presented by the Executive Director and ensure that the organizational structure of the institution continues to comply with program requirements.

13. A **FONAFIFO-SINAC Committee** would serve as the main link between the normal activities of the two institutions involved and the Project. The Committee, meeting bimonthly, would review and approve plans and policies relating to the Ecomarkets project activities within the CAs. It would serve, as needed, as a primary forum for resolving problems that could not be resolved directly between the Executive Director and Directors of individual CAs. And, most important, it would serve as a forum for discussion, analysis, and integration of activities executed within the CAs. Regular membership would include the Directors of each involved CA, General Director of SINAC, and a representative of a third-level environmental NGO as JUNAFORCA, although others might be invited as needed. The Director of FONAFIFO, as Project Coordinator, would serve as Executive Secretary. Other operational structures may be established as needed to facilitate coordination.

Annex 10: Project Processing Budget and Schedule
Costa Rica: Ecomarkets

Project Schedule	Planned (At final PCD stage)	Actual
Time taken to prepare the project (months)	24	28
First Bank mission (identification)	7/1998	7/1998
Appraisal mission departure	11/1999	4/2000
Negotiations	1/2000	5/2000
Planned Date of Effectiveness	6/2000	11/2000

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Bank staff who worked on the project included:

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Juan Martinez	Indigenous Specialist (RUTA)
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Luz Zeron	Financial Management Specialist
Daria Goldstein	Country Lawyer
Gabriela Boyer	Environmental Specialist
Esteban Brenes	Environmental Specialist

Annex 11: Documents in the Project File

Costa Rica: Ecomarkets

A. Project Implementation Plan

Draft found in project files. To be finalized prior to project effectiveness.

B. Bank Staff Assessments

Found in project files.

C. Other

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Annex 12: Statement of Loans and Credits
Costa Rica: Ecomarkets

Number of closed projects: 30								Difference Between	
Board Date	Fiscal Year	<u>Last PSR</u>			<u>Original Amount in US\$ Millions</u>			Expected	Actual
	Active Projects	Supervision Rating b/					Orig.	Frm Rev'd	
		<u>Development Objectives</u>	<u>Implementation Progress</u>	IBRD	Cancel.	Undisb.			
1990	P6926	Transport Sector	S	S	60.0	12.0	4.6	16.6	1.6
1992	P6938	Basic Education	S	S	23.0	0.0	2.4	2.4	0.0
1993	P6941	Water Supply	S	S	26.0	10.0	4.2	14.2	4.1
1994	P6954	Health Sector Reform	S	S	22.0	0.0	6.7	6.7	6.7
					131.0	22.0	17.9	39.9	12.4

<u>All Projects</u>			
	IBRD	IDA	Total
Total Disbursed (IBRD and IDA):	700.4	5.5	705.9
of which has been repaid:	558.8	3.6	562.4
Total now held by IBRD and IDA ^b :	148.8	1.9	150.7

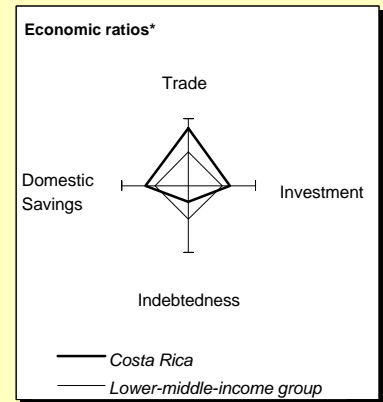
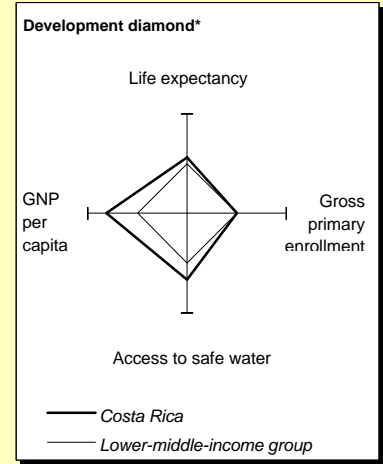
a. Intended disbursements to date minus actual disbursements to date as projected at appraisal.
b. Including valuation adjustments for US\$7.25 million.

Data as of
12/31/99.

Annex 13: Country at a Glance

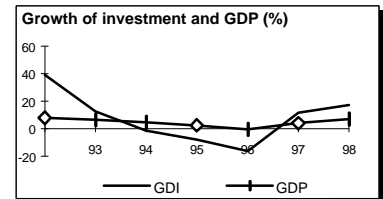
Costa Rica: Ecomarkets

POVERTY and SOCIAL	Costa Rica	Latin America & Carib.	Lower-middle-income	
1998				
Population, mid-year (millions)	3.3	502	908	
GNP per capita (Atlas method, US\$)	2,780	3,940	1,710	
GNP (Atlas method, US\$ billions)	9.3	1,978	1,557	
Average annual growth, 1992-98				
Population (%)	2.1	1.6	1.1	
Labor force (%)	2.7	2.3	1.5	
Most recent estimate (latest year available, 1992-98)				
Poverty (% of population below national poverty line)	22	
Urban population (% of total population)	51	75	58	
Life expectancy at birth (years)	77	70	68	
Infant mortality (per 1,000 live births)	12	32	38	
Child malnutrition (% of children under 5)	5	8	..	
Access to safe water (% of population)	100	75	75	
Illiteracy (% of population age 15+)	5	13	14	
Gross primary enrollment (% of school-age population)	103	113	103	
Male	104	..	105	
Female	103	..	100	
KEY ECONOMIC RATIOS and LONG-TERM TRENDS				
	1978	1988	1997	1998
GDP (US\$ billions)	3.5	4.6	9.7	10.6
Gross domestic investment/GDP	23.5	24.5	26.4	28.3
Exports of goods and services/GDP	28.2	35.1	46.4	49.6
Gross domestic savings/GDP	15.6	22.6	25.7	27.7
Gross national savings/GDP	12.8	16.1	24.9	24.4
Current account balance/GDP	-10.3	-8.3	-2.2	-4.3
Interest payments/GDP	2.4	4.1	1.9	1.7
Total debt/GDP	47.8	98.2	36.5	37.4
Total debt service/exports	39.9	24.3	9.6	7.6
Present value of debt/GDP	33.7	35.8
Present value of debt/exports	56.6	52.8
	1978-88	1988-98	1997	1998
<i>(average annual growth)</i>				
GDP	1.7	4.1	3.7	6.7
GNP per capita	..	2.2	1.3	1.3
Exports of goods and services	3.3	9.5	4.1	15.0



STRUCTURE of the ECONOMY

	1978	1988	1997	1998
<i>(% of GDP)</i>				
Agriculture	20.4	15.8	15.1	15.0
Industry	26.1	23.9	24.4	24.0
Manufacturing	18.7	21.3	18.9	18.5
Services	53.5	60.3	60.5	61.0
Private consumption	67.6	61.8	57.6	55.9
General government consumption	16.8	15.6	16.7	16.4
Imports of goods and services	36.0	37.0	47.1	50.1
	1978-88	1988-98	1997	1998
<i>(average annual growth)</i>				
Agriculture	2.1	3.1	-0.1	5.3
Industry	1.4	3.9	5.5	7.9
Manufacturing	-6.4	3.9	5.1	7.2
Services	1.8	4.5	4.1	6.6
Private consumption	0.9	3.3	2.9	4.6
General government consumption	0.3	2.4	1.6	2.4
Gross domestic investment	1.2	3.4	11.5	17.2
Imports of goods and services	1.1	8.8	5.6	17.5
Gross national product	1.4	4.5	3.5	3.5



Note: 1998 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

