



Government of Costa Rica Ministry of Environment and Energy National Forestry Financing Fund

The Environmental Services Payment
Program: A success story of sustainable
development implementation in Costa Rica

*By: Carlos Manuel Rodríguez
Minister of Environment and Energy*



Fondo Nacional de Financiamiento
Forestal de Costa Rica
FONAFIFO

Features



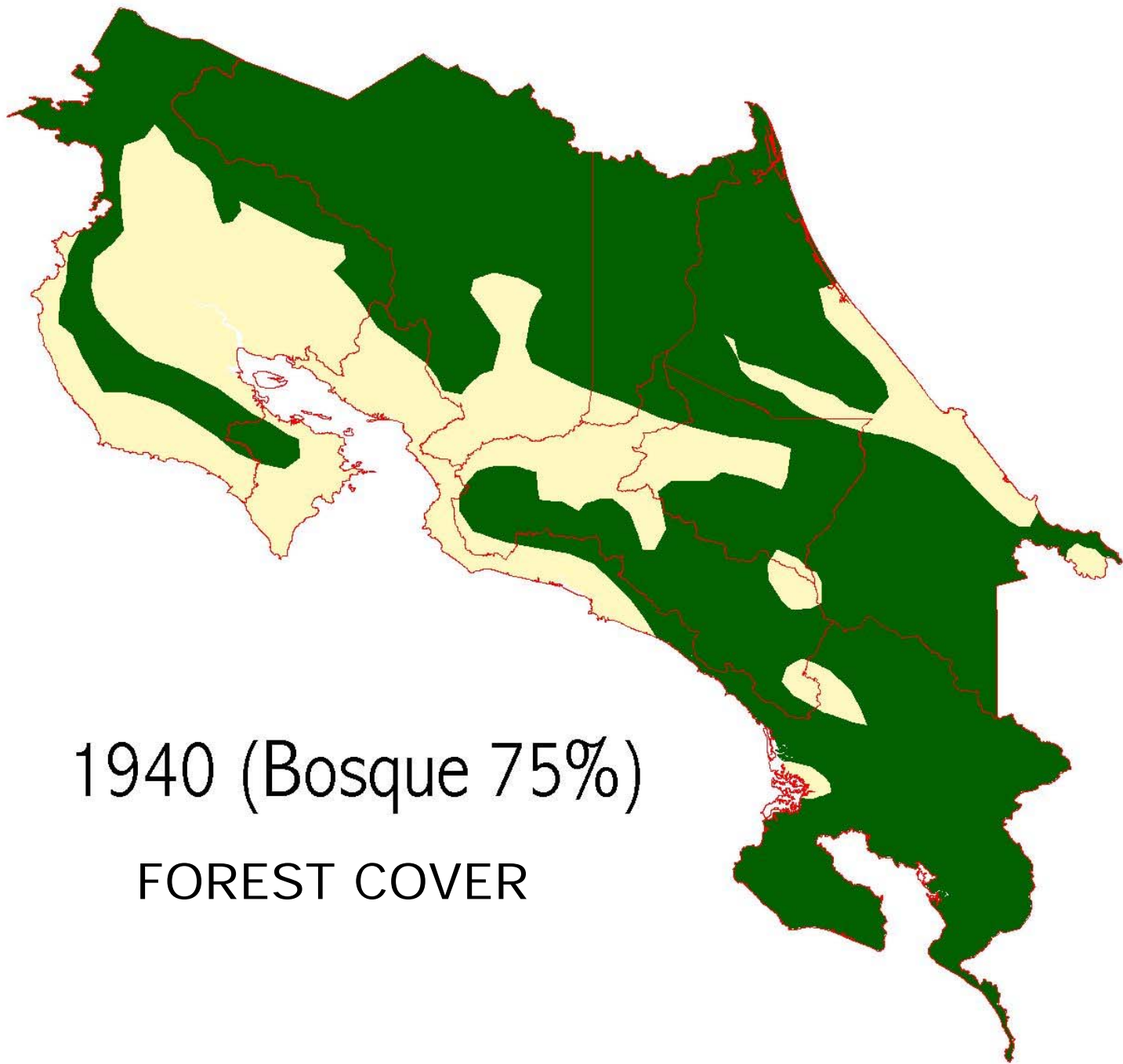
Costa Rica

- *Area: 51,100 Km²*
- *Population: 4,4 millions*
- *High human development index (ranked 45 by UNDP)*
- *Medium Income country (GP = \$4.180 per capita in 2004)*

- 70 % of national lands are of forest capacity
- 26 % of the territory is protected by different management categories (National Parks, wildlife refuges, Forest Reserves)
- 9 % of private lands are under protection by ESP
- Tourism is currently the main income source
- Forest plantations and industrial related activities are privately managed.
- No forest concessions are allowed

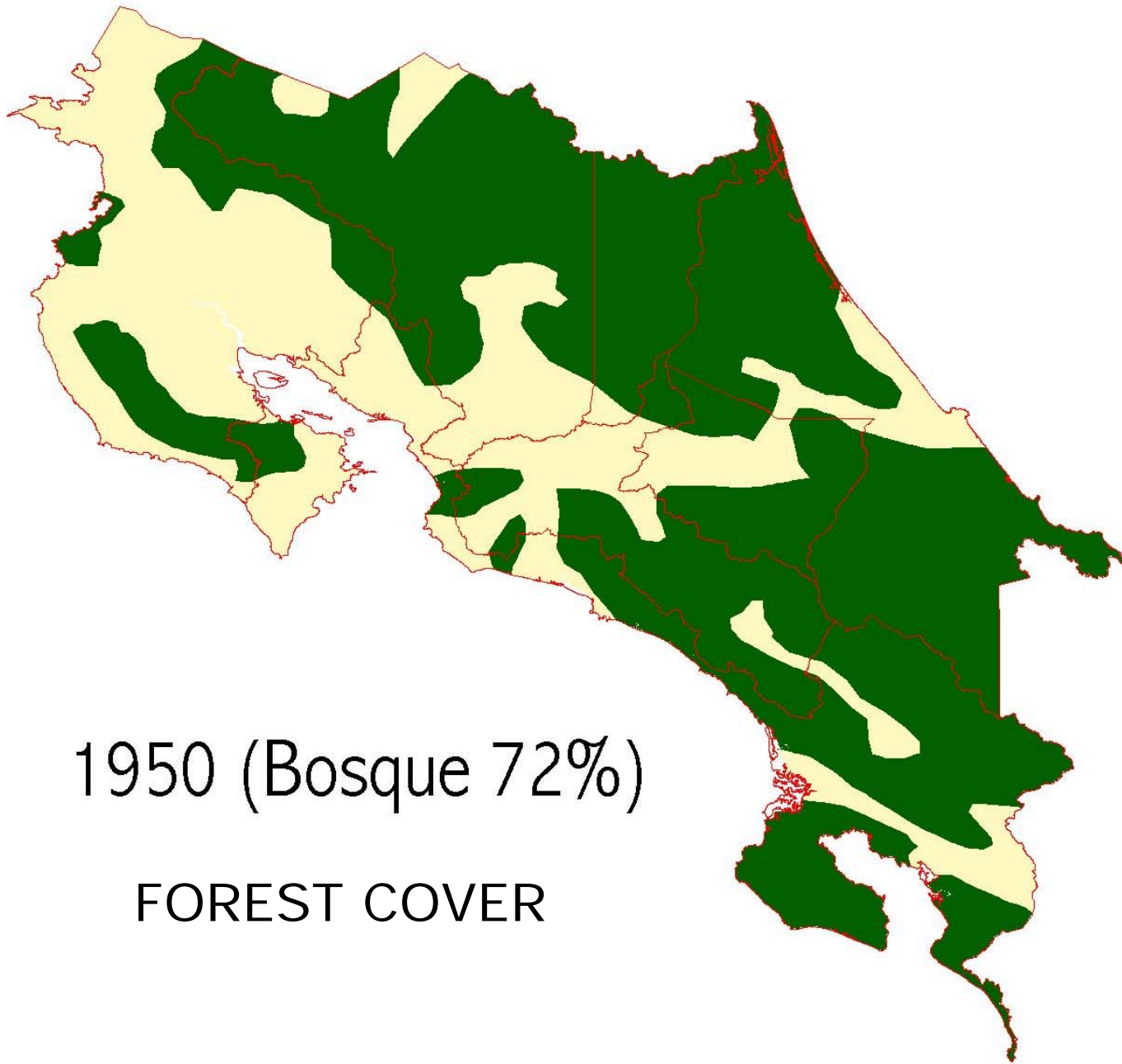
A forestry-oriented country

- ✓ According to the land-use capacity 2/3 of the national territory should be forest covered.
- ✓ By the end of the 70's some research studies showed national forestry reality (Silvander-1977 y Pérez y Protti-1978)
- ✓ The annual rate of deforestation was of 55.000 Ha/year
- ✓ Less than 1/3 of the national territory was the remaining forest (31,1 %)
- ✓ Historically, Costa Rica has been generating financial mechanisms for the forestry sector
- ✓ In 1979 the first forestry incentive was established
- ✓ In 1979 the First National Forest Development Plan was developed



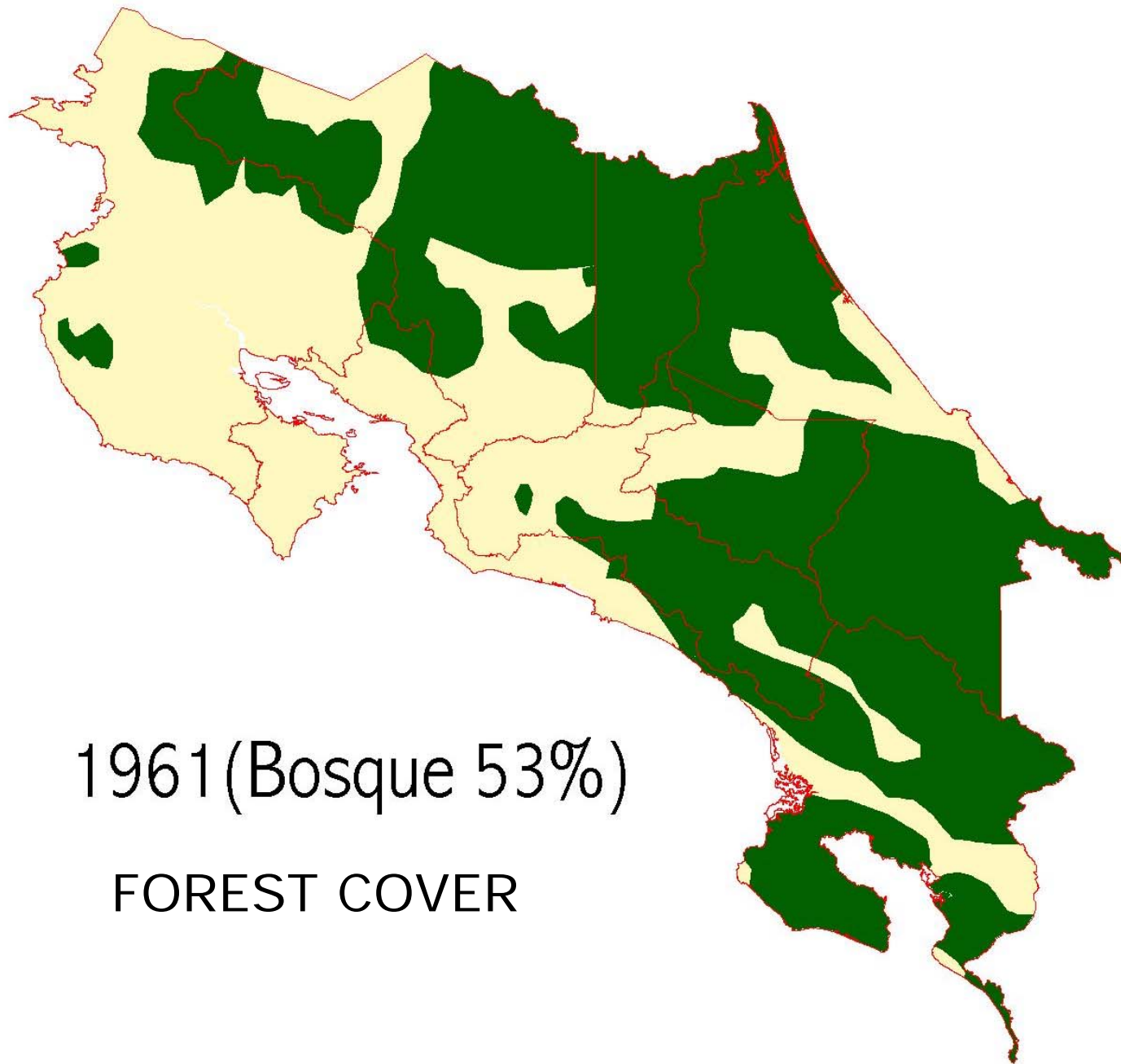
1940 (Bosque 75%)

FOREST COVER



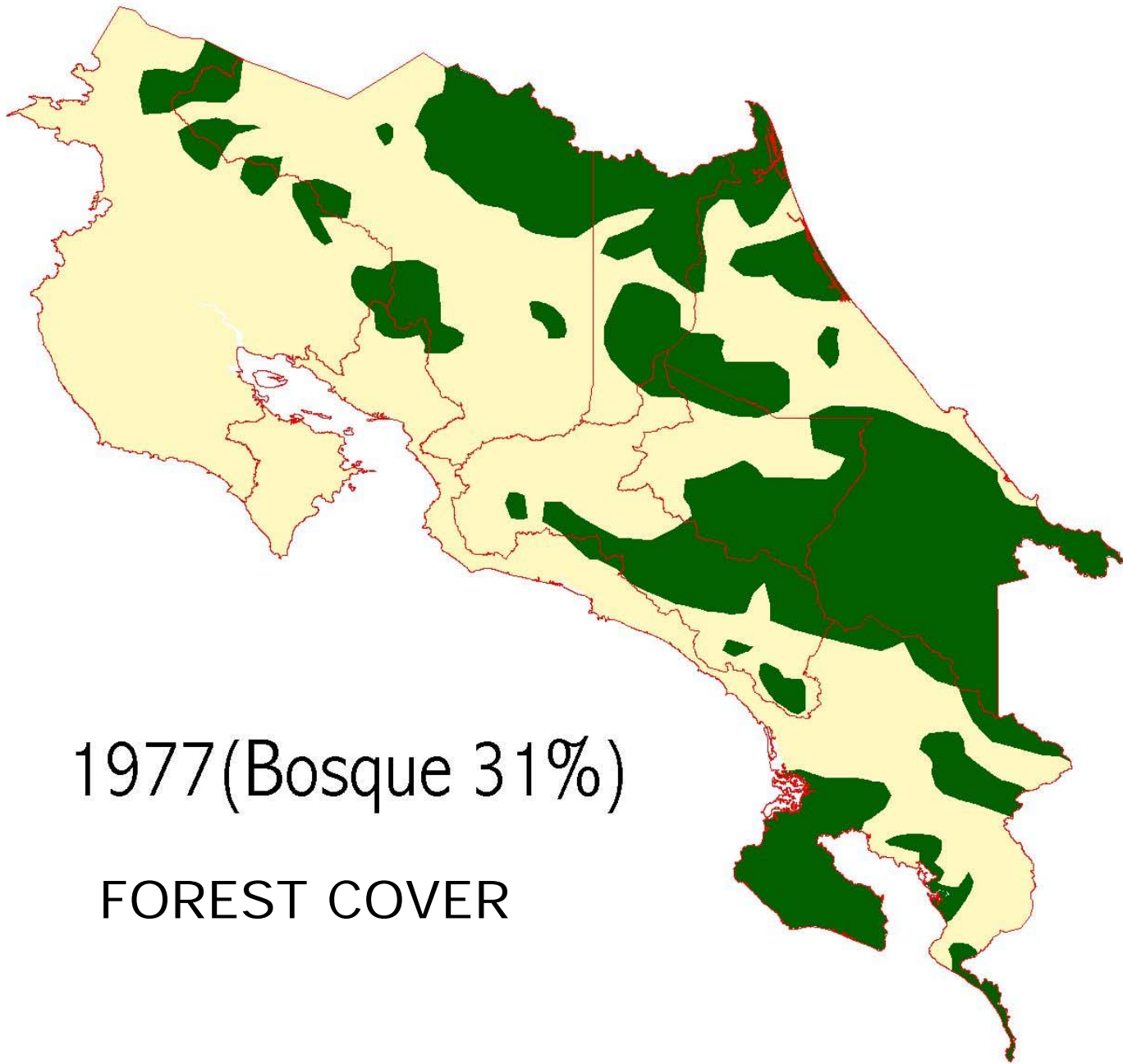
1950 (Bosque 72%)

FOREST COVER



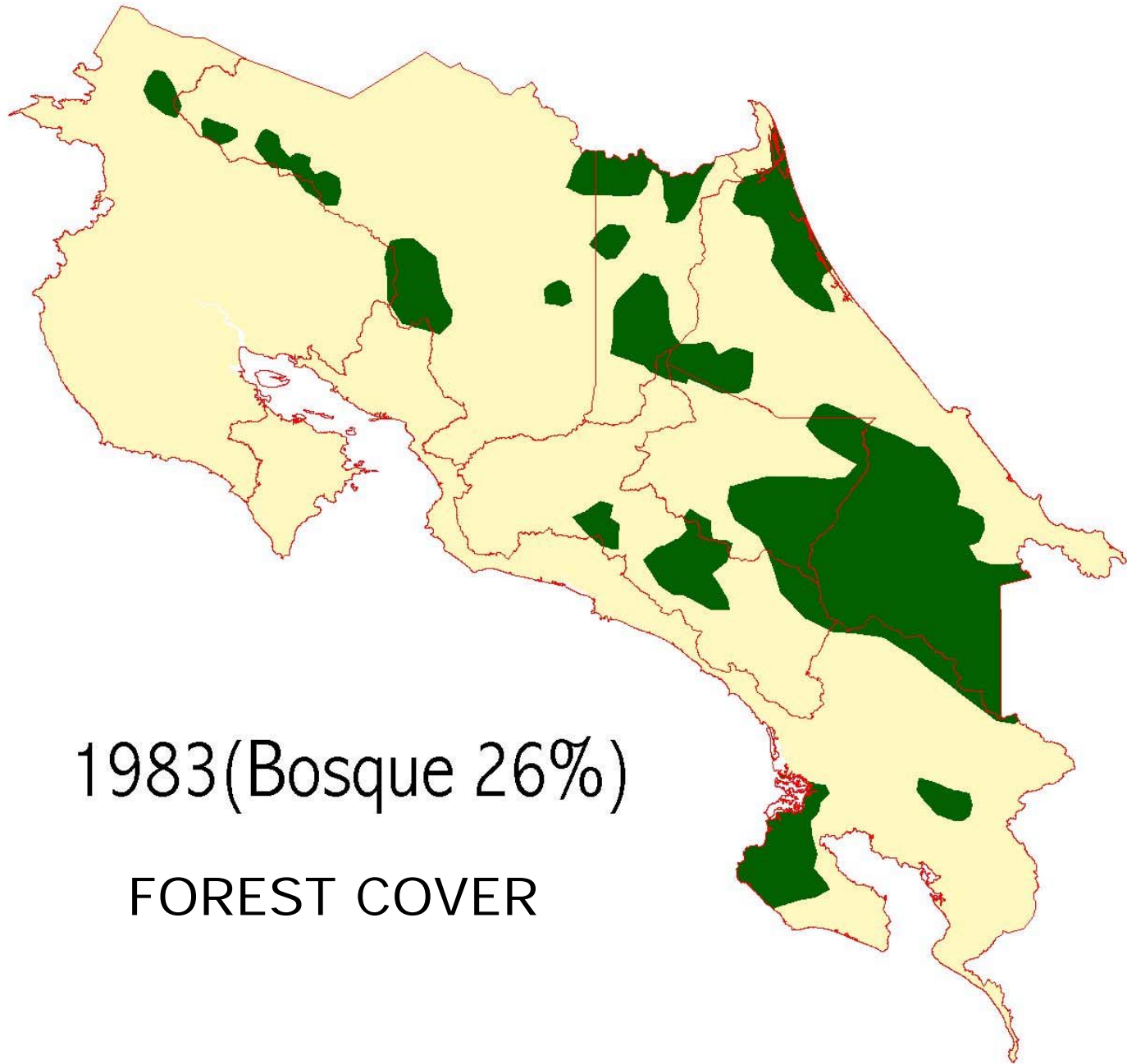
1961 (Bosque 53%)

FOREST COVER



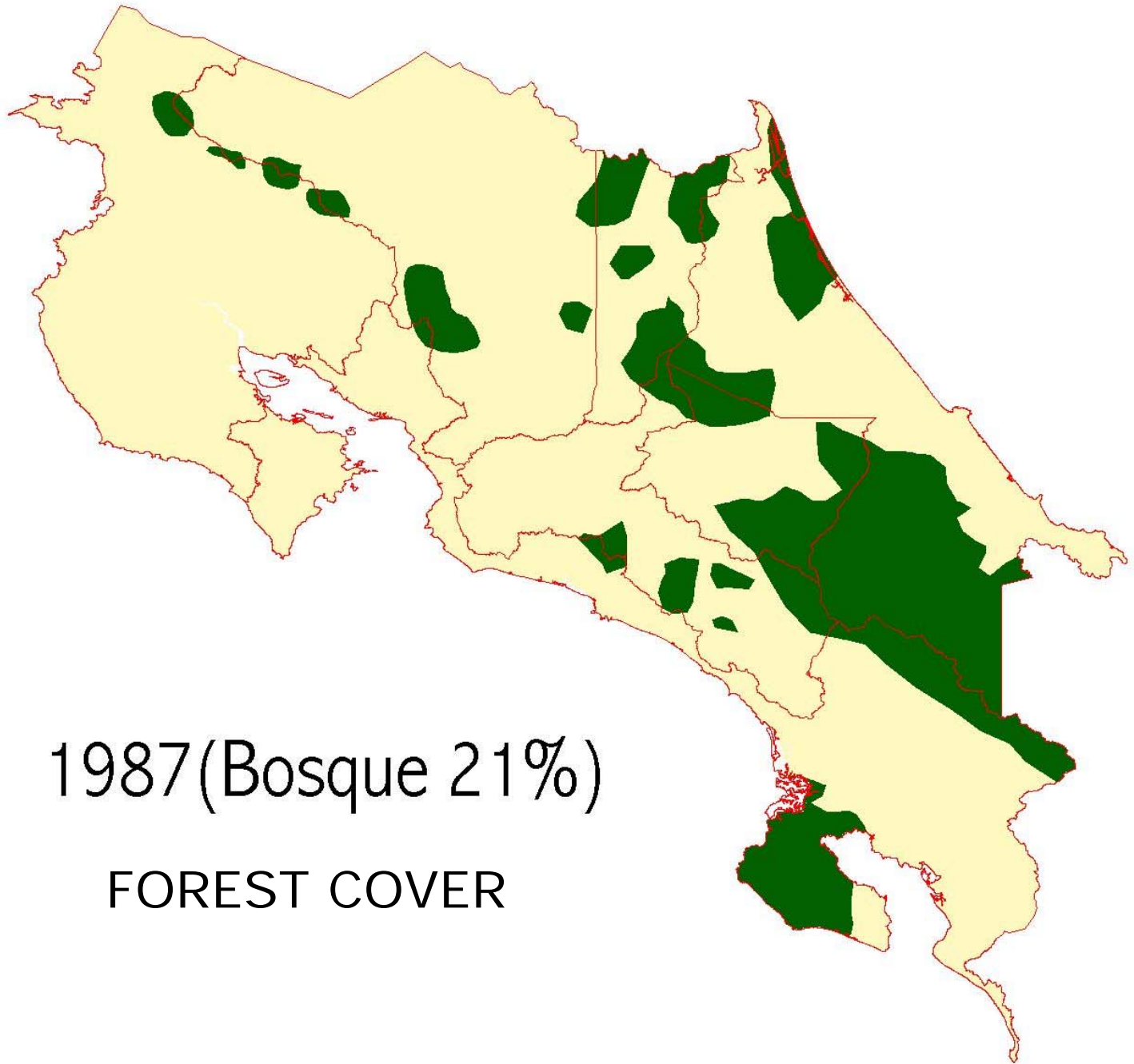
1977 (Bosque 31%)

FOREST COVER



1983 (Bosque 26%)

FOREST COVER



1987 (Bosque 21%)

FOREST COVER

Evolution of forest cover 1940 - 1987



1995-1998 New legal and institutional framework for sustainable development policy

- 1995 General Environmental Law enacted
- 1996 New Forestry Law
- 1998 Biodiversity Law

- Sustainable development becomes a national goal by Law (Art. 50 National Constitution and Environmental law)
- Creation of the National System of Protected Areas to enhance integrated management of natural resources.
- Abolition of the change of use of forested lands
- FONAFIFO legally consolidated
- The Forest National Office was created as a dialogue mechanism among the private and public forest stakeholders
- Transformation of incentives into Environmental Services Payment as the main financial mechanism to promote forest protection and sustainable use
- Creation of a funding source for ESP (tax on fuels)



Environmental Services Payment Program: Legal framework

The Forestry Law states

“ Forests, forest plantations and other ecosystems provide essential services to the people and economic activities, at the local, national and global levels”.

Protection of water resources for different uses

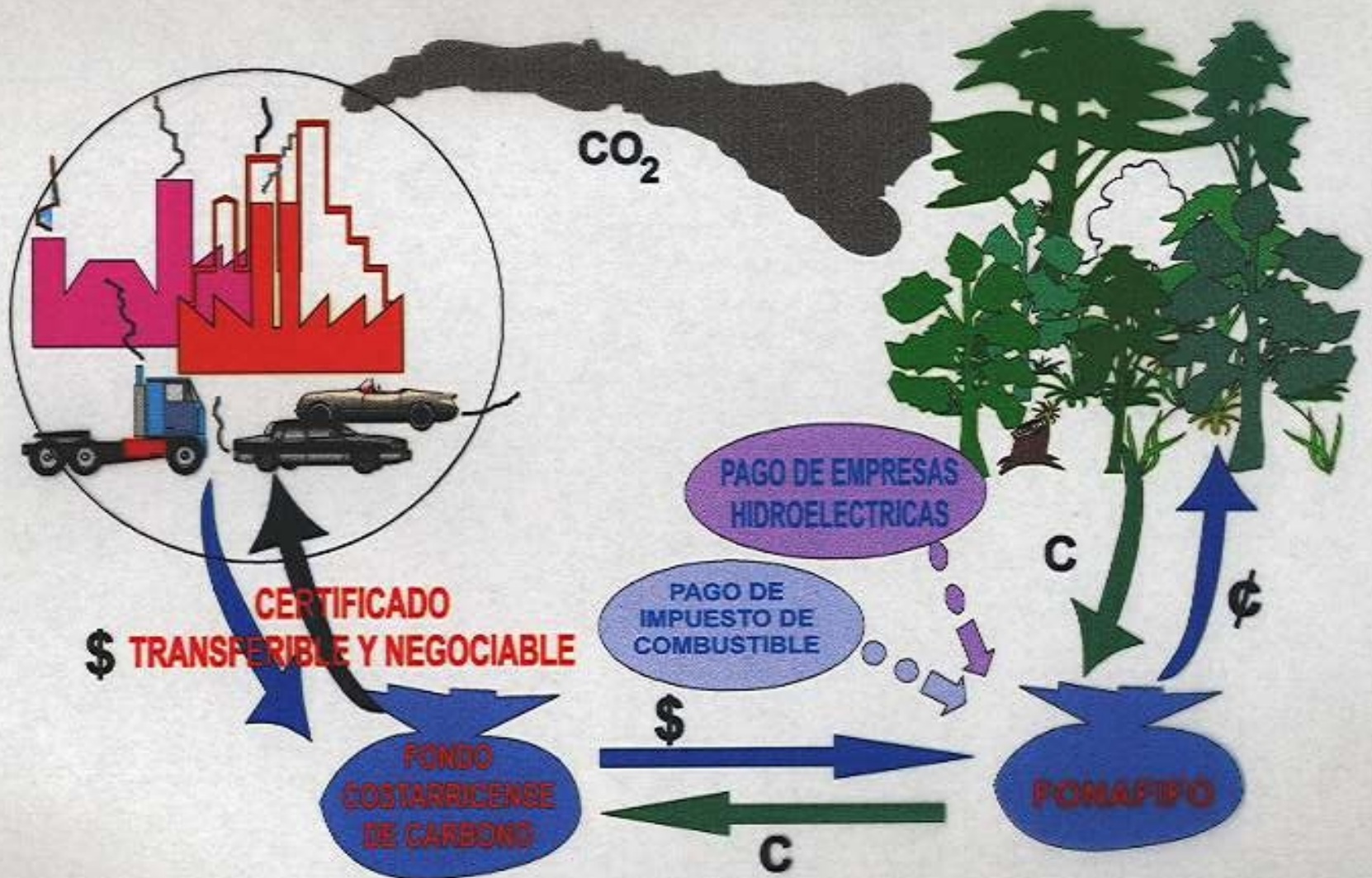
Mitigation of greenhouse effect gases and carbon fixation

Protection of biodiversity

Landscape/scenic beauty

Payment for environmental services is the mechanism implemented to pay the owners of land by the above mentioned services provided to the society

RATIONALE OF THE ESPP



Ecomarket Project goals/targets

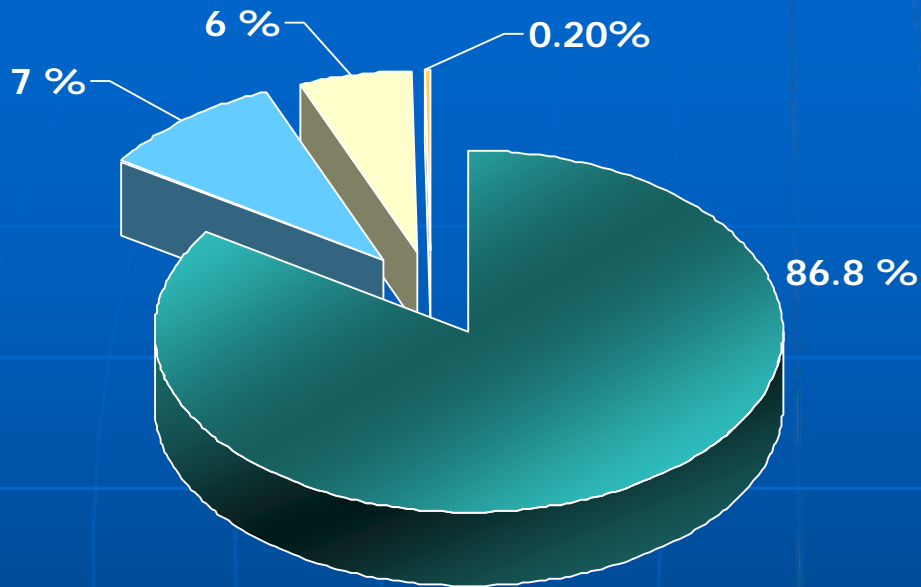
- Payments for contracted projects (+200.000 Has)
- Increase volume of existing contracts in 100.000 Has
- Increase by 30% participation of women in ESP
- Increase by 100% participation of indigenous peoples
- Strengthen FONAFIFO and SINAC institutional capacities

Ecomarkets project

- Need to increase forest conservation and forest cover recovering by enhancing the development of private markets for environmental services provided by forests such as biodiversity protection, greenhouse emissions reduction and water resources protection.

Source of funding	\$ US
BIRF 4557-CR	32,630,000
GEF 23681-CR	8,000,000
PJN 50508	302,250
Government	8,500,000
TOTAL	49,432,250

463.000 Has covered by ESP during 1997 – 2004



■ Protection ■ Forest management ■ Reforestation ■ Private Reforestation

"As scientific understanding of ecological services improves, new financial opportunities emerge"

The Economist 04-05

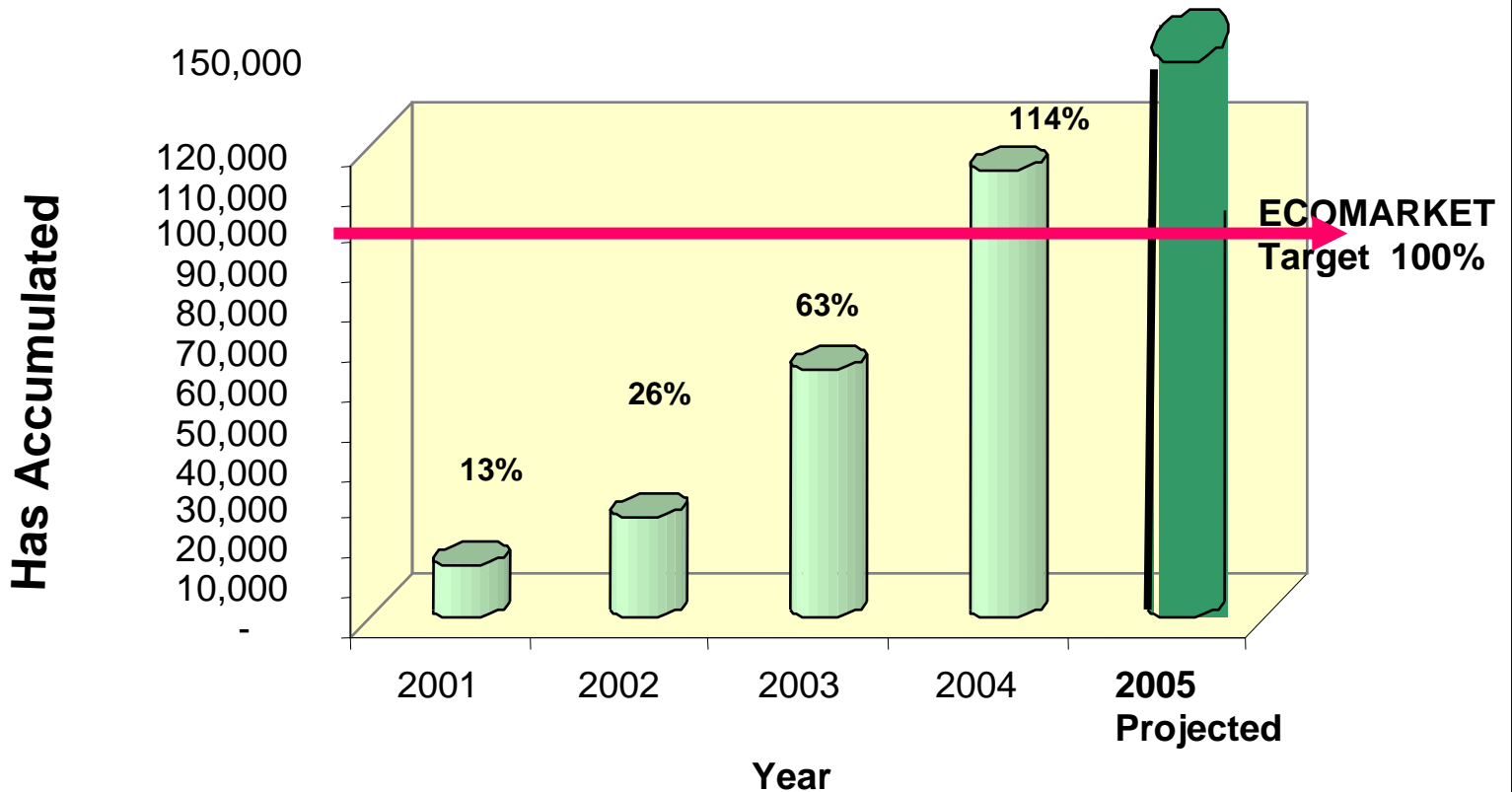
A growing partnership in action

85%
Regular
Budgets

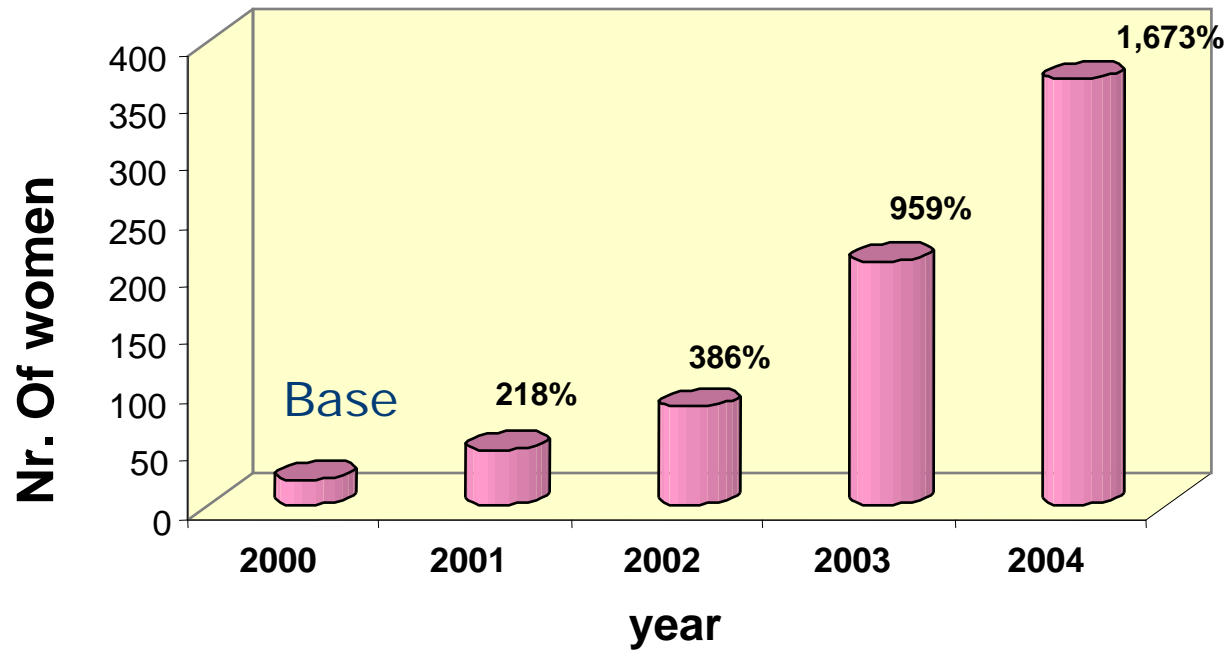
8%
Other sources

7%
Local private
sector

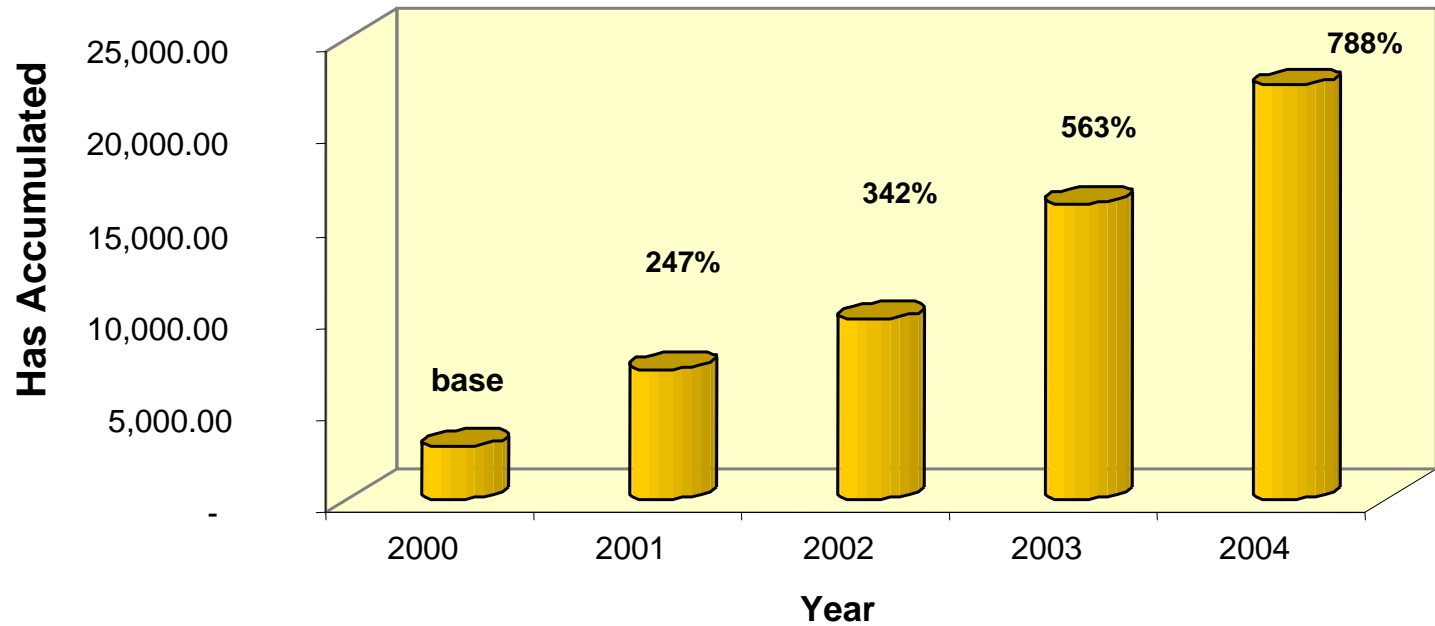
New Has protected by ESP



Participation of women



Participation of indigenous peoples







COLEGIO TELESECUNDARIA BOCA CUEN TJAÍ



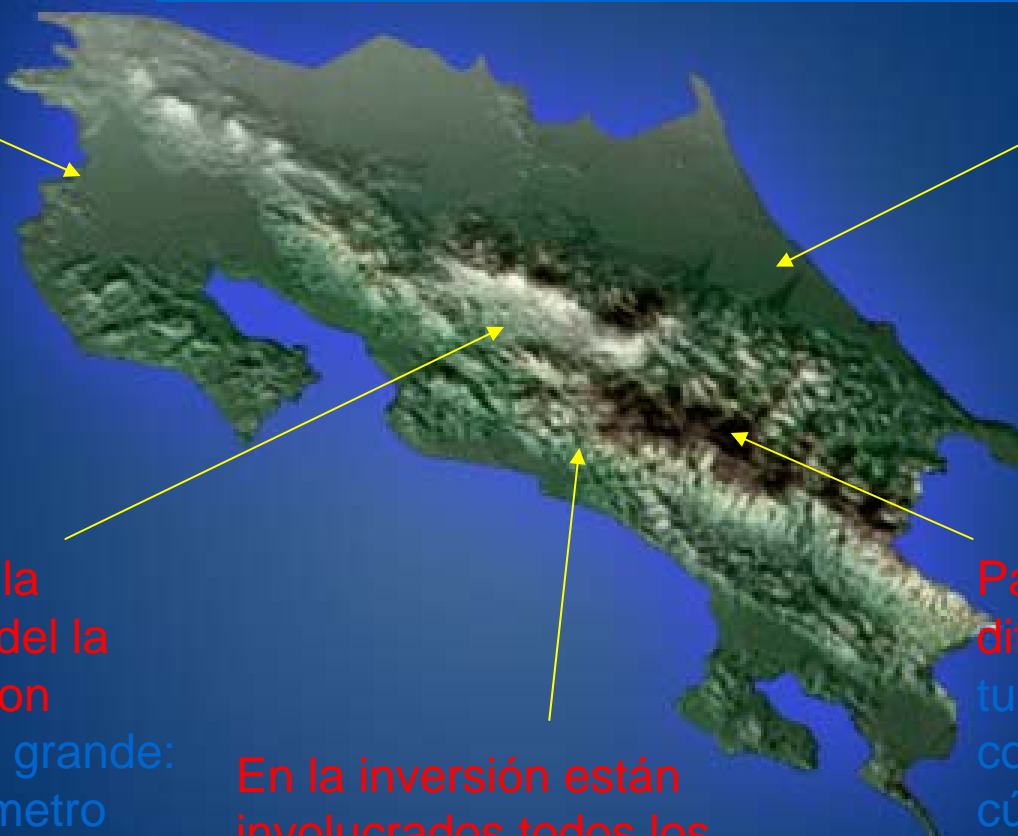




**THE ECOLOGY COST OF WATER
ADJUSTED IN THE WATER RIGHTS
DECREE: AUGUST 24th 2005**



EVERY USER WILL PAY THE ECOLOGY COST OF WATER



Implementación en siete años
Uso en Consumo Humano:
1,46 colones por metro cúbico anual

Plan de incentivos para los sectores productivos
Uso comercial e industrial: 3,25 colones por metro cúbico anual de agua subterránea

Negociación para la viabilidad política del la propuesta del canon
Uso hidroeléctrico grande:
0,12 colones por metro cúbico anual en concesión

Pago por el agua diferenciado por uso turístico
2,46 colones por metro cúbico anual

En la inversión están involucrados todos los actores públicos y privados
El uso acuícola: 0,12 colones por metro cúbicos



PRESIDENT´S EXECUTIVE ORDER 035-MINAE (Minister of Environment)

All Public Institutions who use public water rights for a public service, will financially recognize the ecological cost of water.

Actual Value of Water Rights

Decree 26635-MINAE - Enero 1998

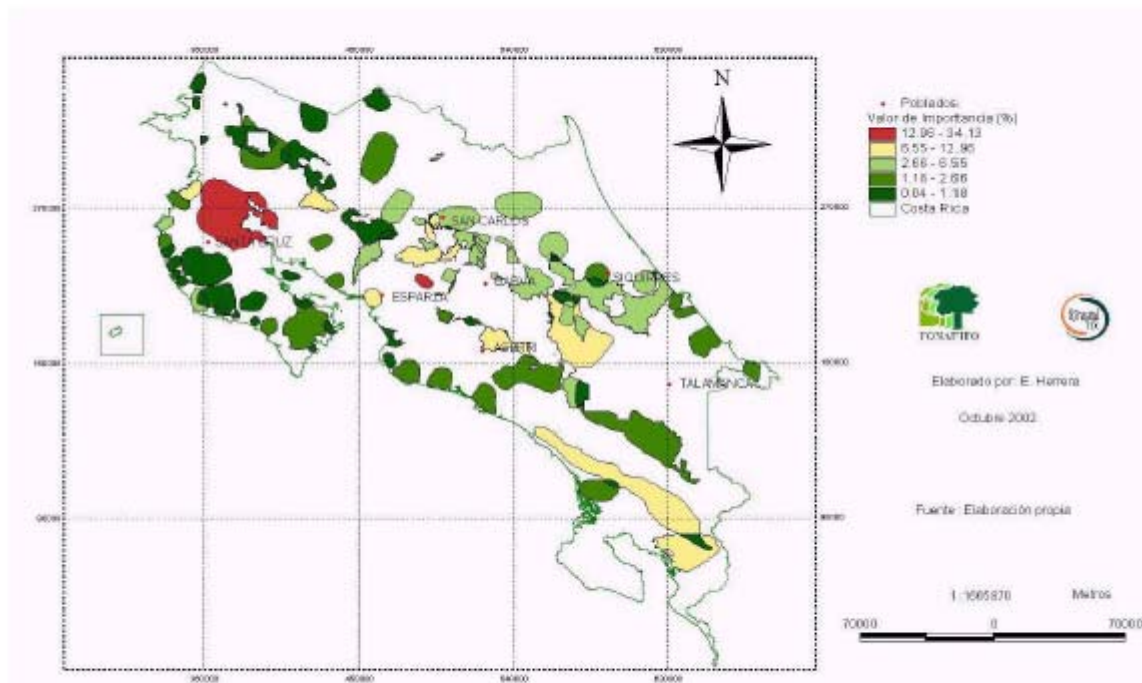


Sector	Canon (colones por metro cúbico anual)			
	Superficial		Subterráneo	
Doméstico	0.5177	(\$0.0010)	0.7187	(\$0.7187)
Poblacional	0.0088	(\$1.79592e-05)	0.0109	(\$0.0109)
Hidroeléctrico (fuerza hidráulica)	0.0001	(\$2.04082e-07)	NA	
Industrial	0.0252	(\$5.14286e-05)	0.1928	(\$0.1928)
Riego	0.0169	(\$3.44898e-05)	0.1304	(\$0.1304)
Otros usos	0.0075	(\$1.53061e-05)	0.3224	(\$0.3224)
Promedio	0.0007	(\$1.42857e-06)	0.1128	(\$0.1128)

Proposed values of water rights

(1) Uso	(2) Canon (colones por metro cúbico anual)			
	Agua Superficial		Agua Subterránea	
Consumo Humano	1.46	(\$0.002979)	1.63	(\$0.00332)
Industrial	2.64	(\$0.005387)	3.25	(\$0.00663)
Comercial	2.64	(\$0.005387)	3.25	(\$0.00663)
Agroindustrial	1.90	(\$0.003877)	2.47	(\$0.00504)
Turismo	2.64	(\$0.005387)	3.25	(\$0.00663)
Agropecuaria	1.29	(\$0.002632)	1.40	(\$0.00285)
Acuicultura	0.12	(\$0.000244)	0.16	(\$0.00032)
Fuerza Hidráulica	0.12	(\$0.000244)	-	

Need to invest in areas of importance for water conservation



Mapa 6. Zonas prioritarias para implementar el pago por servicios ambientales según su valor de importancia en porcentaje.



Needs to invest: in monitoring
and control insite for water
rights and ilegal uses



Need to invest: in
watershed management



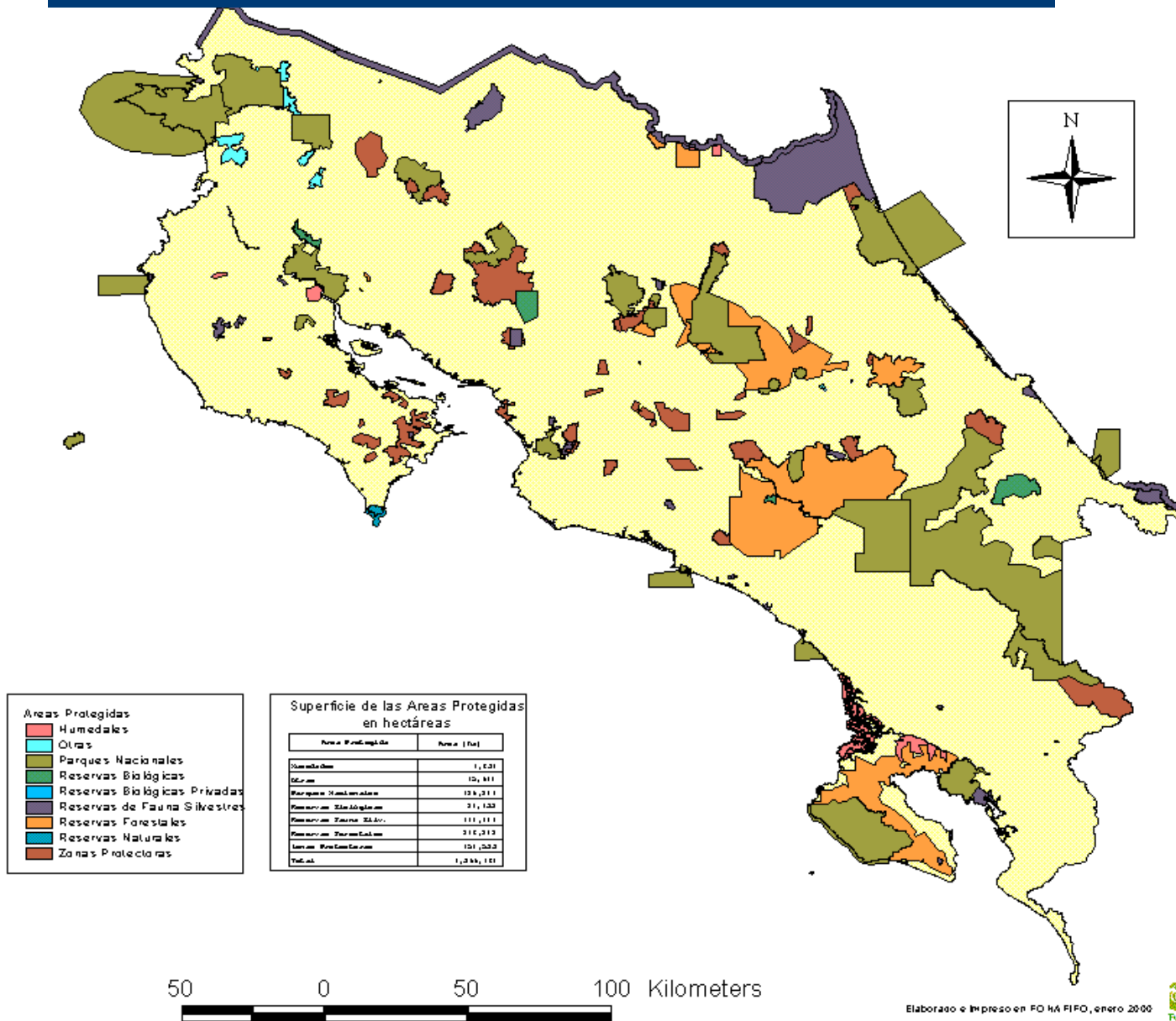
Need to recognize:
the environmental service for
ecosystems

*Forest Law

*Need to invest in restoration and good uses of land
for water conservation*



Costa Rica: Protected Areas



RESULTS 2002

	P.N. Chirripó	P.N. Cahuita	P.N. Volcán Poás
TOTAL	\$609.000	\$4.900.000	\$23.400.000
Nacional	46%	64%	59%
Regional	28%	3%	24%
Local	26%	33%	17%

APORTES ECONÓMICOS DE LOS PARQUES NACIONALES Y RESERVAS BIOLÓGICAS 2002

Total: \$834,6 millones

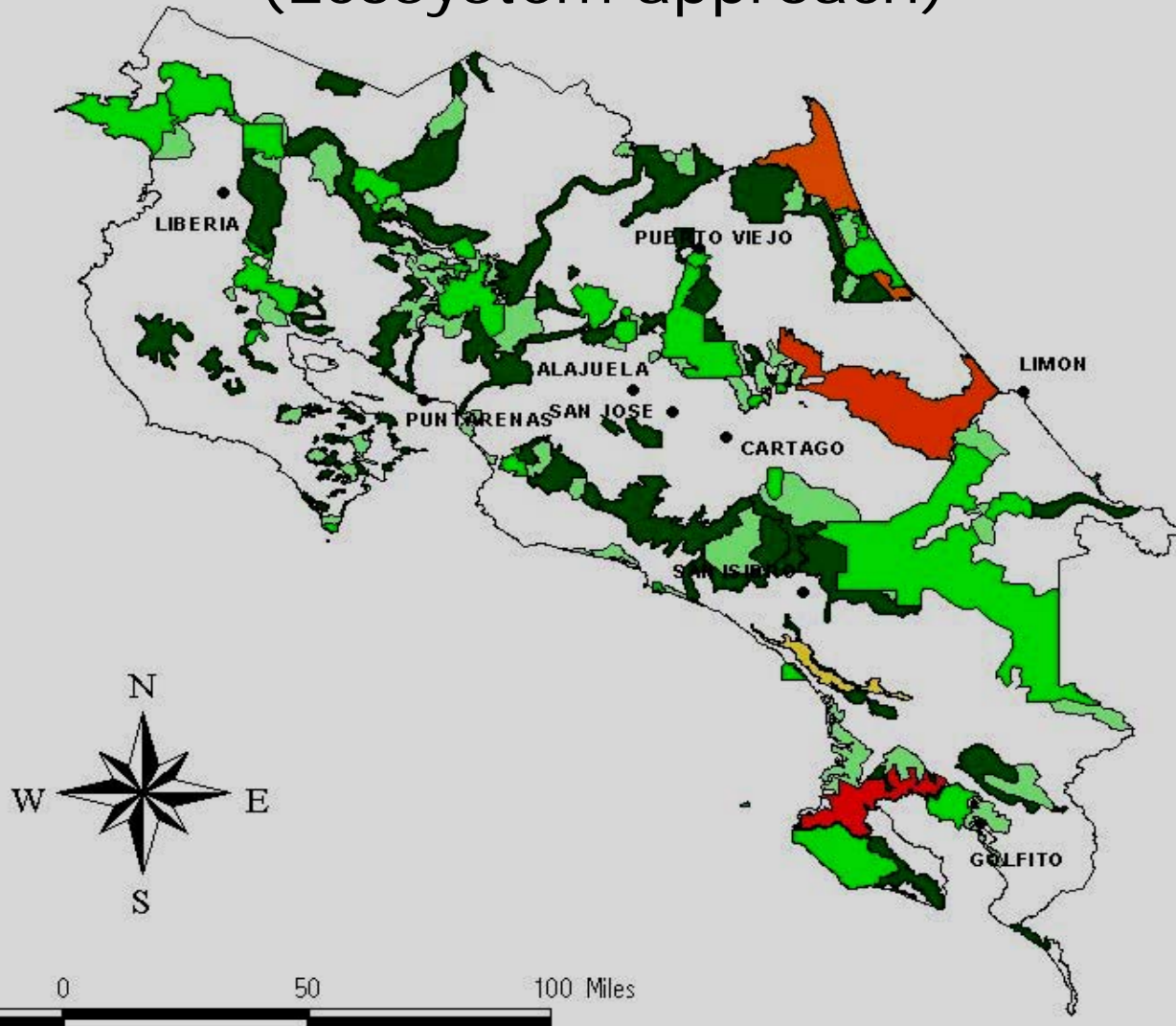
- **Turismo Nacional (87,48%):** Hospedaje, transporte, alimentación, culturales
- **Generación de electricidad (10,45%):** Aproximación mediante SIG a las plantas cercanas a los P.N. y R.B.
- **Fondos para Conservación de ASP (1,10%)**
- **Otros (0,97%):** Fondos para la investigación, visitación, empleo, PSA, compra de tierras.

APORTE DE LOS P.N. Y R.B. AL PRODUCTO INTERNO BRUTO 2002

	%
Aporte de los P.N. y R.B.	5,5

Agricultura, silvicultura y pesca	7,7
-----------------------------------	-----

PRIORITY AREAS FOR THE PROGRAM (Ecosystem approach)



Costa Rica

Ubicación de proyectos PSA 1998



ESP Project Investments

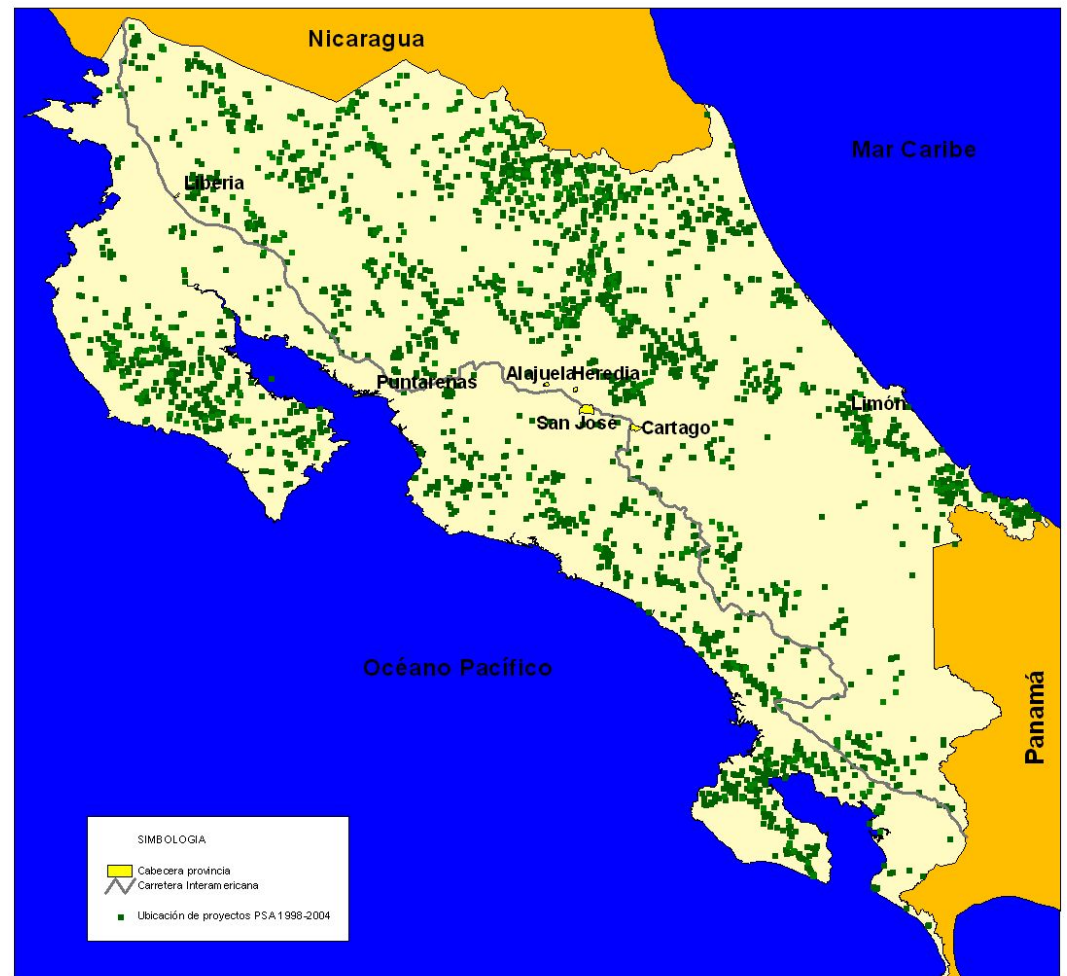


Elaborado en FONAFIFO.
A. Méndez, abril 2005



ESP Projects Investments

Costa Rica.
Ubicación de proyectos PSA 1998-2004



50 0 50 100 150 200 250 Kilometers

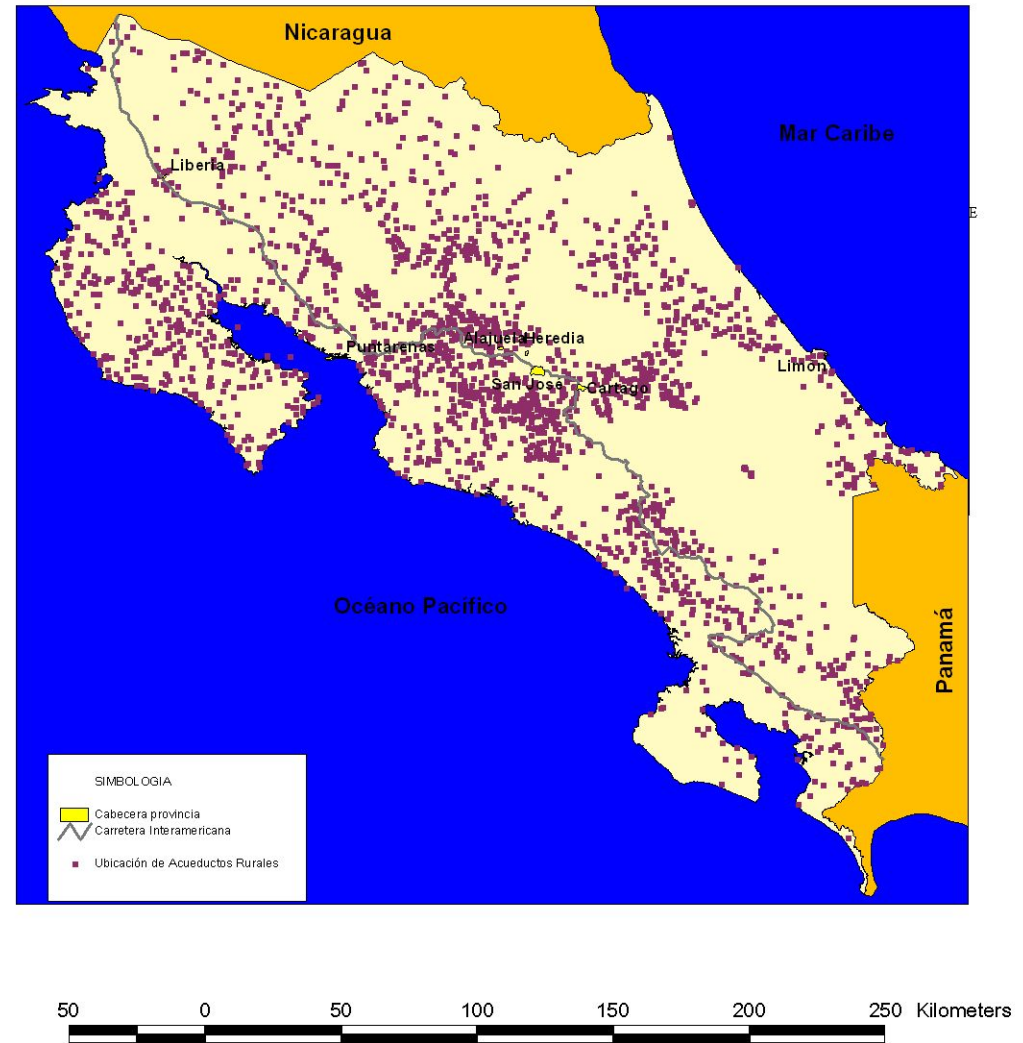


Elaborado en FONAFIFO.
A. Méndez, abril 2005



Rural water Supply system

Costa Rica. Ubicación de Acueductos Rurales



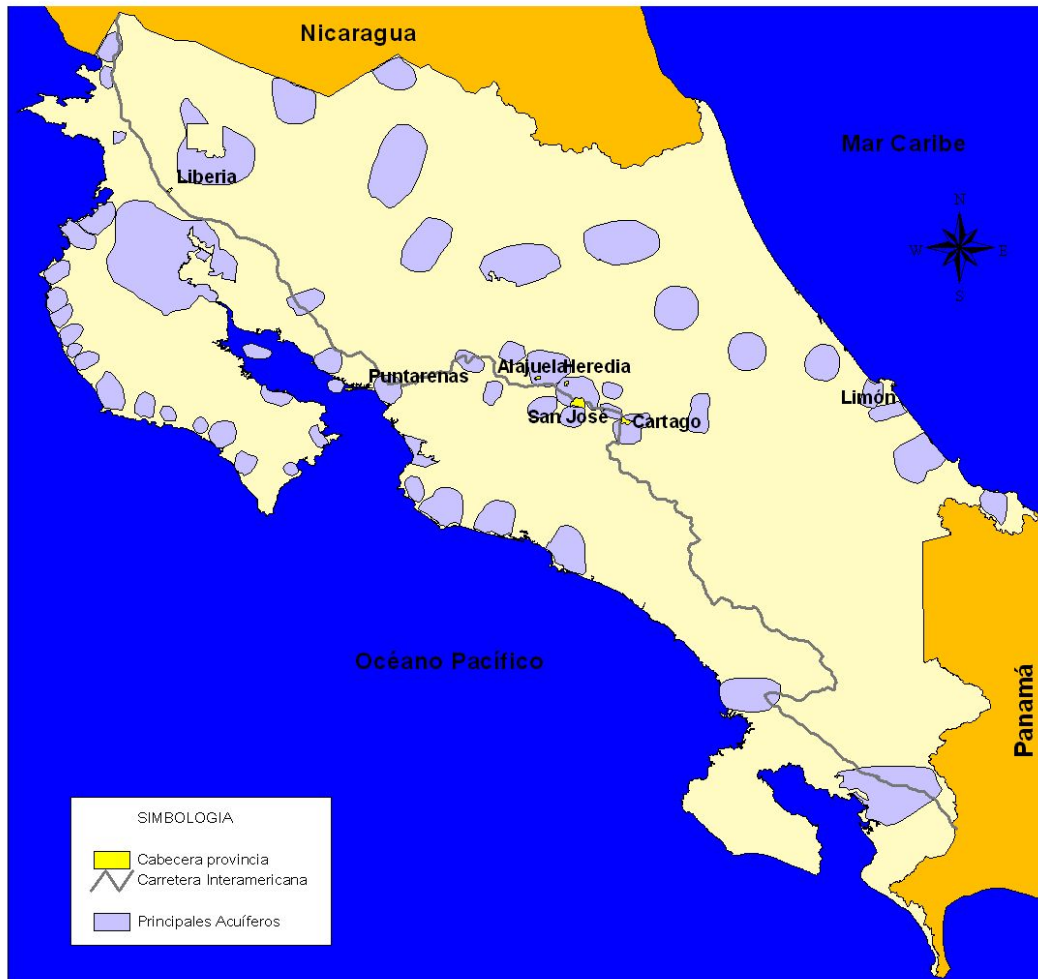
Fuente: Atlas 2004



Elaborado en FONAFIFO.
A. Méndez, abril 2005



Costa Rica.
Ubicación de Principales Acuíferos



50 0 50 100 150 200 250 Kilometers

Fuente: Atlas 2004



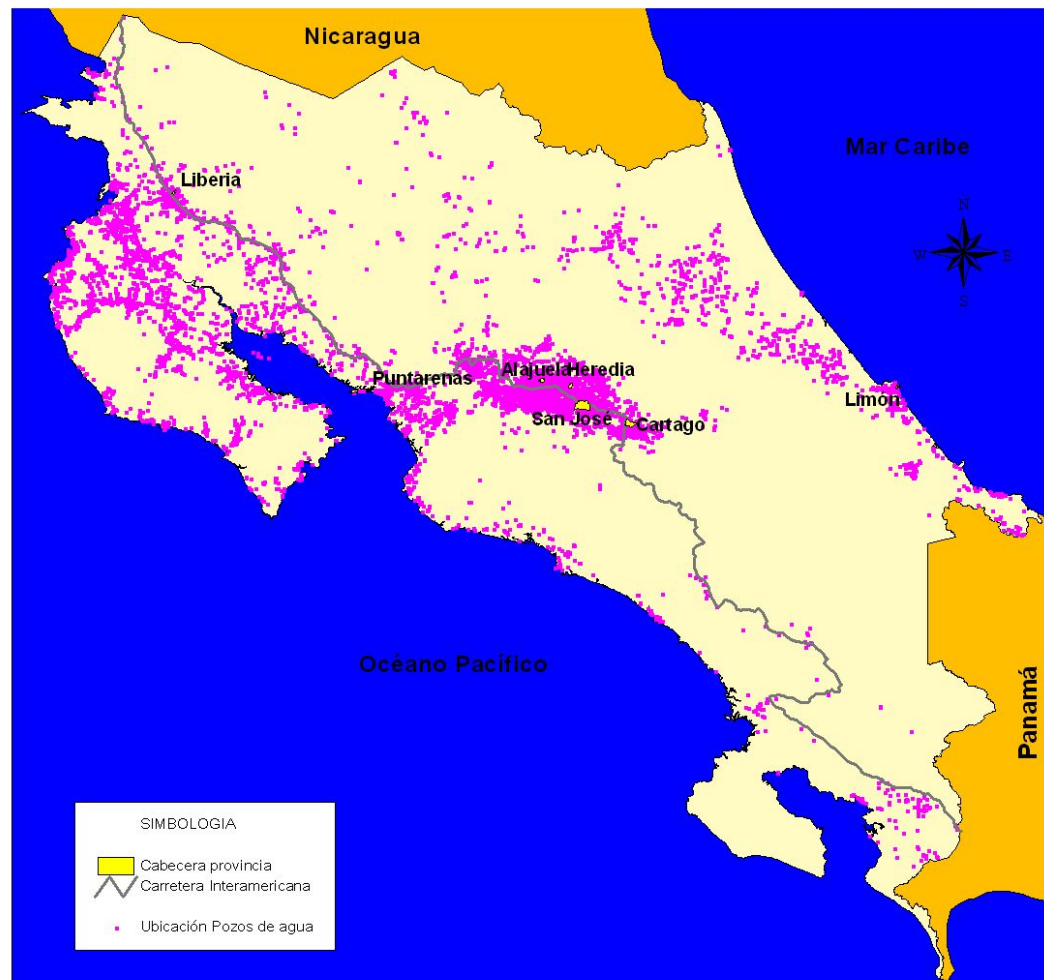
Elaborado en FONAFIFO.
A. Méndez, abril 2005



Watersheds

Water Catchments

Costa Rica.
Ubicación de Pozos de agua.



50 0 50 100 150 200 250 Kilometers

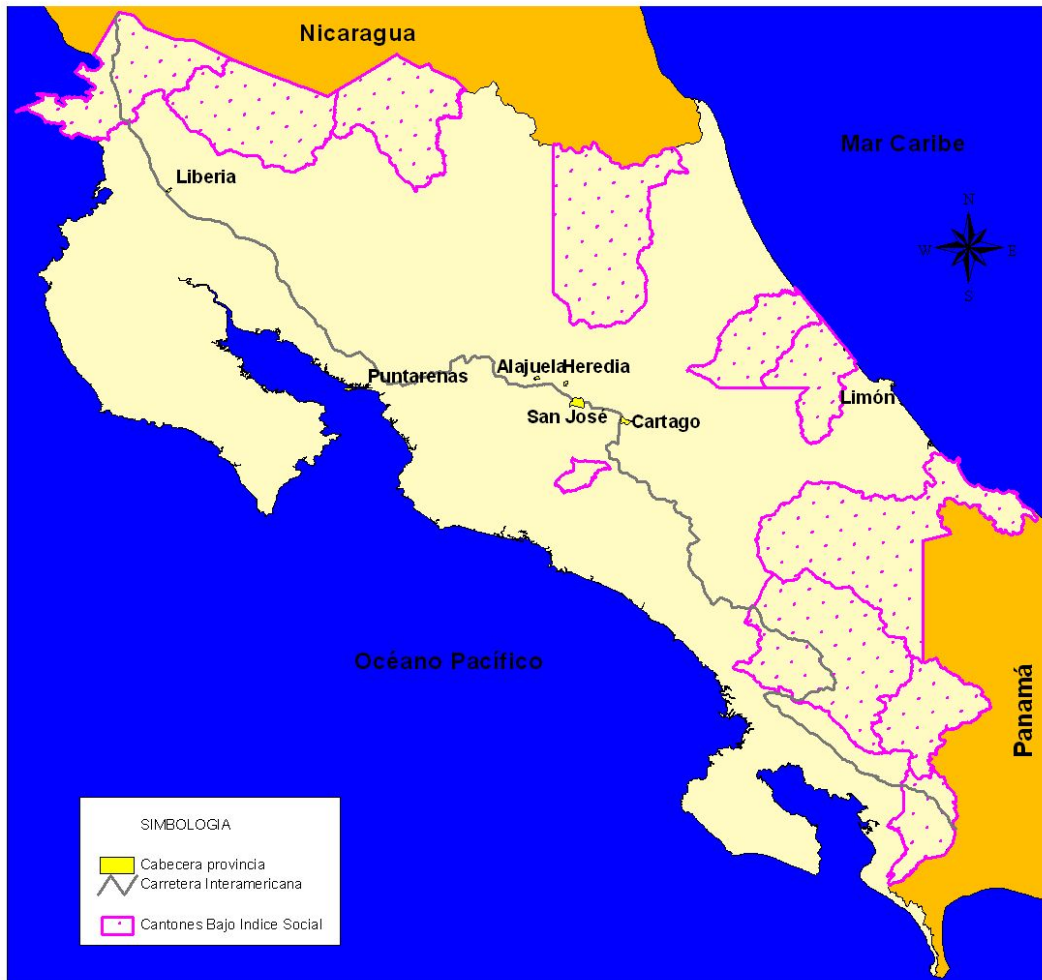
Fuente: Atlas 2004



Elaborado en FONAFIFO.
A. Méndez, abril 2005



Costa Rica, Mapa Prioridades PSA Protección, 2005
Cantones con Índice de Desarrollo Social inferior a 40%



Low Social
Development Index
Populations
(Less than 40%)

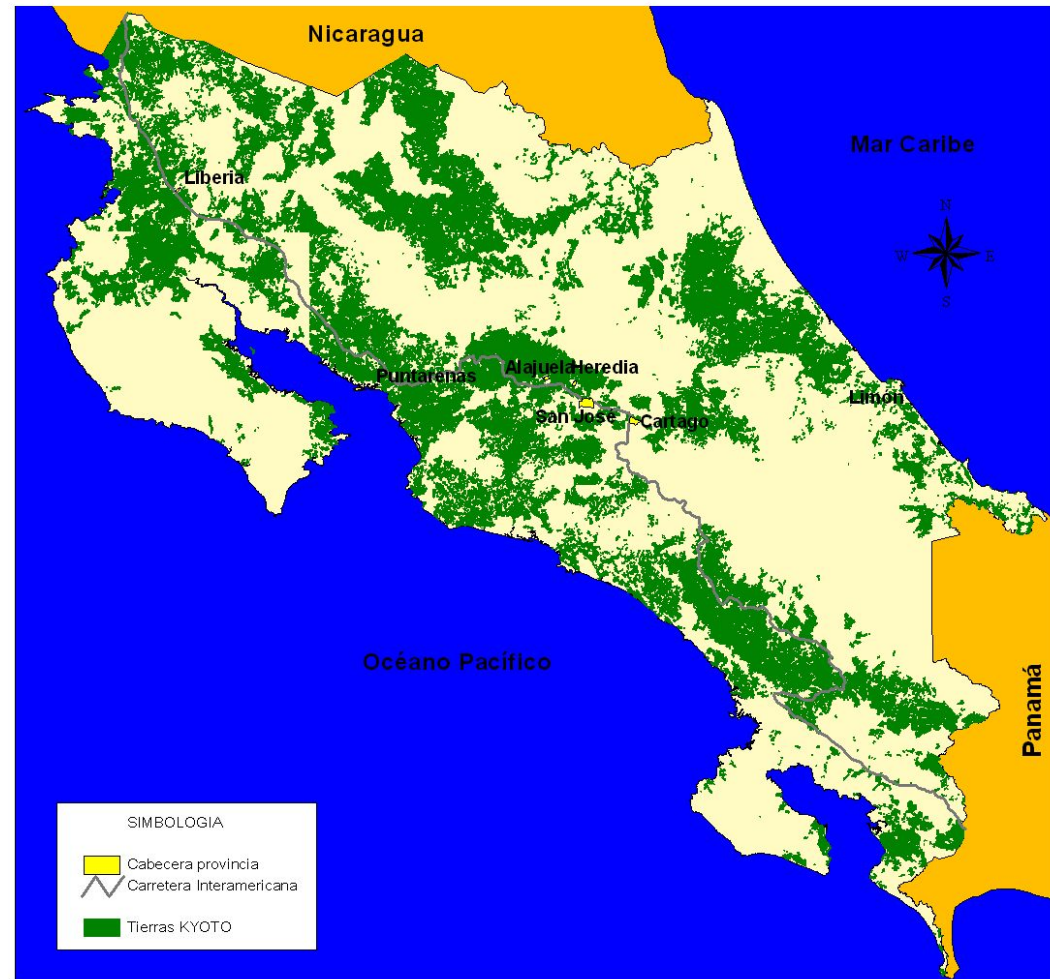


Elaborado en FONAFIFO.
A. Méndez, abril 2005



Lands with potential for
The development of CDM
Projects (Kyoto Lands)

Costa Rica.
Propuesta de Tierras KYOTO



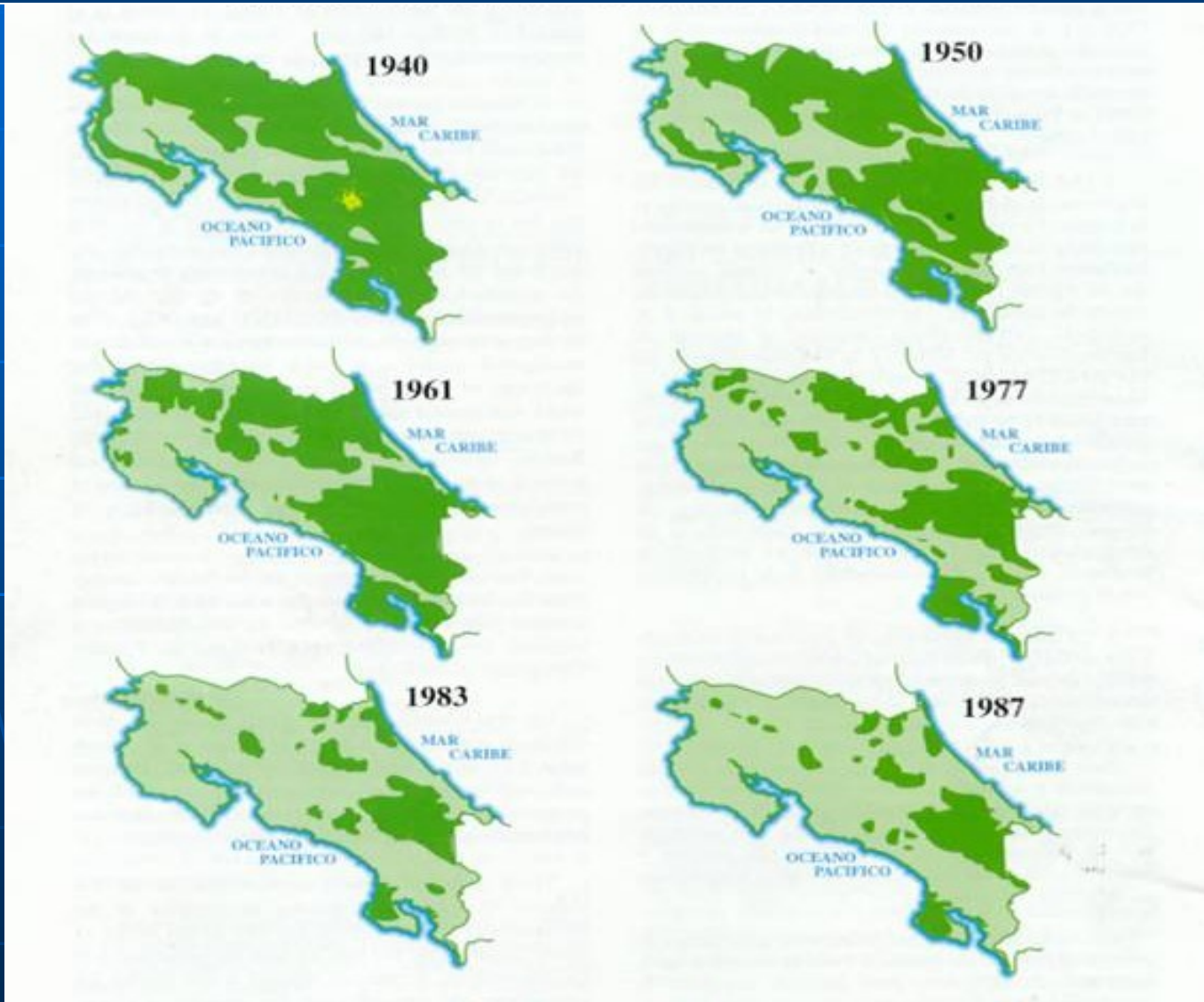
50 0 50 100 150 200 250 Kilometers

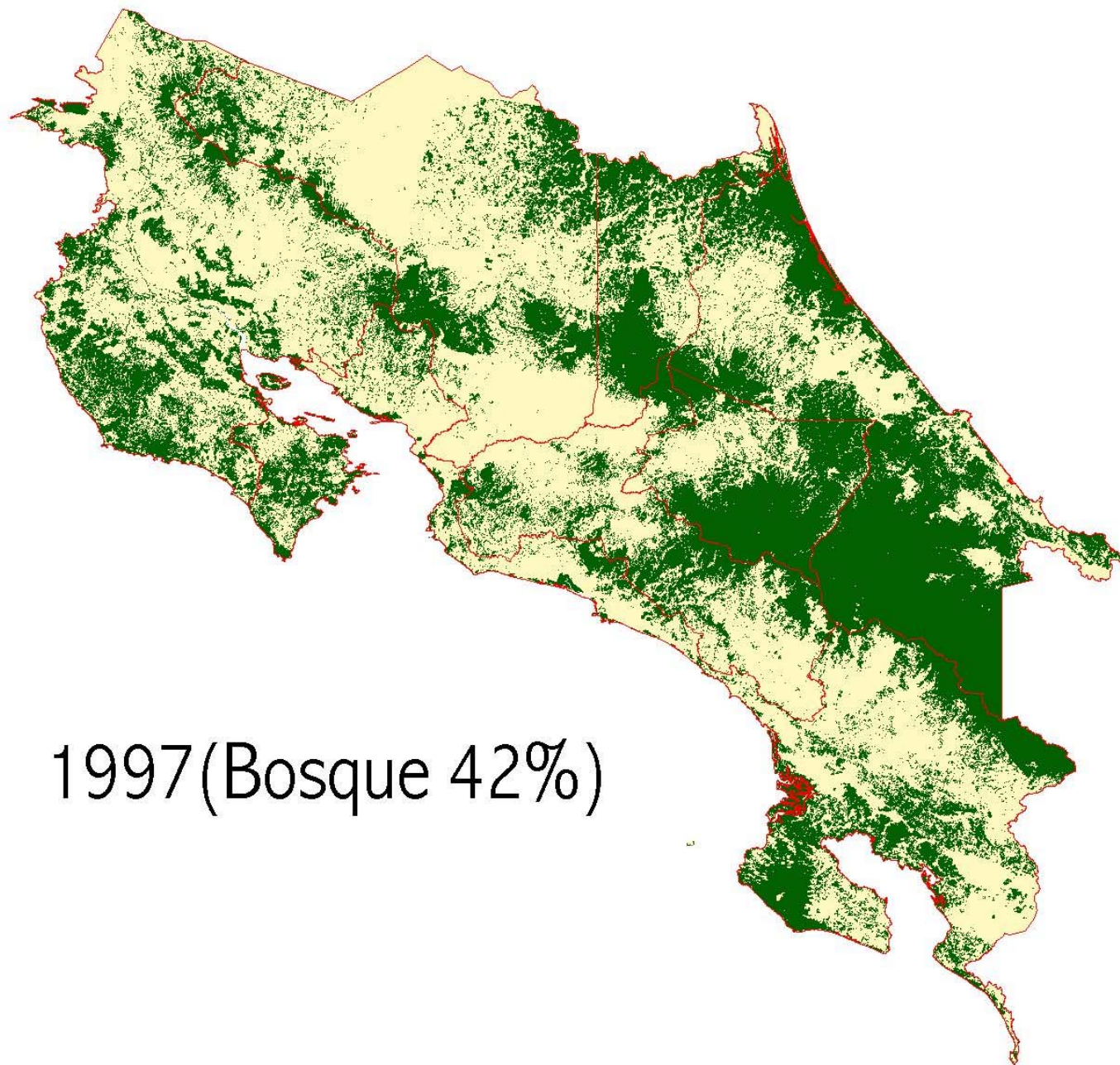


Elaborado en FONAFIFO.
A. Méndez, abril 2005



Evolution of forest cover 1940 - 1987





1997 (Bosque 42%)

Forest Cover 2000 45%

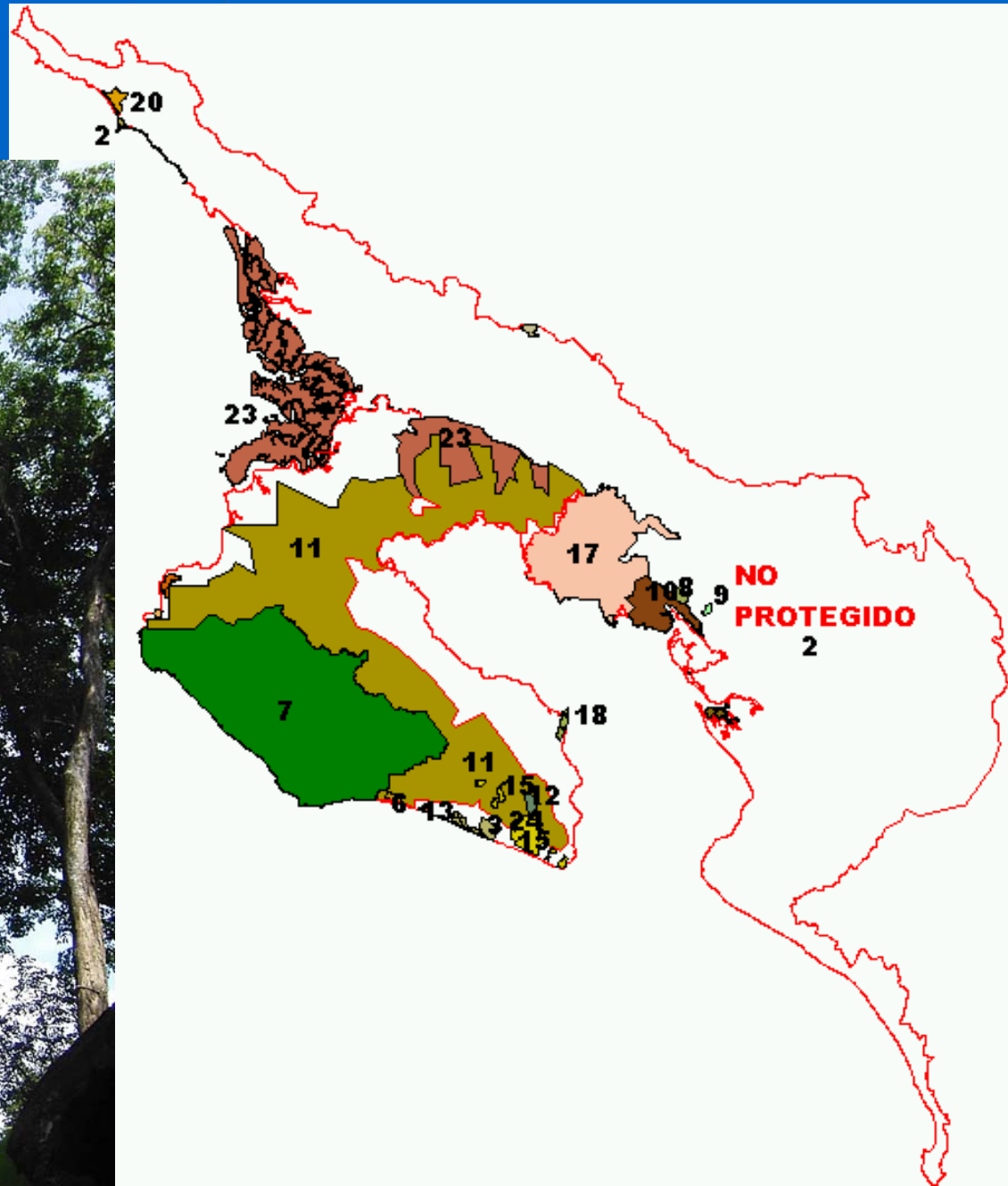


Costa Rica Forest Cover Change from 1997 to 2000

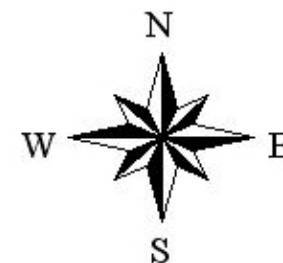
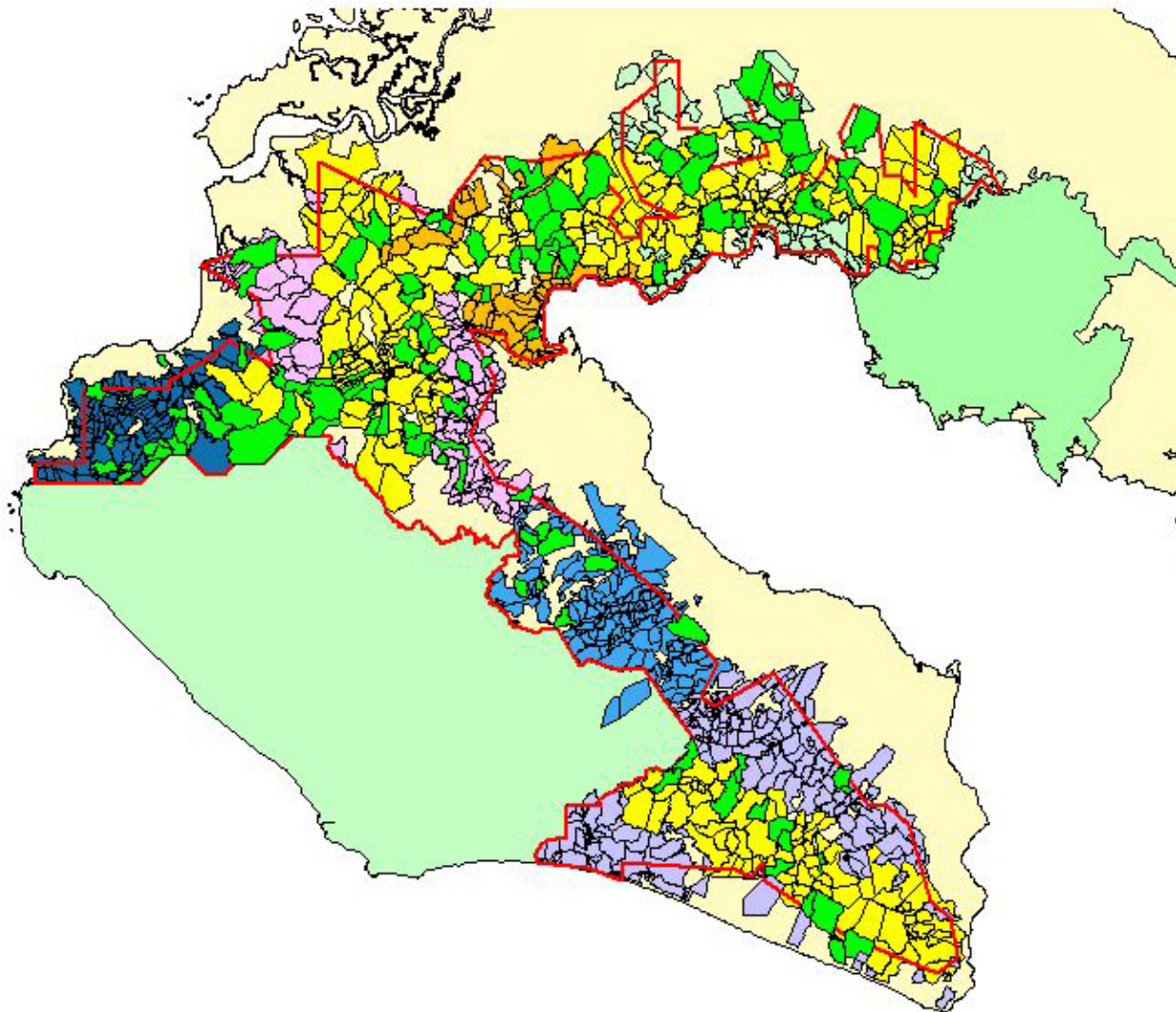
Legend

N





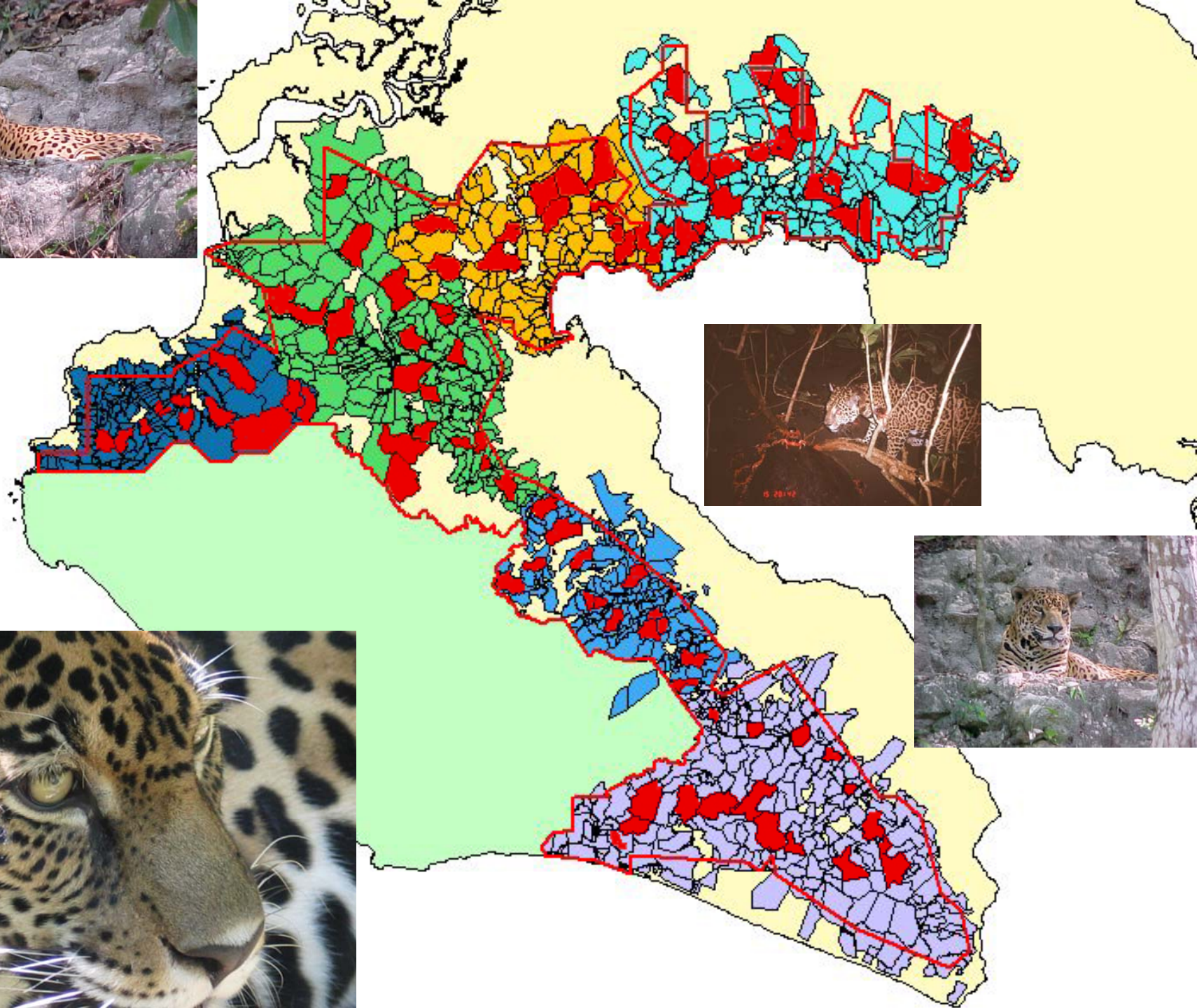
CONECTIVIDAD CON FINCAS PAGO SERVICIOS AMBIENTALES RESERVA FORESTAL GOLFO DULCE



- Fincas con psa_rfgd.shp
- Piedras_blancas_ls.shp
- Reserva_golfo_dulce_ls.shp
- Riotigre_riorincon_mod_ls.shp
- Rincon_rancho_quemado_mod_ls.shp
- Esquinas_bahia_chal_mod_ls.shp
- Drake_los_planes_mod_ls.shp
- Chocuaco_bahia_chal_mod_ls.shp
- Carate_rio_tigre_mod_ls.shp
- Corcovado_ls.shp
- Acosa_marco_ls.shp



PSA Reserva Indígena



Need for Scaling Up and Mainstreaming Environmental Services Payment Program in Costa Rica

The second generation of
Environmental Services Payment

The ESPP have resulted in significant local, national and global benefits including:

- (i) income generation to the rural poor
- (ii) improvement of watersheds
- (iii) contribution to carbon sequestration
- (iv) conservation of biodiversity
- (v) Other indirect benefits such as improved public health and infrastructure, increased demand for technical assistance for ESSP implementation

Key objectives - of the proposed project

- Fulfillment of the Millennium Development Goals (High level Political commitment)
- Increase the range of sources of funding for ESP activities aimed at local and global services (PARTNERSHIPS)
- Extend the scope of ESP activities to include degraded and fragile lands, water protection related forests and improve the efficiency of current activities
- Increase the contribution of ESP activities to poverty reduction
- Contribute to the international policy dialogue by promoting new financial mechanisms for sustainable development

- The project will support Costa Rican efforts to develop and implement a system of water charges, which is expected to become one of the major financing sources for the ESP.



- Use of carbon credits generated through the sequestration of carbon due to project-induced change in land use (an approach that has particular promise in financing reforestation in degraded areas)

The project will target ESP activities to areas of high density or incidence of poverty, and will study new ways to reduce poverty in rural areas



“If governments invest seriously in green data acquisition and Coordination, they will no longer be flying blind” The Economist

Criteria for Project Investments

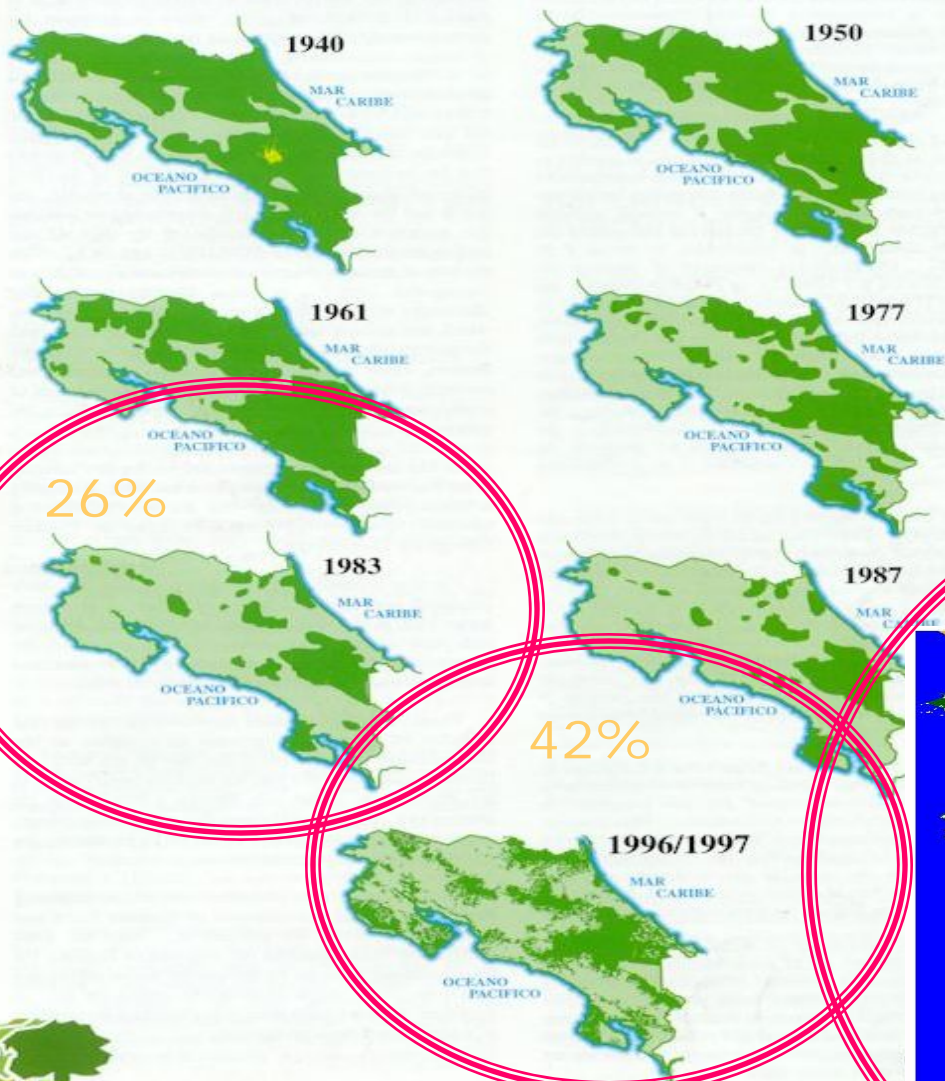
Costa Rica
Mapa Prioridades PSA Protección, 2005



Elaborado en FONAFIFO.
A. Méndez, abril 2005



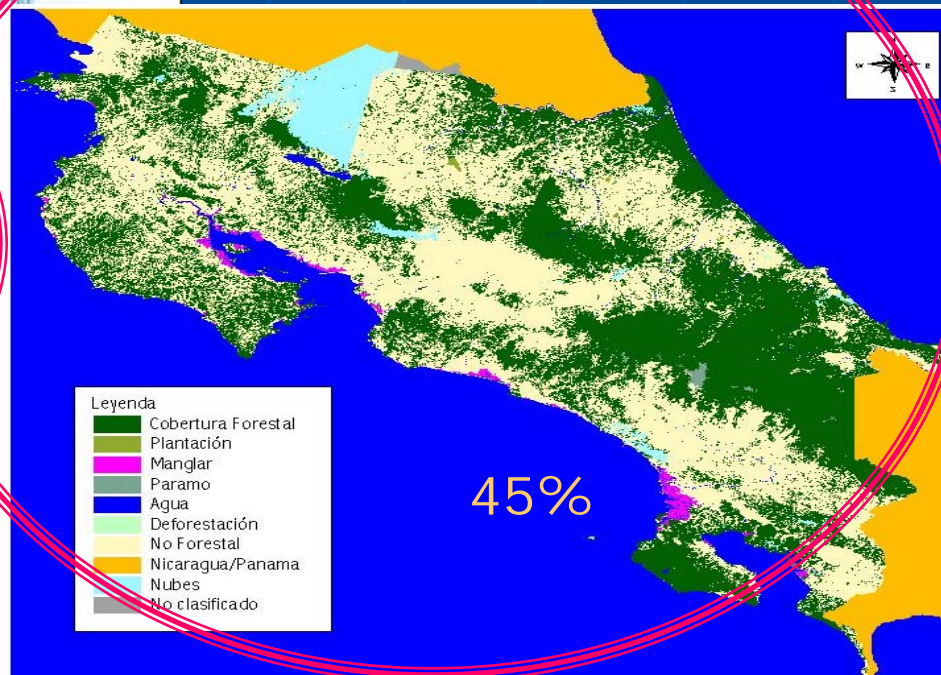
Cobertura Boscosa Densa (80-100% de cobertura del suelo) en Costa Rica en los años 1940, 1950, 1961, 1977, 1983, 1987, 1996/1997



26%

42%

Year 2000



- Leyenda
- Cobertura Forestal
 - Plantación
 - Manglar
 - Paramo
 - Agua
 - Deforestación
 - No Forestal
 - Nicaragua/Panama
 - Nubes
 - No clasificado



Fuente: FONAFIFO