

ESTRATEGIA NACIONAL DEL AMBIENTE

Gestión Ambiental para el Desarrollo Sostenible

2008 - 2012

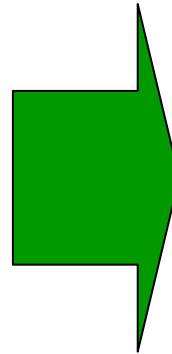


Estrategia de Reducción de Emisiones por Deforestación y Degradación del Bosque de Panamá (Estrategia de REDD • 2008-2012)



**Development of Country Plan of the Environmental Component:
Strategic Vision of Economical Development & Employment to 2009 through Strategy of
Conservation for Sustainable Development
(Strategic Objectives)**

- 1. Reduction of Poverty and better income distribution**
- 2. Economical and employment grow**
3. Citizen Security
4. Public finance Transparency
5. Strengthen Democracy & **Community Participation**
- 6. Insertion of Panama inside the Global World**

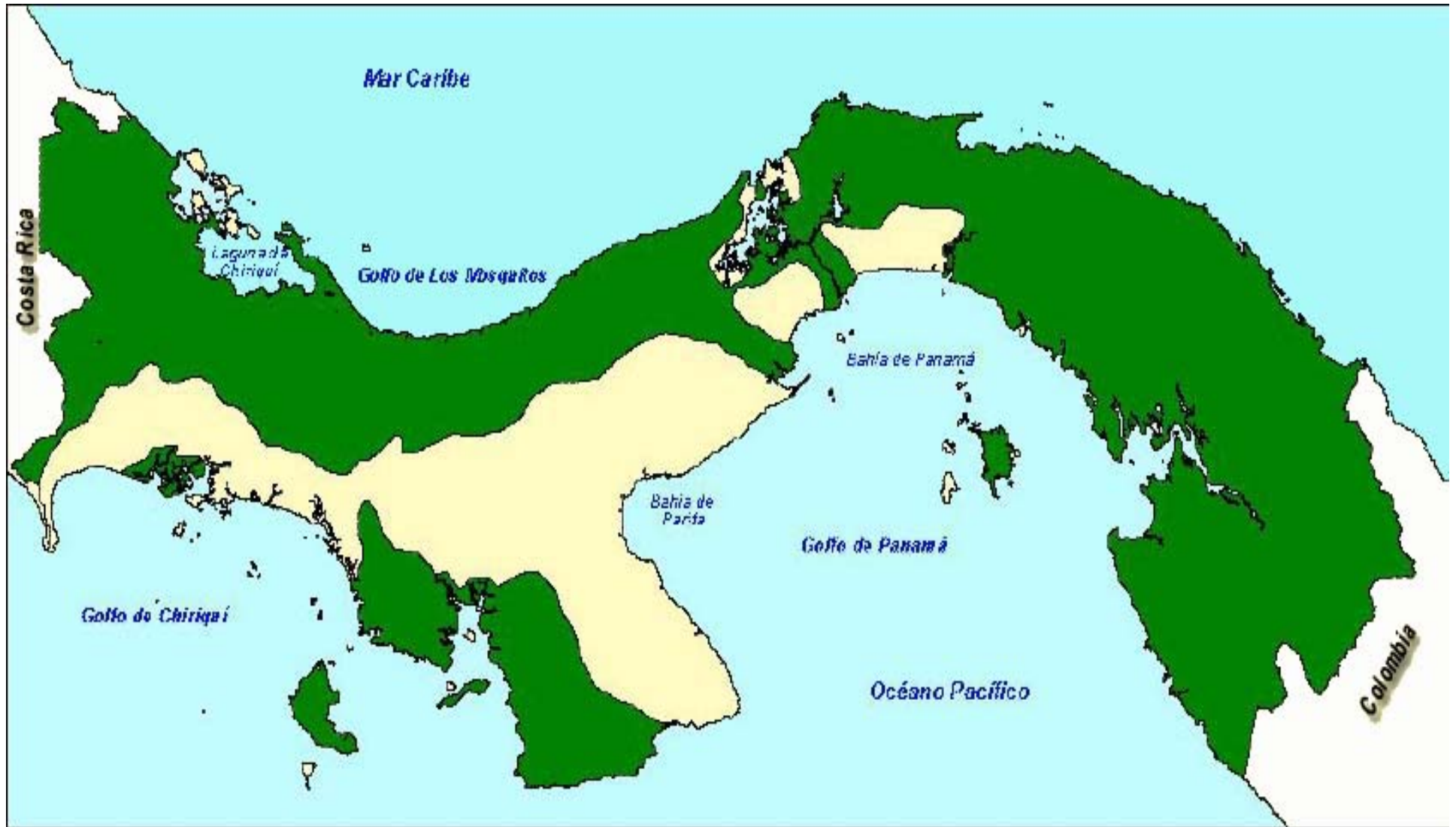


- 1. Strengthen ANAM role as Environmental Authority**
- 2. Promote a shared model of environmental management**
- 3. Develop competitive advantages in environmental management**
- 4. Protect, recover, restore and improve our ecosystem for sustainable development contribution. (REDD)**

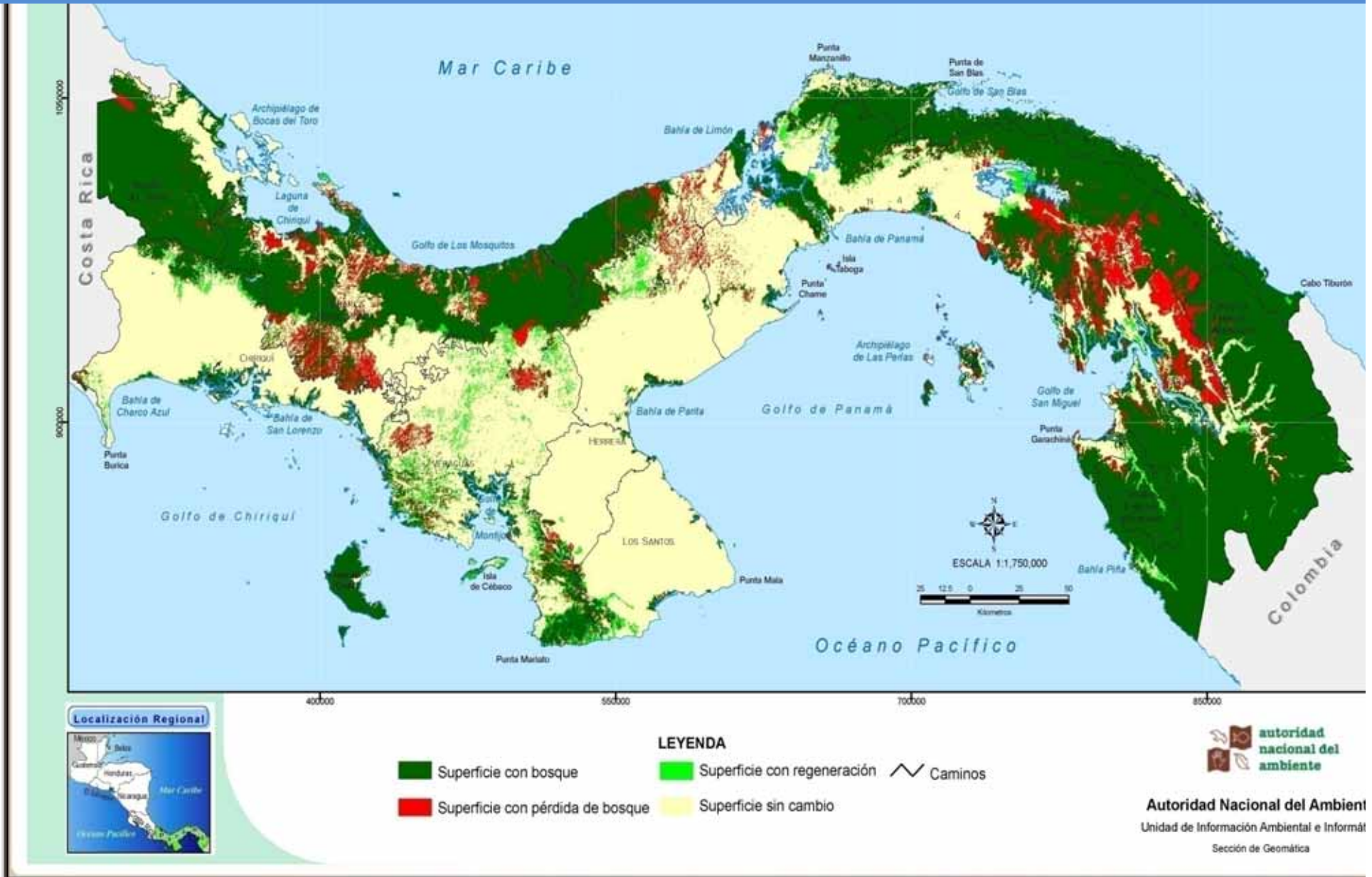
National Environmental Strategy: Environmental Management for sustainable development

Desarrollo Sostenible	<i>Lines of Action for ANAM</i>	<i>Strategic Objective of ANAM</i>
Institucional	Strengthen ANAM capacity to perform its duties as an environmental authority.	<ol style="list-style-type: none"> 1. Consolidar el marco jurídico y de políticas públicas ambientales 2. Fortalecer los servicios que presta la ANAM a la ciudadanía para la aplicación de los instrumentos de gestión ambiental 3. Mejorar la Gestión Institucional de la ANAM
Socio / Cultural	Fomentar el desarrollo de una cultura ambiental, que haga de la gestión del conocimiento, de los saberes populares y de la promoción de los elementos ambientales de nuestra identidad factores decisivos para comprender y ejercer los derechos y deberes de todos los grupos humanos de Panamá con respecto a los ecosistemas y recursos naturales de los que dependen la vida y el desarrollo de nuestra sociedad.	<ol style="list-style-type: none"> 1. Fomentar el desarrollo de una Cultura Ambiental para la Sostenibilidad en el país 2. Aplicar mecanismo para la adaptación y mitigación del cambio climático 3. Promover instrumentos y estrategias económicas en la gestión ambiental
Económico	To Work very closely in coordinated collaboration with the State, private sector and civil society to promote the environmental advantages capacity of the country..	<ol style="list-style-type: none"> 1. Fortalecer la función de liderazgo de la ANAM 2. Elevar la Capacidad Técnico-Científica de la ANAM y sus asociados (SIA, gobiernos locales, ONG's, sociedad civil, empresas privada)
Ambiental	To protect, recover, restore and improve los ecosistemas para contribuir a la creación de empleos, el bienestar de la población y al desarrollo sostenible.	<ol style="list-style-type: none"> 1. Conservación y restauración de las cuencas hidrográficas y áreas protegidas desde un enfoque ecosistémico y participativo 2. Conservación y uso sostenible de la Biodiversidad

Mapa de Cobertura Boscosa, 1947

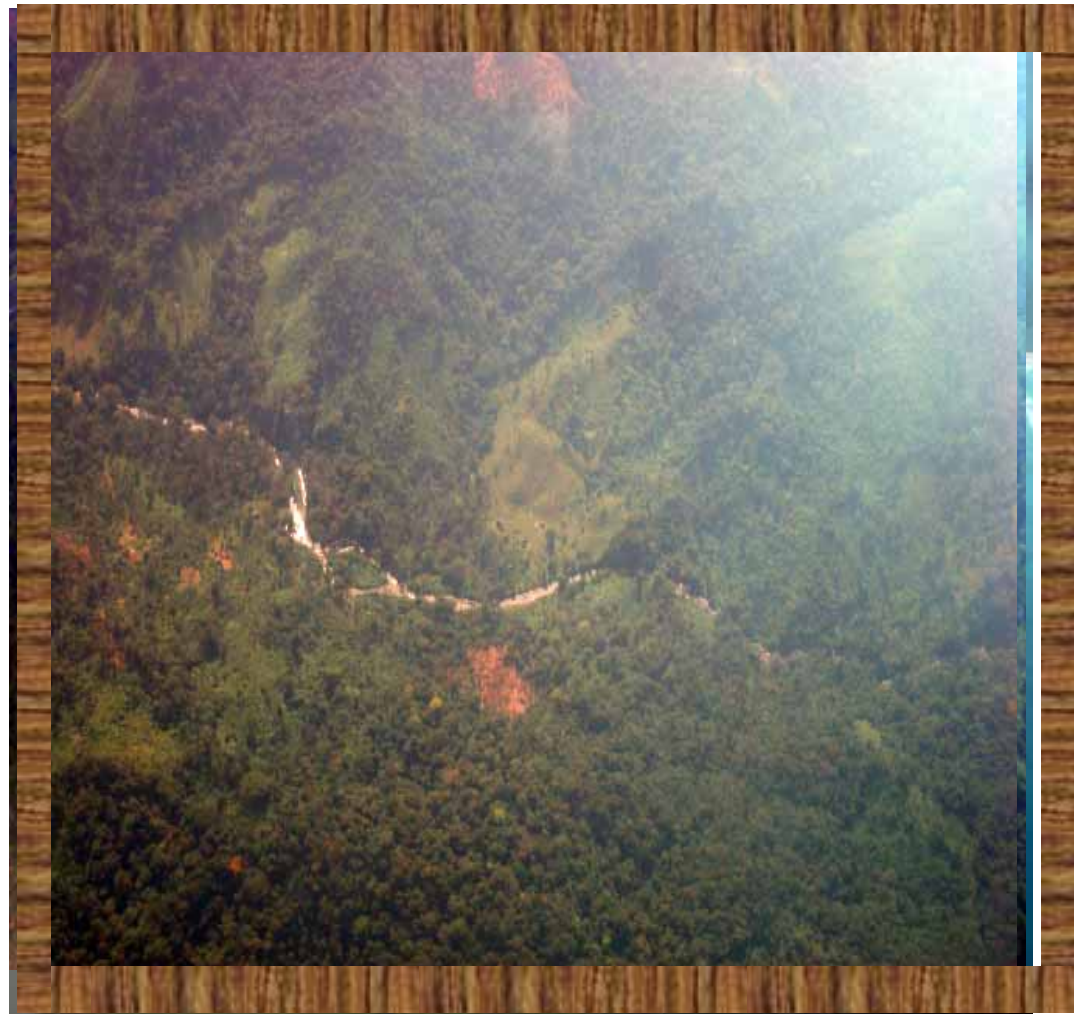


Cambio de la Cobertura Boscosa Año 1990-2000



DEFORESTATION DATA

- Forest area in 1947 = 70%.
- 1,591,303 Ha deforested from 1947 to 1992 (35,362 Ha/yr).
- Forest area in 1992 = 49.3%
- 377,264 Ha deforested from 1992 to 2000 (47,158 Ha/yr)
- Forest area in 2000 = 45%
- Forest area in 2008 = ?
- Our goal from 2005 for 2010 (ENA) is to reduce deforestation rate close to 40 or 42,000 Ha/year



Environmental Horizon of Panama Strategy

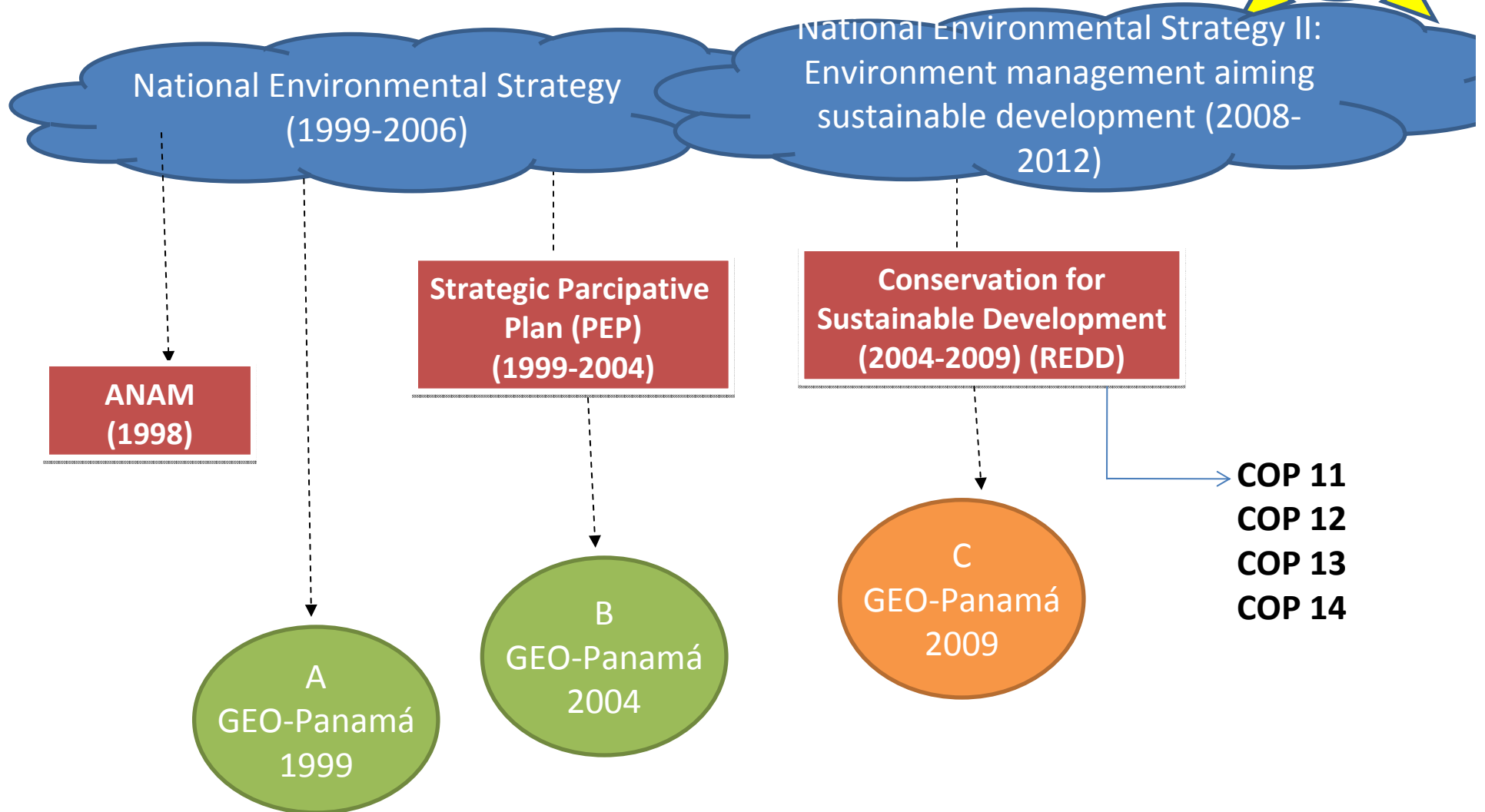


Tabla 1

SINTESIS DEL PRIMER INVENTARIO NACIONAL DE GASES DE EFECTO INVERNADERO PARA 1994 (Gg)

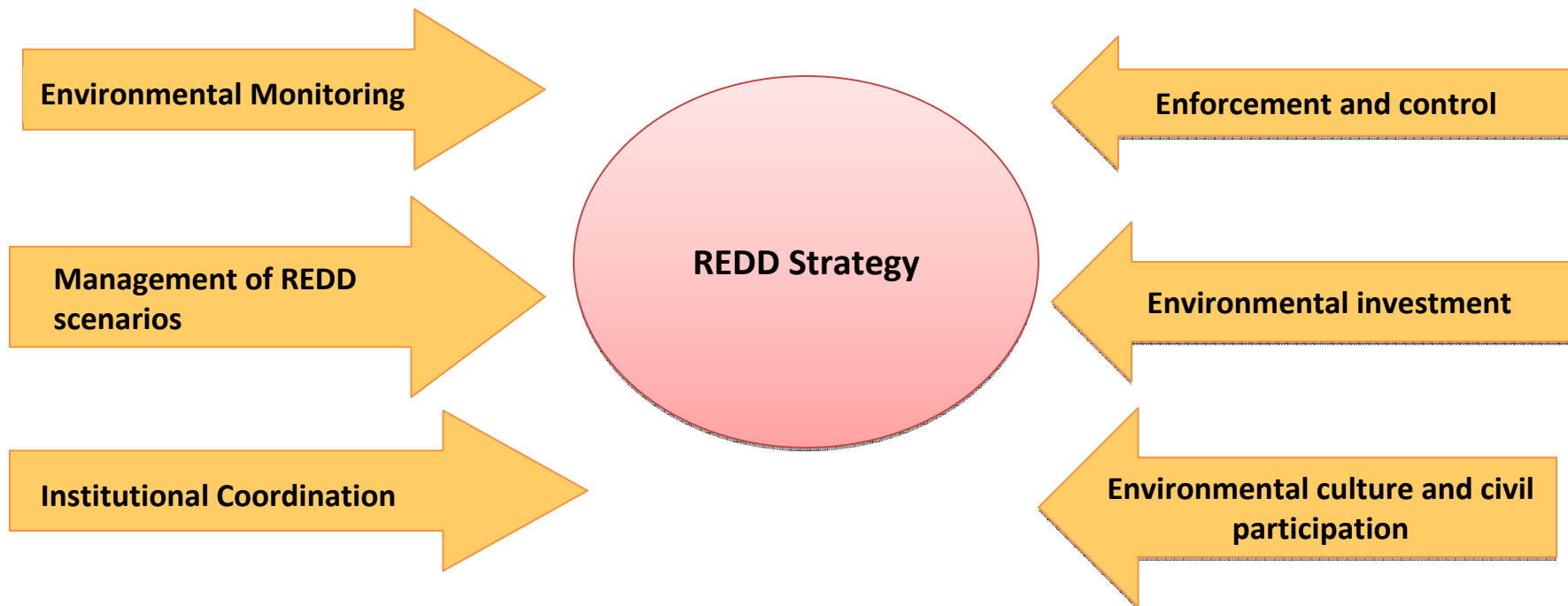
Categorías de Fuentes y sumideros de GEI	CO₂ Emisiones	CO₂ Absorciones	CH₄	N₂O	NO_x	CO	CVDM
TOTAL - PINGEI	15,188.56	0	230.37	9.42	16.48	544.74	5.58
1 Energía	5,873.12		0.05		0.07	0.11	3.02
2 Procesos Industriales	412.94				0.01	0.31	1.95
3 Utilización de Disolventes y Otros Productos							0.61
4 Agricultura			94.09	8.87	1.57	22.01	
5 CUTS	8,902.5	0	59.69	0.41	14.83	522.31	
6 Desperdicios			76.54	0.14			
PARTIDAS INFORMATIVAS	3,497.19						
Búnkeres Internacionales	1,014.04						
a- Aviación	389.33						
b- Marino	624.71						
Emisiones de CO ₂ de Biomasa	1,155.38						

Estimado de TCO₂ CUTS al 2005: **11,572,600**

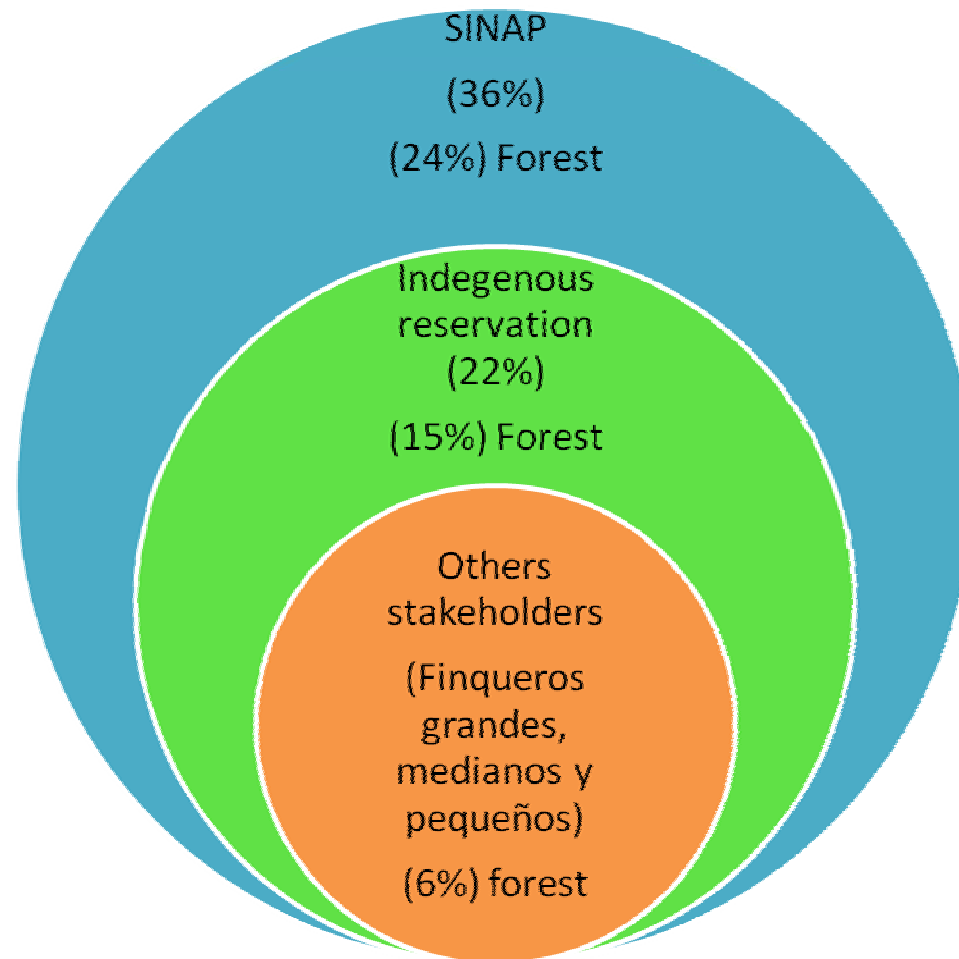
Meta 40% de CUTS emisiones 1994 para el 2010-2013: **4,629,040**

Strategy for implementing REDD

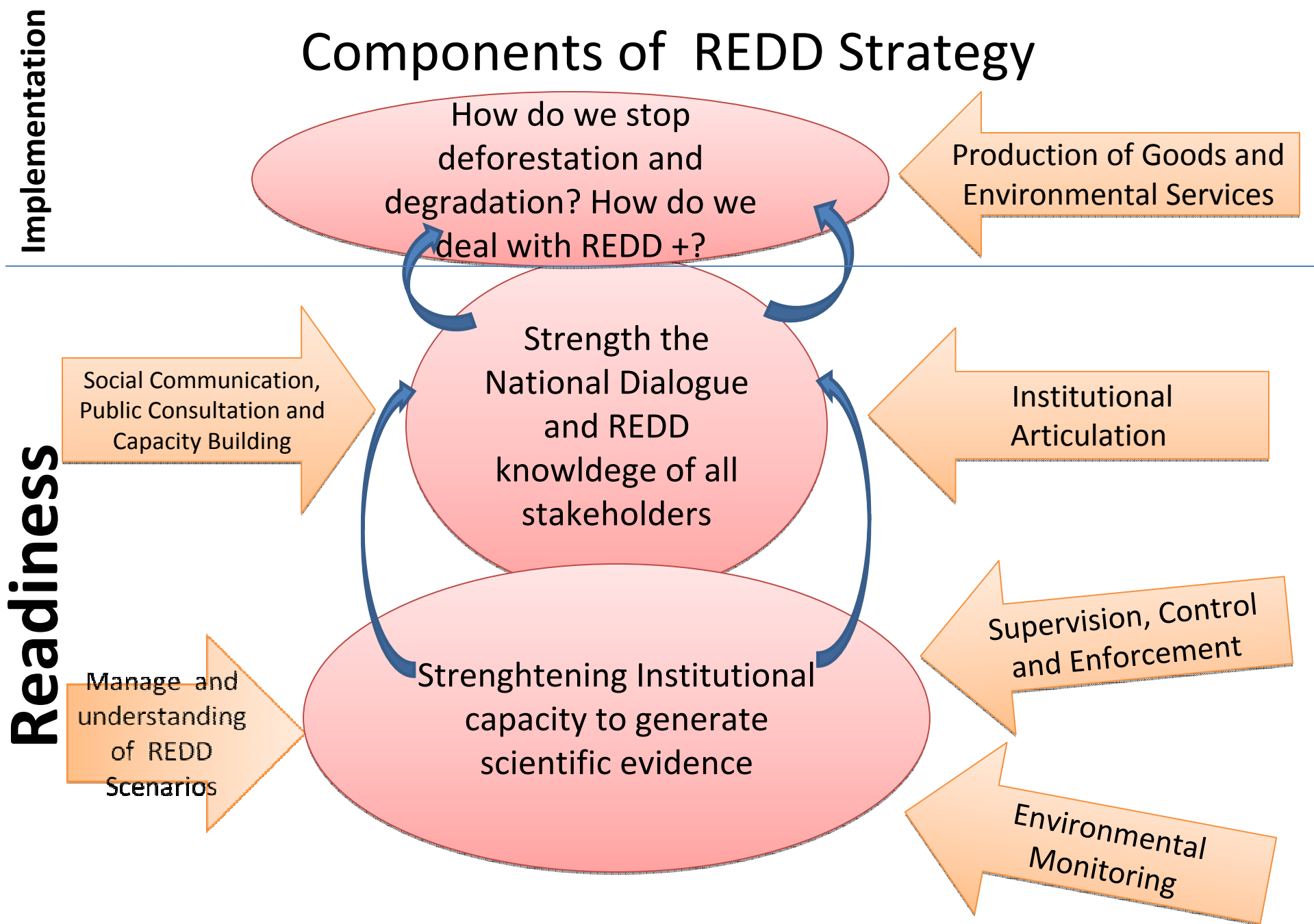
- National Environmental Strategy (Renewed)
- Guidelines from state policy 2004-2009
- Public Environmental Policies
- Operational and Thematic Strategies
- Environmental Management Model Based on Watershed
- Sustainable Development Plans/ Provinces (CONADES)
- Portfolio of ANAM's investment projects (> 200 projects at moment)



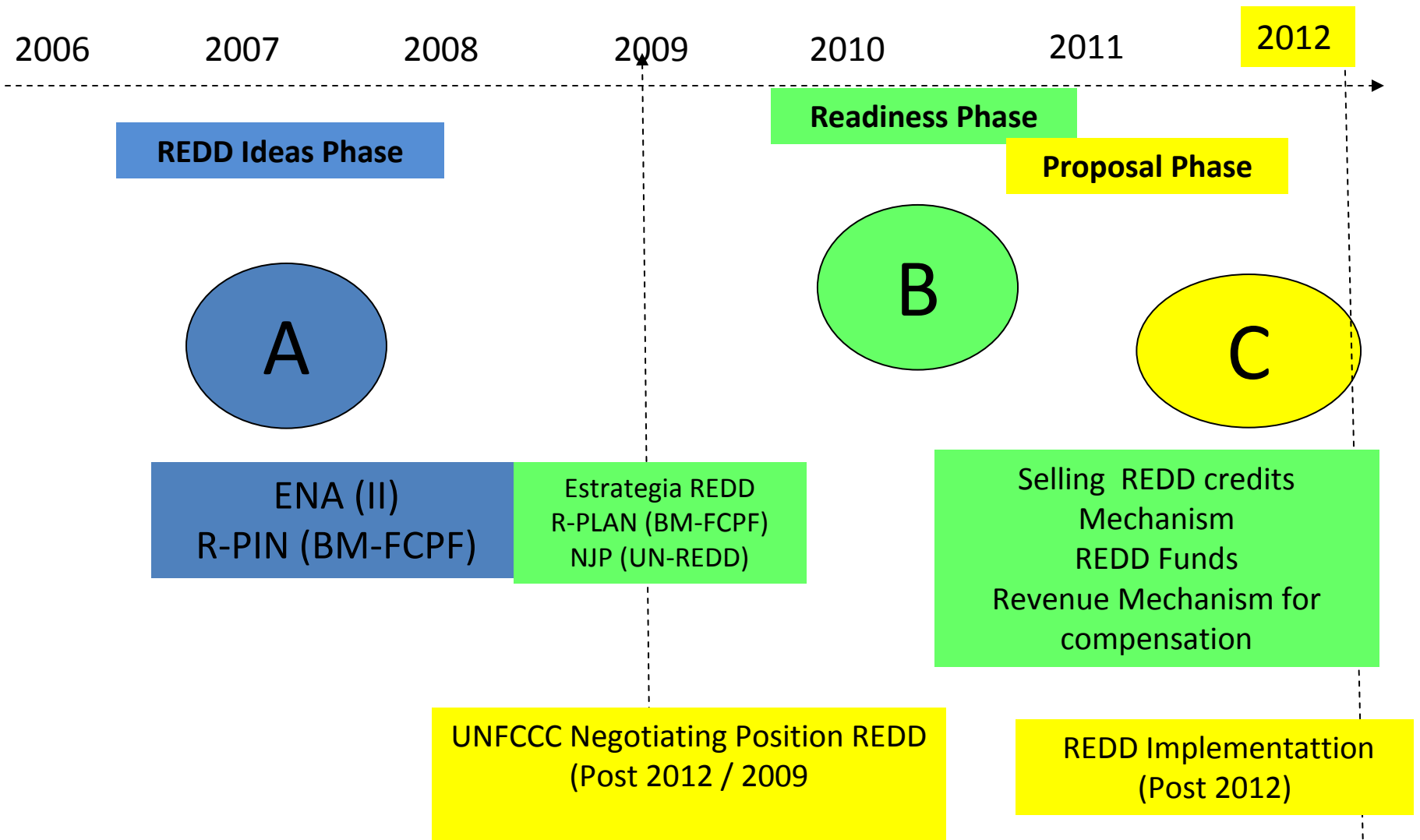
National Territory Distribution as Forest Conservation for REDD (Natural Forest 45% national territory 2000).



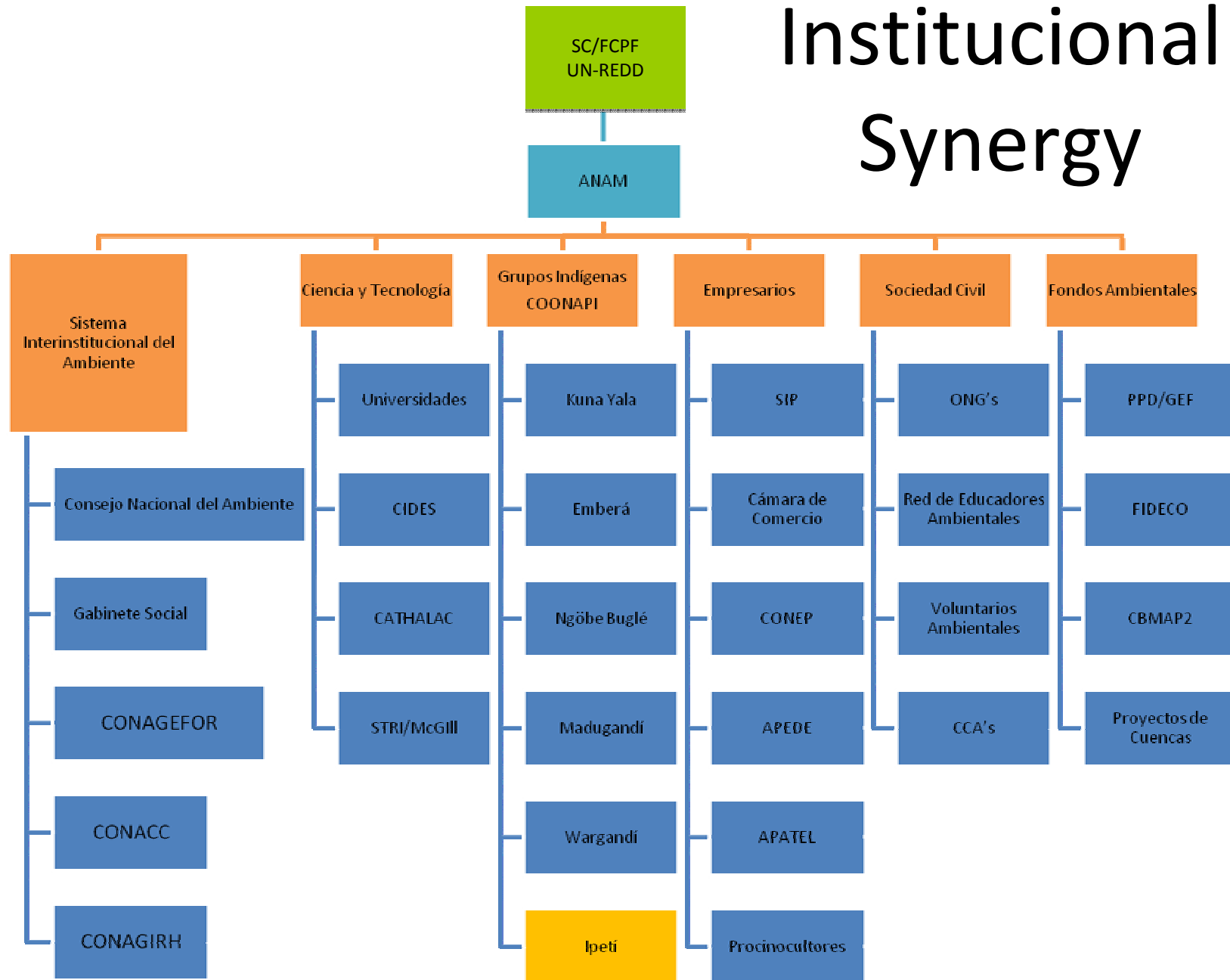
Components of REDD Strategy



REDD PROCESS



Institucional Synergy



NJP Formulation - continued

- **Joint Mission:** Gov. of Panama (ANAM) led a joint REDD mission: UN (FAO, UNDP, UNEP), World Bank. Nov. 2008, Jan. 2009, March 2009. Jan and March with NGOs.
- **REDD Plan Roadmap:** Comes out of National Environmental Strategy renewed 2008-2012 nationwide consulted. With 2020 vision.
- **Stakeholder Consultations:** Met in different cities and towns of Panama with stakeholders from public and private sectors, civil society. ANAM continuous consultation > 90 workshops since 2008 up to now. 14 with IP
- **Development Partners:**, **INTERNATIONAL:** WB, Cfrn, UN, CATIE, LAVAL, GLADCC. **NATIONAL:** STRI, Mc Guill, CATHALAC, COONAPI, SOMASPA, NGOs IUCN group.
- **Coordination:** Coordination with the FCPF (R-PIN accepted),

NJP Results Outcome

Objective: Support Government of Panama to implement part of its readiness plan strategy presented before FCPF.

Outcomes:

Outcome 1: Institutional capacity established for the coordination and efficient execution of Panama national REDD strategy

- 1. Consultations and Workshops: general model proposed. (UNEP-CIDES-ANAM)*
- 2. Establish a baseline of information between actors and interest groups in the country, with regard to the use of, and the need to conserve, the forests and their associated resources. (UNEP-CIDES-ANAM)*
- 3. Environmental Education Workshop geared to Citizen Participation. (UNEP-CIDES-ANAM)*
- 4. Train a team of facilitators by experts associated with ANAM's Environmental Monitoring Unit and Officers. Hire a team of 17 facilitators. (UNEP-CIDES-ANAM)*
- 5. Define the Training Plan, schedule, role of CEDESAM, CIDES, and topics by module (UNEP-CIDES-ANAM).*

NJP Results Outcome

Outcomes:

Outcome 2: Technical capacity to monitor, measure, report and verify the reduction of emissions from the deforestation and forest degradation

1. National forest inventory and network of ecophysiological permanent sampling plots (Eco-PSP) (FAO-CATHALAC-ANAM)
2. Forest land monitoring system (FAO-CATHALAC)
3. Reference Emissions Level scenarios (FAO-CATHALAC)
4. Inventory system for greenhouse gases (FAO-UNDP-UNEP-CATHALAC-ANAM)

REDD STRATEGY BUDGET

Componente	Total	FCPF	UN-REDD	ANAM-CBMAP II
Total	15,680,000	8,580,000	6,100,000	1,000,000
Articulación Institucional	500,000	500,000		
Consulta Pública, Capacitación y Comunicación Social	2,500,000	1,680,000	820,000	
Supervisión, Control y Fiscalización	1,000,000	1,000,000		
Producción de Bienes y Servicios Ambientales	500,000	500,000		
Monitorio Socioeconómico	500,000	500,000		
Monitoreo Ambiental				
Satelital	2,480,000		2,080,000	400,000
Forestal-Terrestre y Biológico	5,900,000	3.900,000	1,400,000	600,000
Inventario Forestal	1,000,000		1,000,000	
Construcción de Línea Base de REDD	300,000		300,000	
Gastos Administrativos	1,000,000	500,000	500,000	

NJP Budget Allocation (USD)

Outcome 1	FAO	UNDP	UNEP	Total
<i>1. Consultations and Workshops: general model proposed.</i>			100,000	100,000
<i>2. Establish a baseline of information between sectors and interest groups in the country, with regard to the use of,</i>			50,000	50,000
<i>3. Environmental Education Workshop geared to Citizen Participation</i>			350,000	350,000
<i>4. Hire a team of 17 facilitators</i>			70,000	70,000
<i>5. Train a team of facilitators by experts associated with ANAM's Environmental Monitoring Unit.</i>			70,000	70,000
<i>6. Interinstitutional Environmental System, & ANAM's Officer,</i>			110,000	110,000
<i>7. The "social fabric" or networks of social organization to support the environmental management of the country</i>			70,000	70,000
Sub Total			820,000	820,000

NJP Budget Allocation (USD)

Outcome 2	FAO	UNDP	UNEP	Total
1 National forest inventory and network of ecophysiological permanent sampling plots (Eco-PSP)	1,400,000			1,400,000
2. Forest land monitoring system	1,400,000			1,400,000
3. Reference Emissions Level scenarios	300,000			300,000
4. Inventory system for greenhouse gases	1,000,000	380,000		1,380,000
SubTotal	4,100,000	380,000		4,480,000
Total Outcome 1 and 2				5,300,000

Tropical Carbon Stock Monitoring System (TROPICARMS) v 2.0

What? How?

- Comprehensive system for monitoring tropical C stocks
- Estimates both above- and below-ground C stocks, based on CATHALAC's variable-scale C stock model
- Integrates both field and satellite measurements
- Alert system for adaptive mgt. / preventive action



www.cathalac.org



Tropical Carbon Stock Monitoring System (TROPICARMS) v 2.0

Addresses the following:

- **What** do I have?
- **How** is what I have changing (increasing / decreasing / static)?
- **What** will I have in **n** period of time *if* I do nothing?
- **What** will I have *if* I do **x**?



Tropical Carbon Stock Monitoring System (TROPICARMS) v 2.0

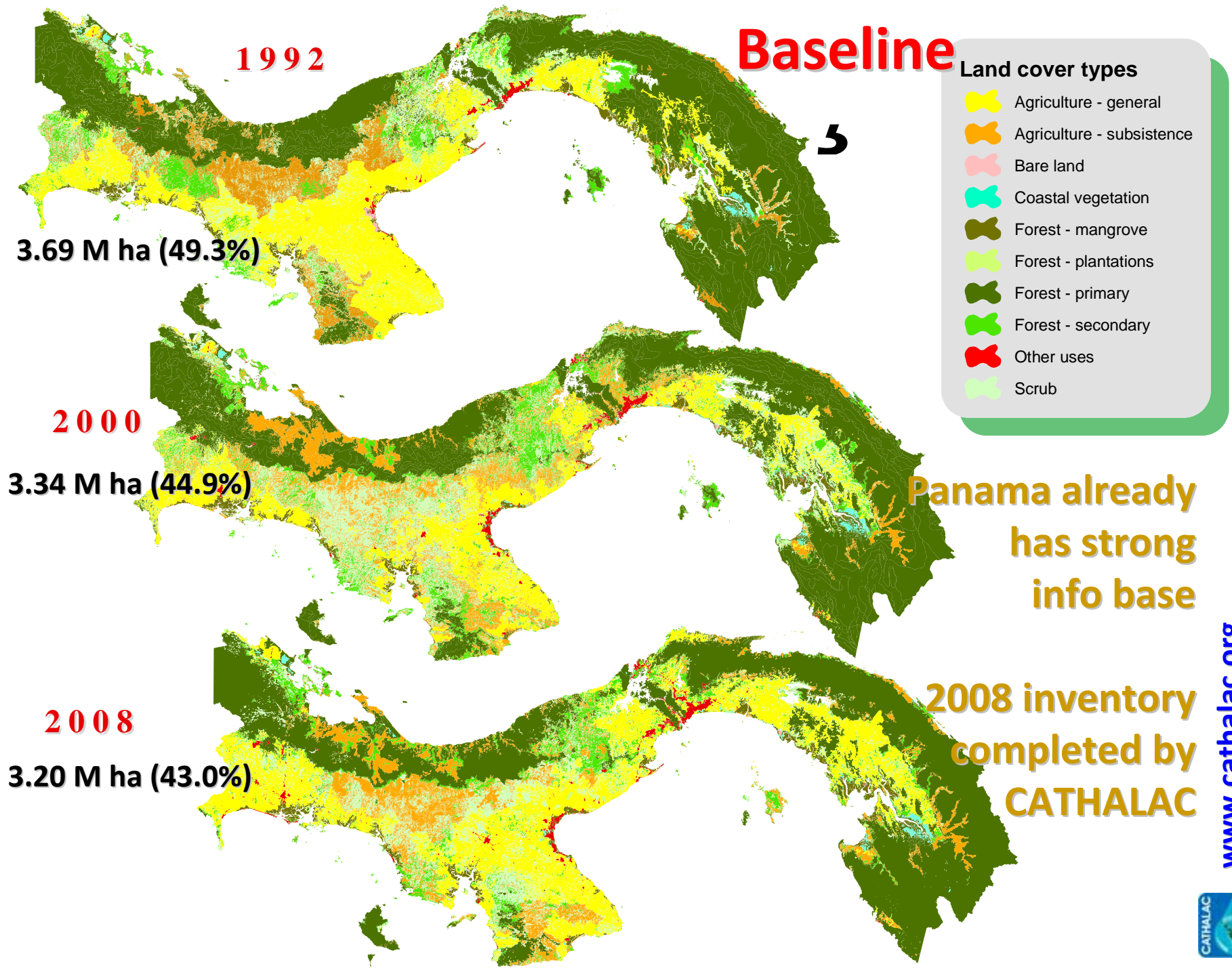
Can answer the following questions:

- How much carbon does my *property* / *protected area* / *watershed* / *country* / *region* contain?
- How much carbon will my land have after 10 years of **reforestation**?
- How much carbon will **x** parcel lose if it is converted into a low-density housing development?
- How much carbon was lost in **x** reserve due to the *tropical storm* / *wild fire* / *landslide* which occurred?
- How much carbon is stored *underground* in **x** parcel?



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Participatory Approach for Establishing a Base Line Scenario for Carbon Stocks with Local Experts

Developed by:

University of Mc Gill - Smithsonian Tropical Research Institute (STRI)

In cooperation with ANAM

