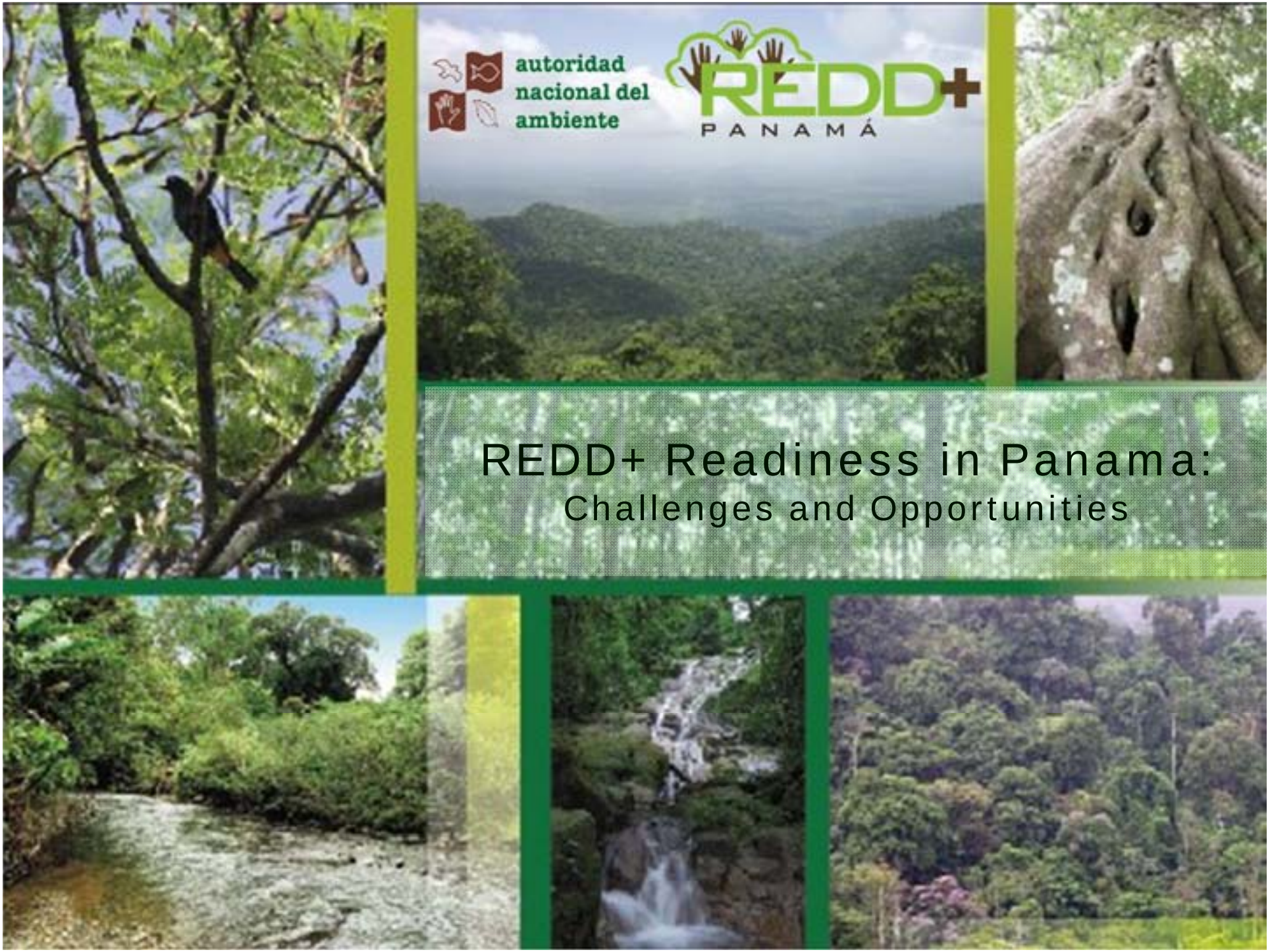
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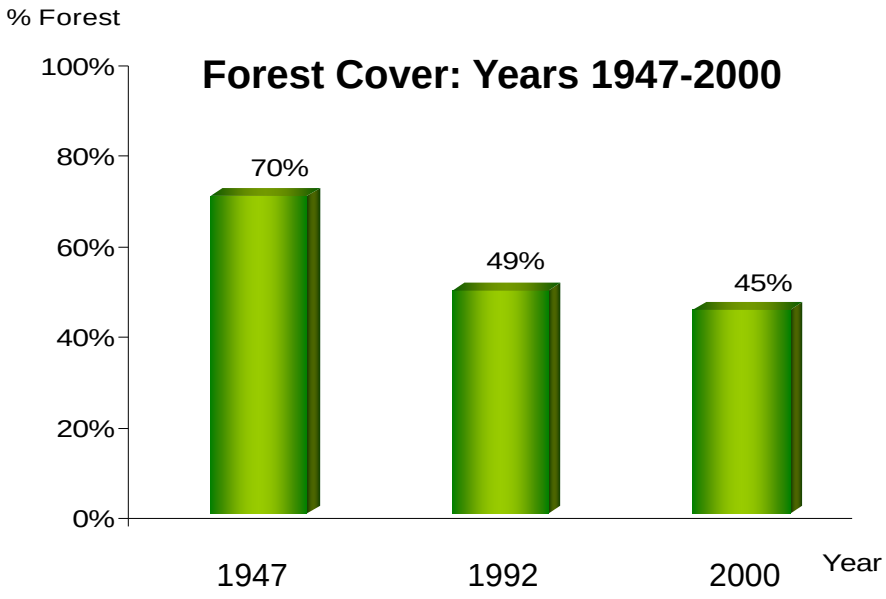
PANAMÁ
REDD+ Readiness in Panama:
Challenges and Opportunities

Deforestation in Panama

- From 1947 to 1992:1,591,303 ha deforested (**35,362 ha/year**).
- From 1992 to 2000: 377,264 ha of forest were deforested.
- The rate of deforestation increased to **47,158 ha/year**.

Land Use and Land Cover Change 1992-2000



Forest Cover Map

Deforestation in Panama

Drivers of deforestation and forest degradation:

Social	Access to education, access to technology, degree of organization, communication facility and access roads, soil productive capacity (ecological-habitat) and production systems.
Economic	Distribution of wealth, economic development models, technology, production systems, markets, types of incentives.
Political	Public policy, lack of institutional synergy, planning models (short-term, unsustainable), lack of incentives, low institutional capacity.
Cultural	Peasant settler group, indigenous, timber, livestock. Level of organization, beliefs, customs and traditions.

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Purpose of REDD+ Panama

- Promote and strengthen national capacities that lead to sustainable forest management, conservation and restoration of natural forests, contributing to *reducing emissions from deforestation and forest degradation*, in benefit of rural communities.

- Strengthen the environmental management model in the country with the consensus of all sectors of society to create a culture, in harmony with the REDD+ strategy, that allows a real option to the communities of usufruct of nature, pointing sustainable development.

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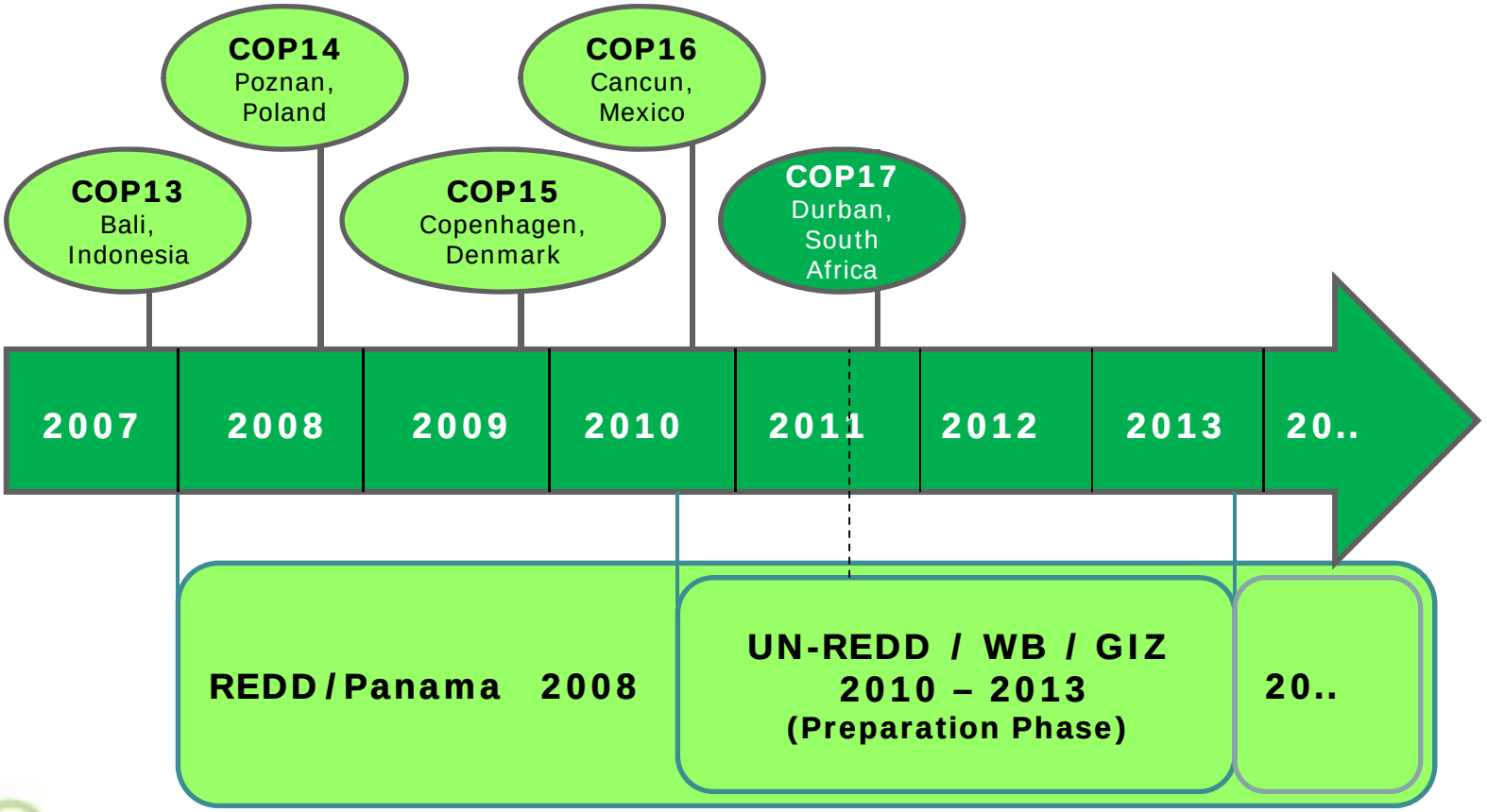
REDD+ Strategic Horizon



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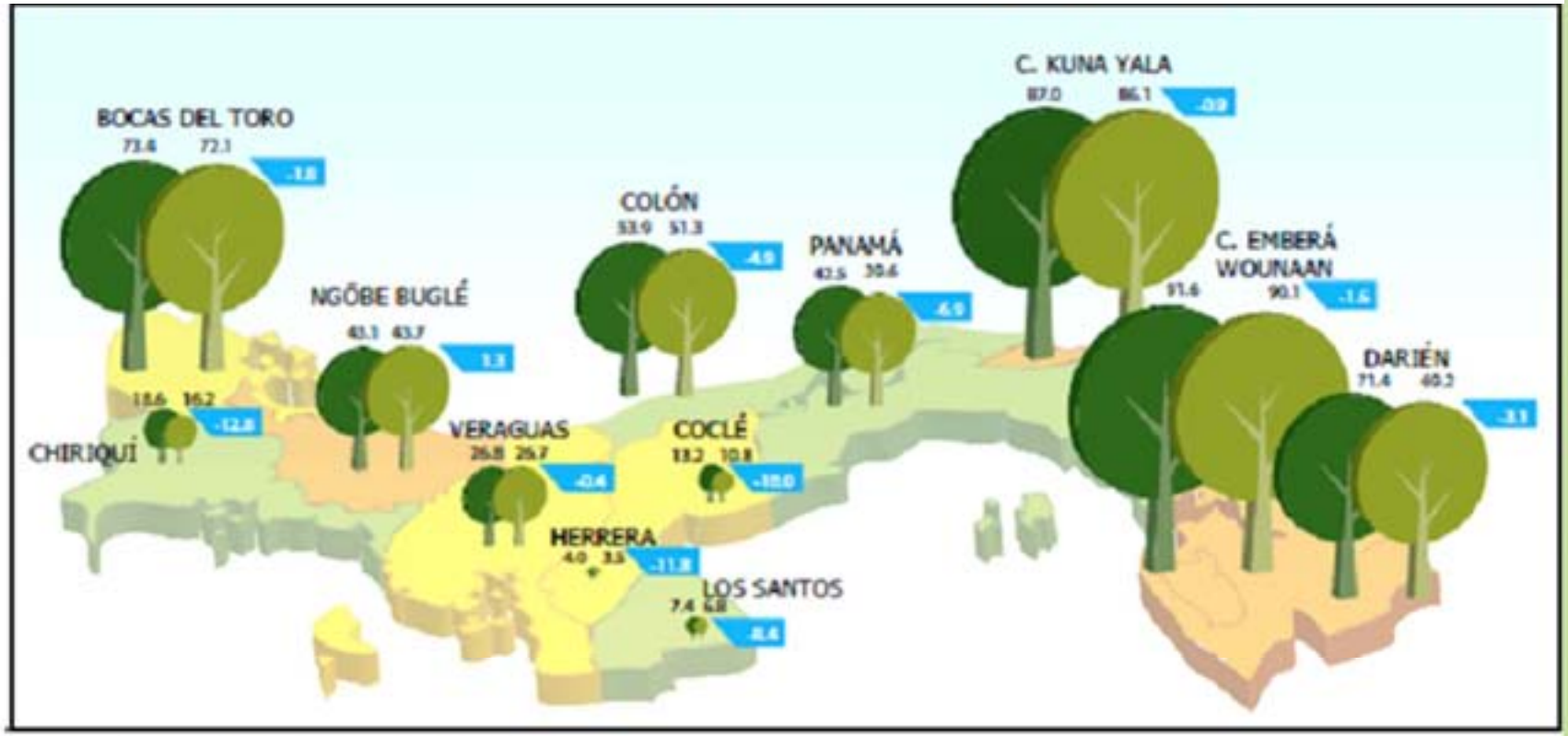
Land Covered by Forest by Provinces and Indigenous Regions



Source: UNDP, 2010

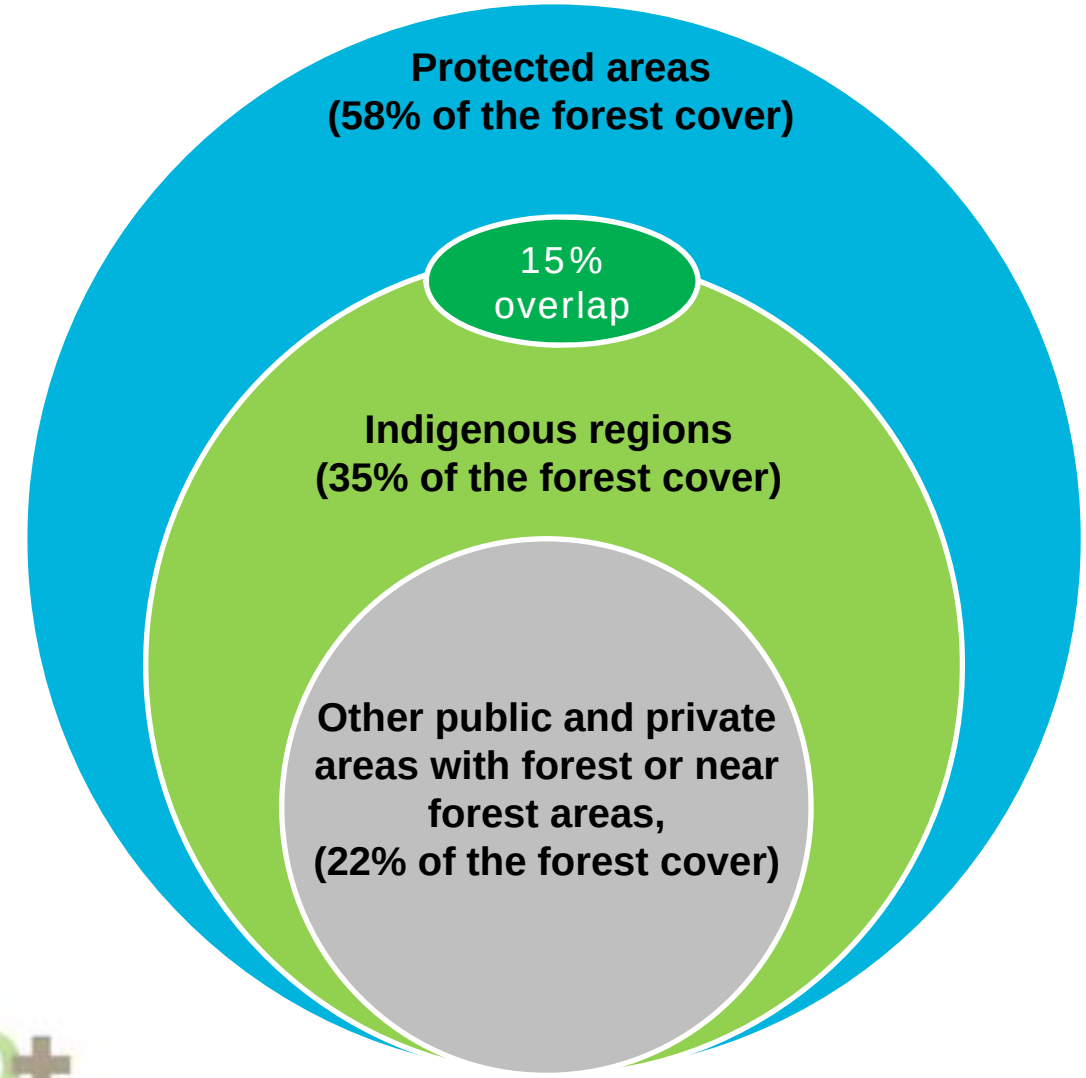
Land covered by forest (%) 2000

Land covered by forest (%) 2008

Growth

In regions such as Bocas del Toro, Colon and Darien, where still are natural forests, is proposed the management and conservation. On the Pacific sector is proposed to develop reforestation, afforestation and community forestry.

Potential Areas of Impact



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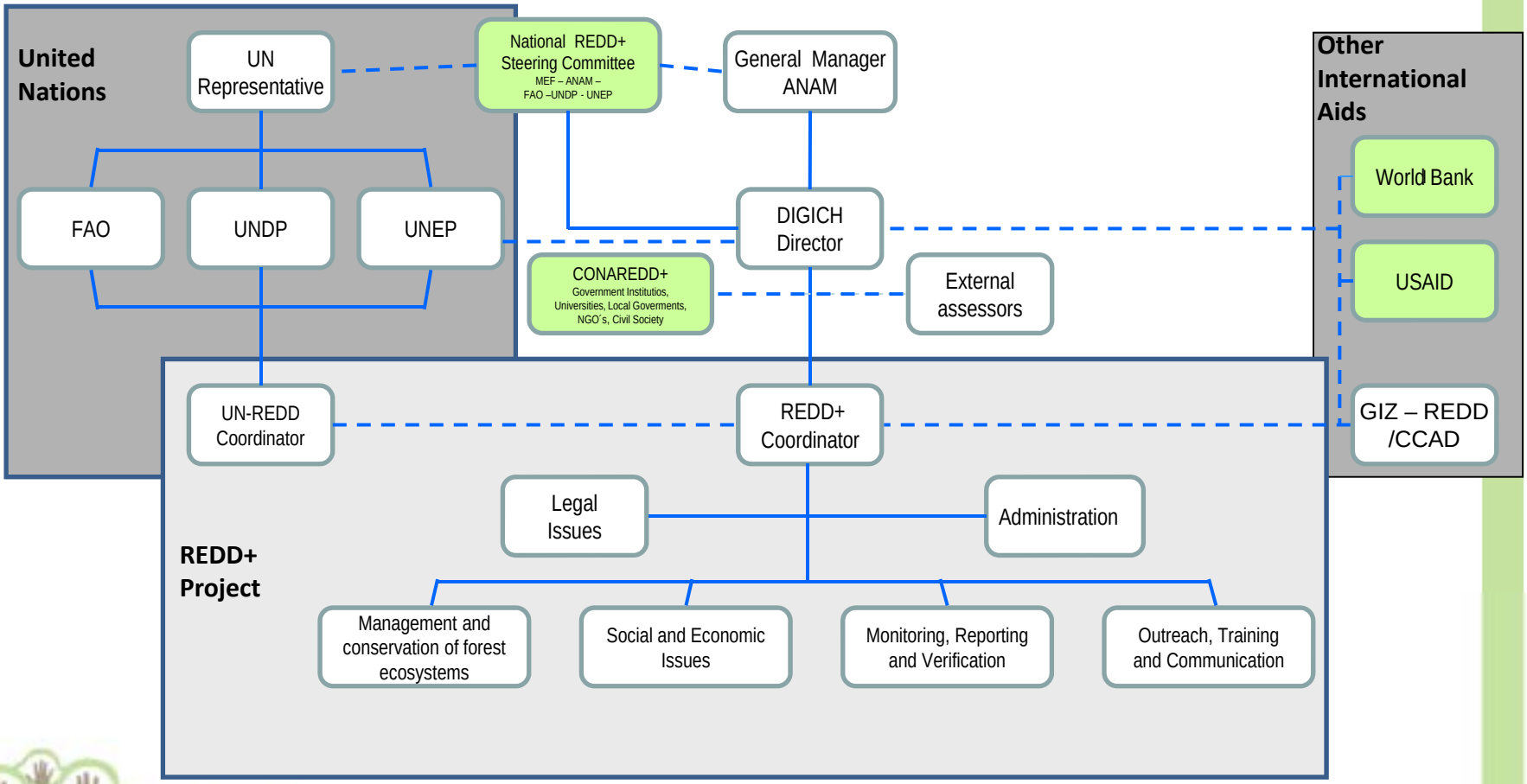
Organization for Phase I - Preparatory



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Management and Conservation of Forest Ecosystems

REDD+ Pilot Projects

- Sites selected by socio-economic, environmental and cultural criteria.
- Process of experimentation for learning, MRV and REDD+ saveguards.
- Will be evaluated by results and the effectiveness of the MRV system.
- Facilitate the creation of a political and institutional structure to generate and manage measurable emission reductions using IPCC methodologies.
- Easier to identify an administrative and financial system, flexible and efficient to support REDD+ activities.

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REDD+ Pilot Projects

To minimize risks the following elements will be considered :

- Align pilot projects with national development plans.
- Complement the pilot project with other incentive programs already in place (eg. in the Panama Canal Watershed – Environmental Economic Incentives).
- Ensure the land tenure for the project implementation.
- Evaluate opportunities and alternatives with land use plans.

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Important Actions to Implement Pilot Projects

- Develop a risk index of deforestation and possible limitations for REDD+.
- Cost and impact of forestry and non-forestry land use projects for DD.
- Develop baseline scenarios consistent at different scales (national, provincial, community).
- Spatial study of opportunity costs of non-forest land use options.
- Analyse institutional and local capacity requirements (government, owners).
- Analyse the impact of forestry and non-forestry projects, biodiversity and poverty.

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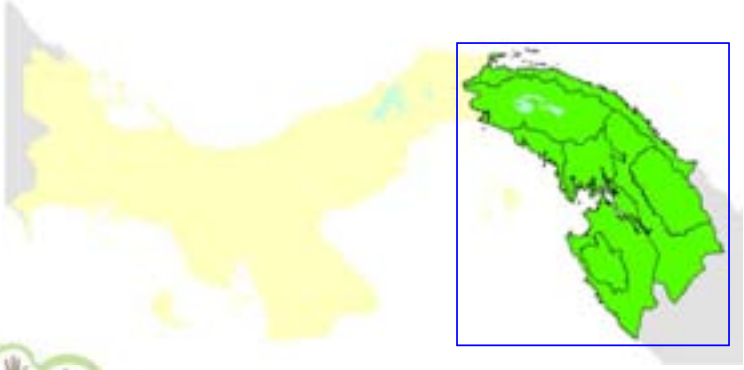
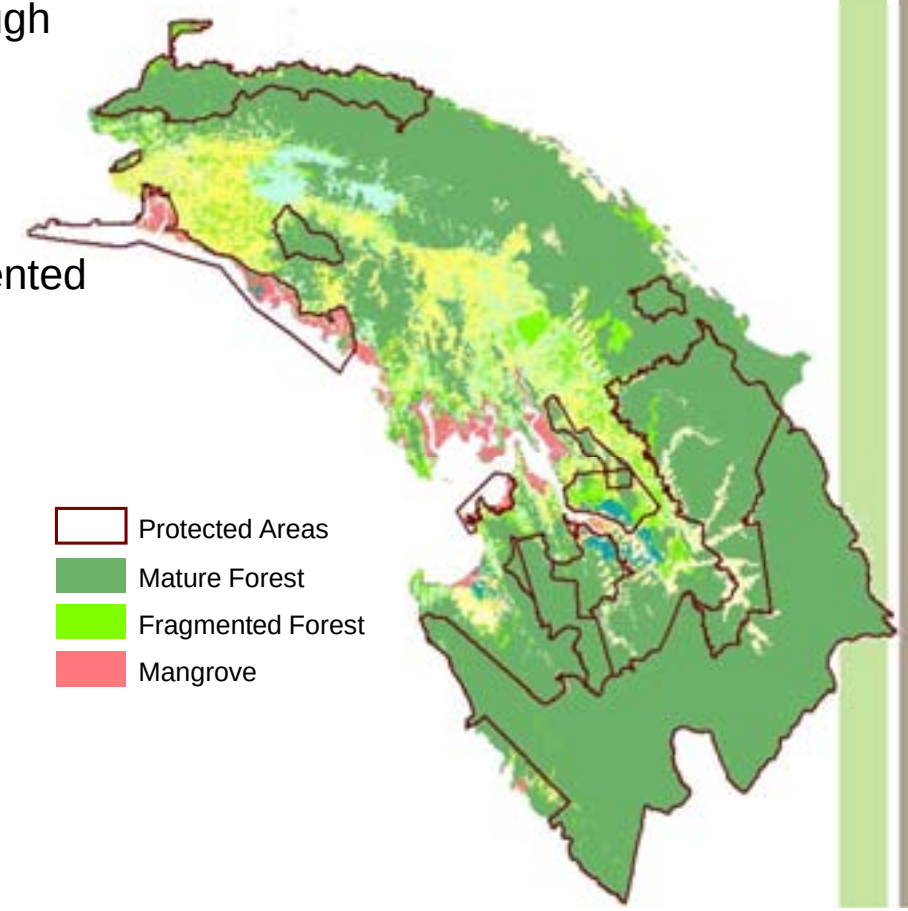
Identification of Some Potential Areas

- **Eastern area of Panama**: Panama province (Chepo and Chiman districts), Darien province, Emberá Wounaan and Kuna Yala indigenous territory.

  - ✓ There is an institutional presence through different programs.
  - ✓ Indigenous regions, peasant and afro-descendant settlements.
  - ✓ Includes protected areas.
  - ✓ Significant areas of mature and fragmented forest.



Eastern area



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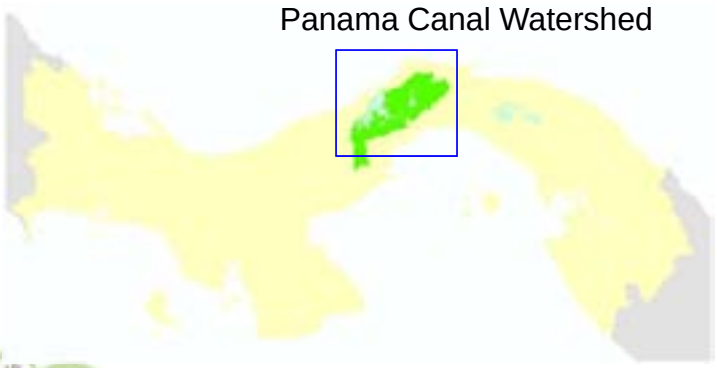
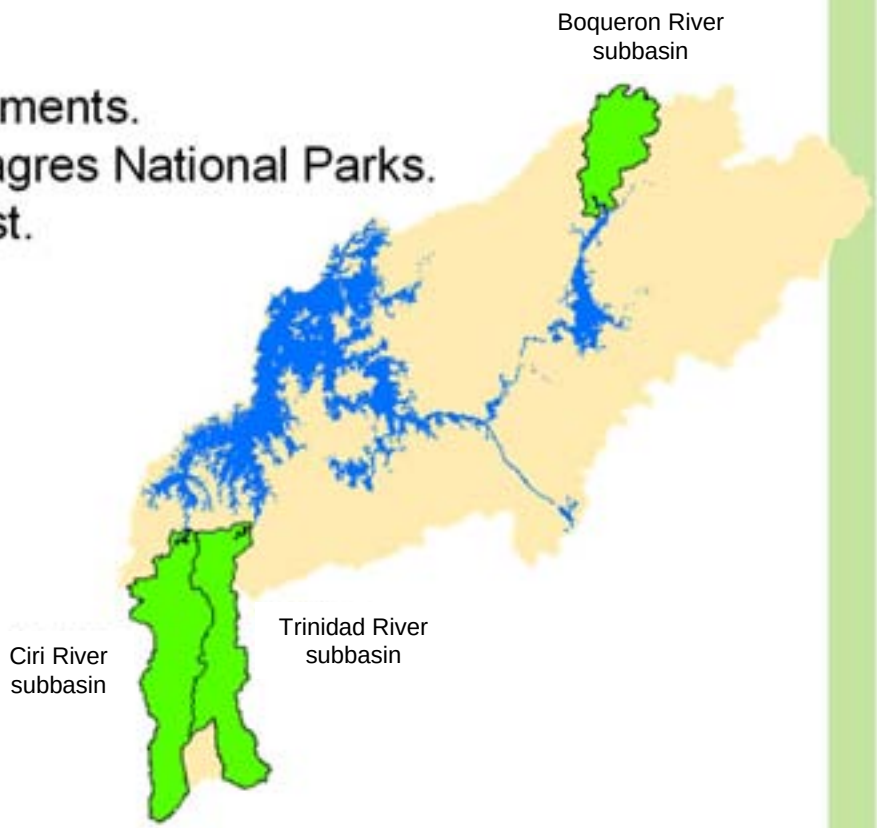
Identification of Some Potential Areas

- **Panama Canal Watershed**: 3 subbasins (Ciri, Trinidad and Boqueron – within Chagres National Park)

✓ There is an institutional presence through different programs.
✓ High percentage of land titling.
✓ Community organization developed.
✓ Indigenous areas and peasant settlements.
✓ Includes areas of Campana and Chagres National Parks.
✓ Significant areas of fragmented forest.





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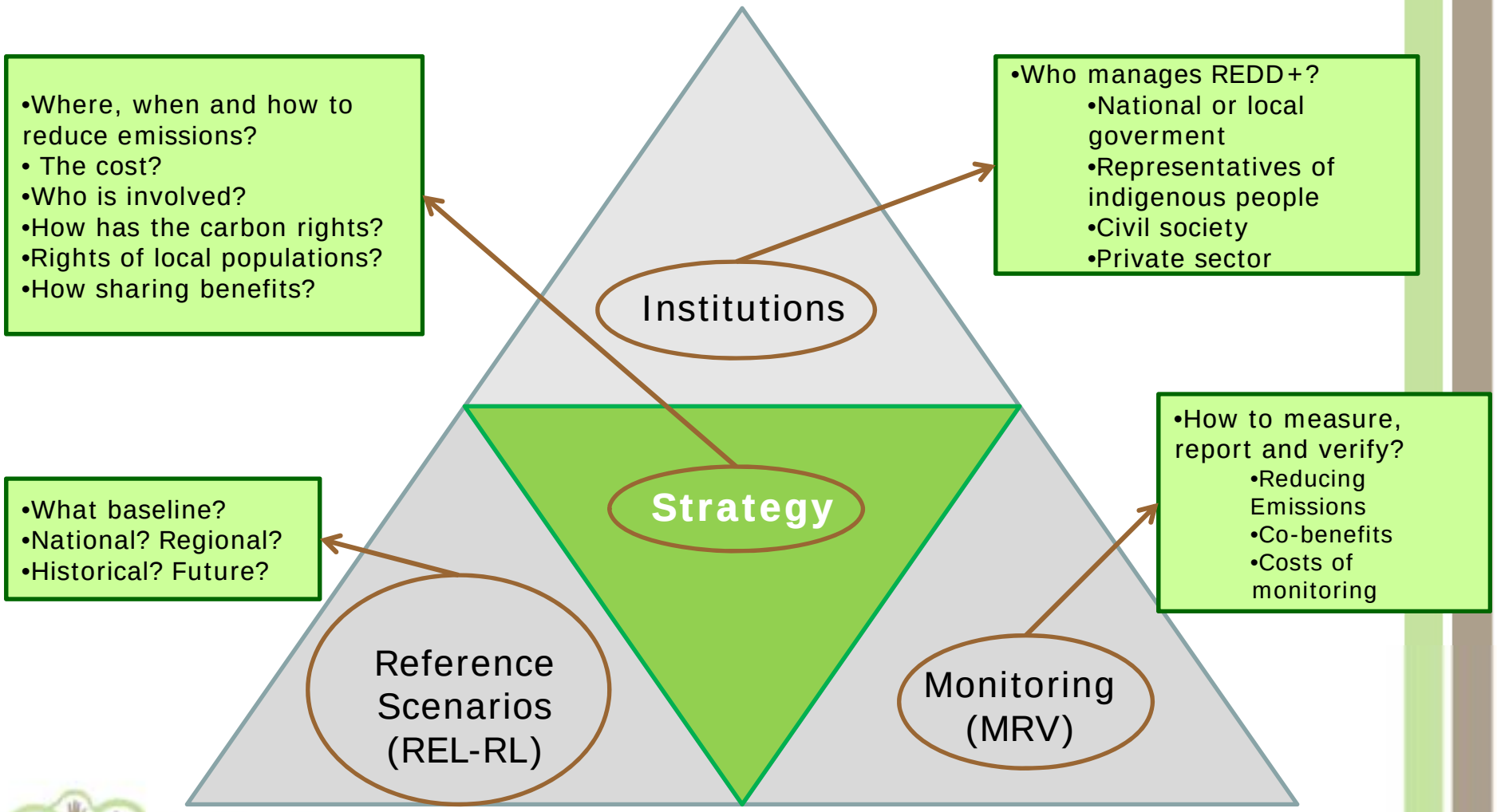
Social and Economic Issues

REDD+ Phase I - Preparatory



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Strategic Plan for Political Advocacy of the COONAPIP 2011-2015
Draft Document (may 2011)

PEIP, by its Spanish acronym

1. Jointly Analysis (authorities and technicians) on the current status of the organization: structure and function.
2. Its trend and desirable condition.
3. Identification of areas of work that should be strengthened to improve the living conditions of Indigenous in Panama.
4. PEIP formulation.

This document is the result of collaborative work between COONAPIP and IUCN supported by GIZ(REDD+ Project), UNEP, UNDP and FAO.

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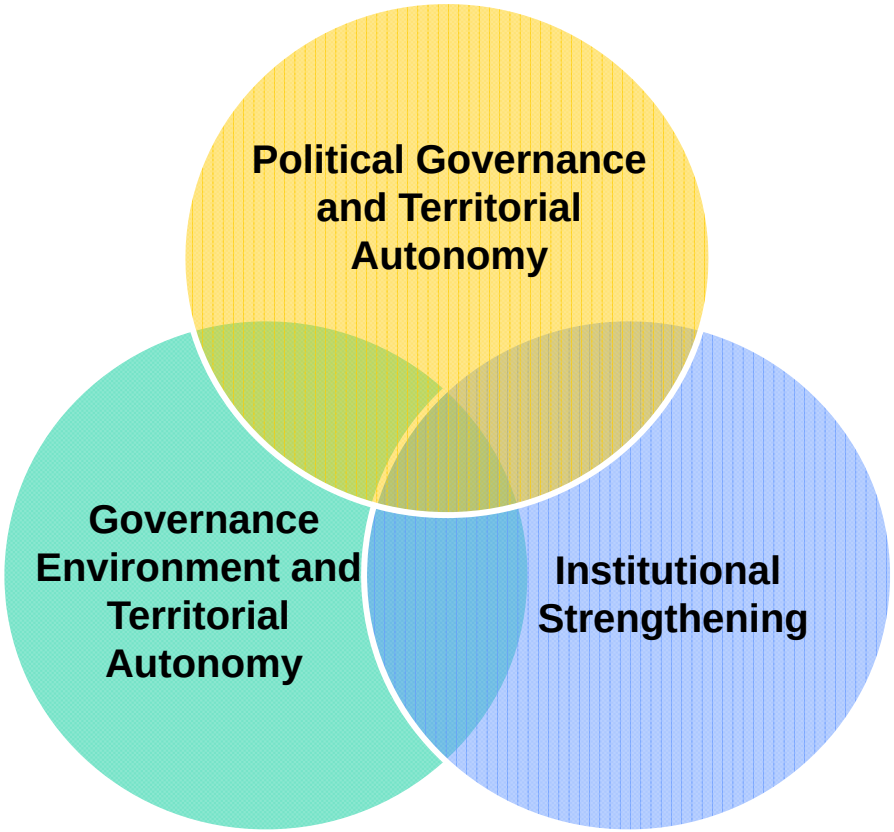
1. Advocate for effective implementation by the State of Panama and its agencies working in areas of the *consultation mechanism "consent, free, previous and informed".*
2. Incorporate the indigenous worldview in programs and projects implemented in indegenous territories.
3. **Promote *training and effective participation* of panamanian indigenous in consultation, negotiation and decision making on topics related to REDD+.**
4. Support the *resolution of conflicts of "overlapping lands"* between indigenous territories and protected areas declared by ANAM.



Objectives, Scope, Goals
Action Line: priority, Responsible, term, indicator

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Monitoring, Reporting and Verification

(Forestry and Carbon)

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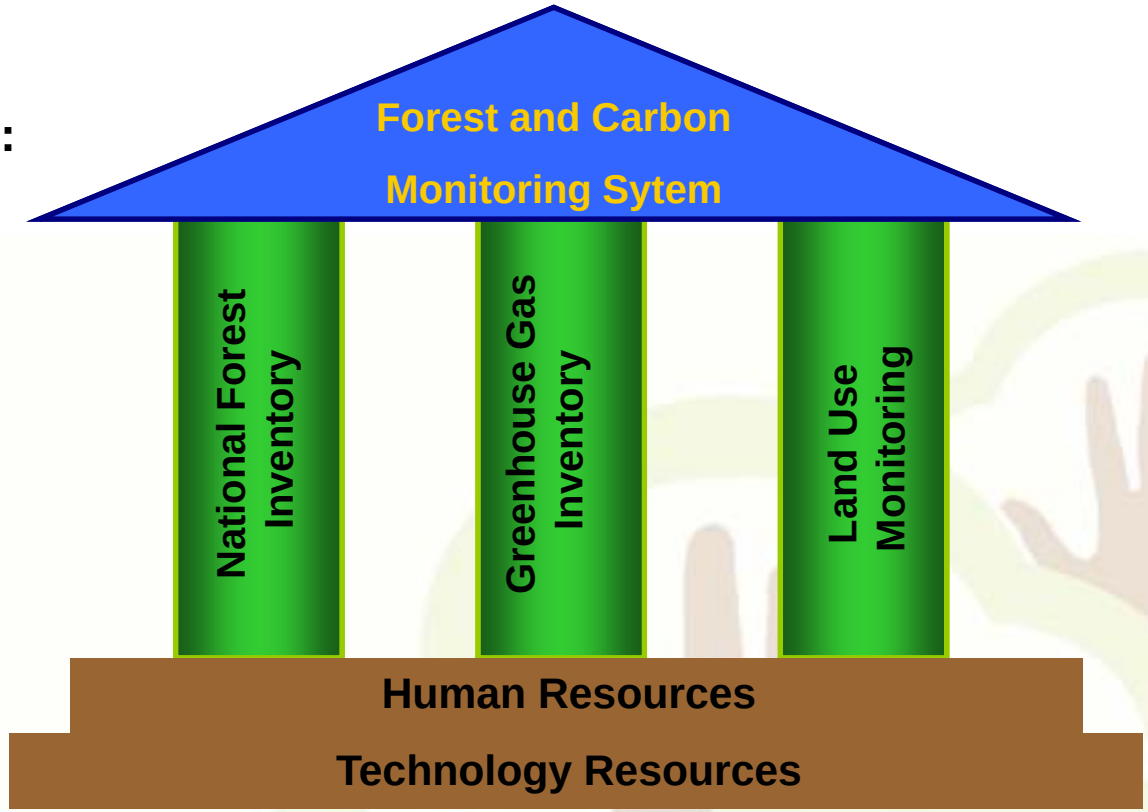
Basic Components of the Monitoring System

The three basic pillars:



✓The existence of a National Forest Inventory.

✓National Greenhouse Gas (GHG) Inventory to account for emissions and removals from forests.

✓Land use changes according to the IPCC.

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National Forest and Carbon Inventory

- Coordination of National Forest and Carbon Inventory.
- Process of defining the type of sampling, detailed sampling units and equipment for the inventory.
- Defining pilot study area.

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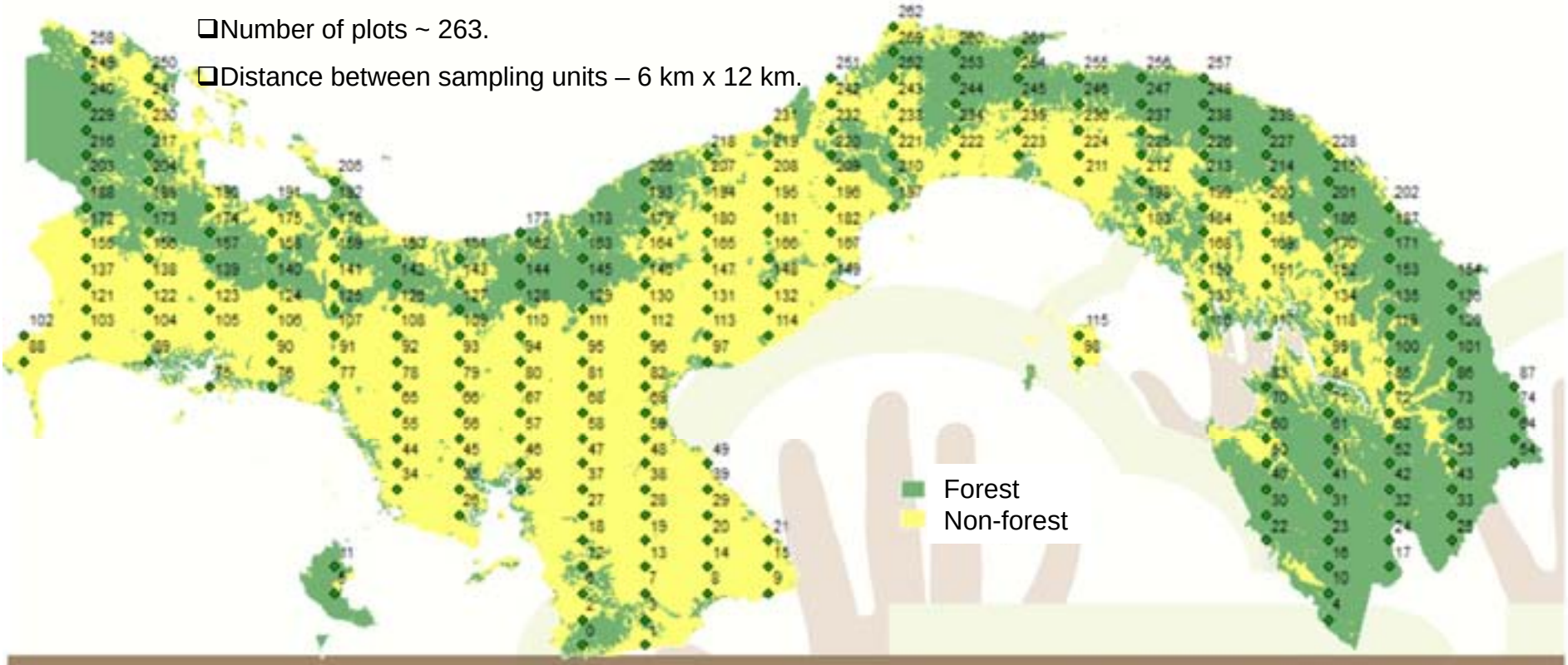
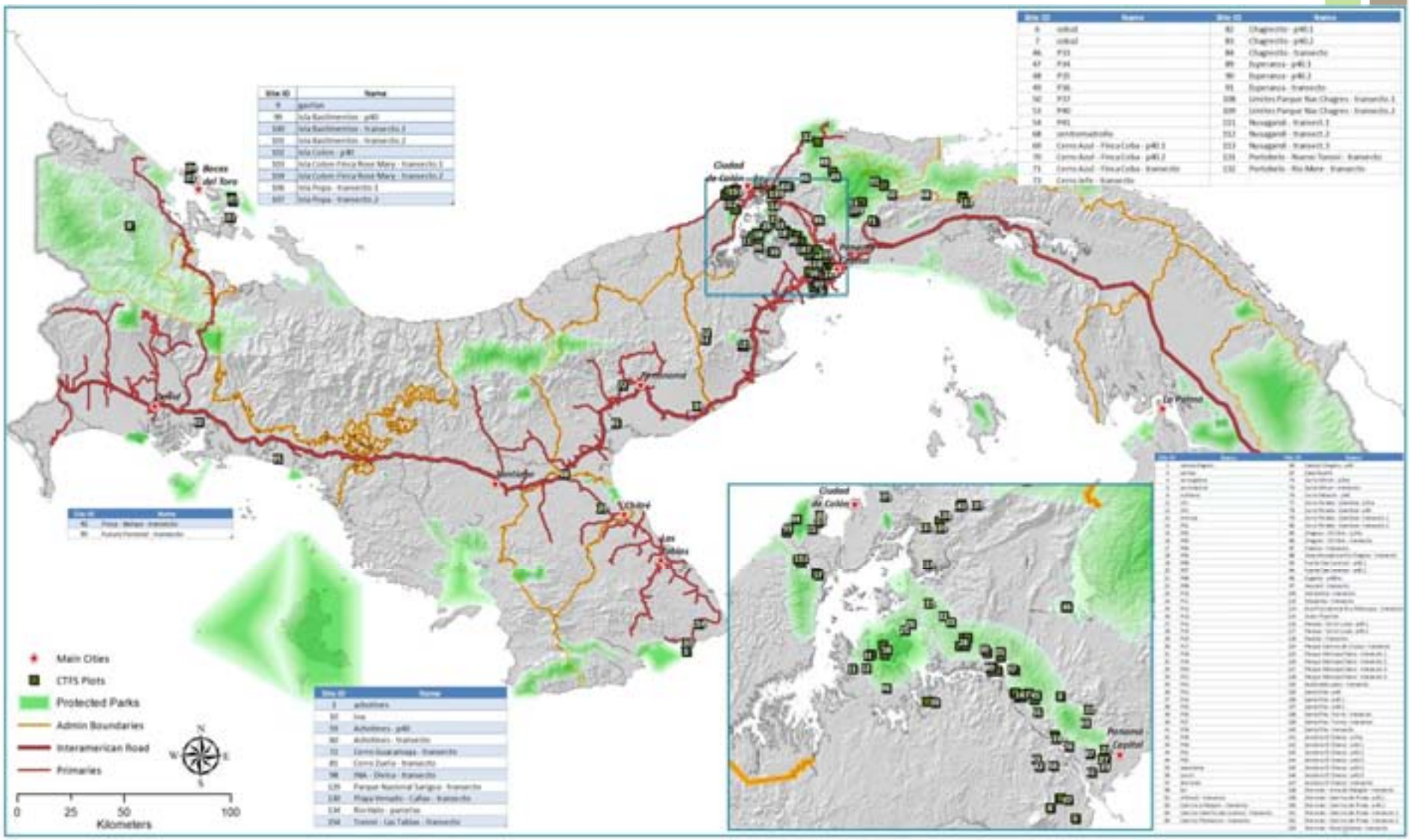
National Forest Inventory

- Type (Systematic, Systematic/Stratified).
- Number of plots ~ 263.
- Distance between sampling units – 6 km x 12 km.



Plots of the Center for Tropical Forest Science (CTFS)



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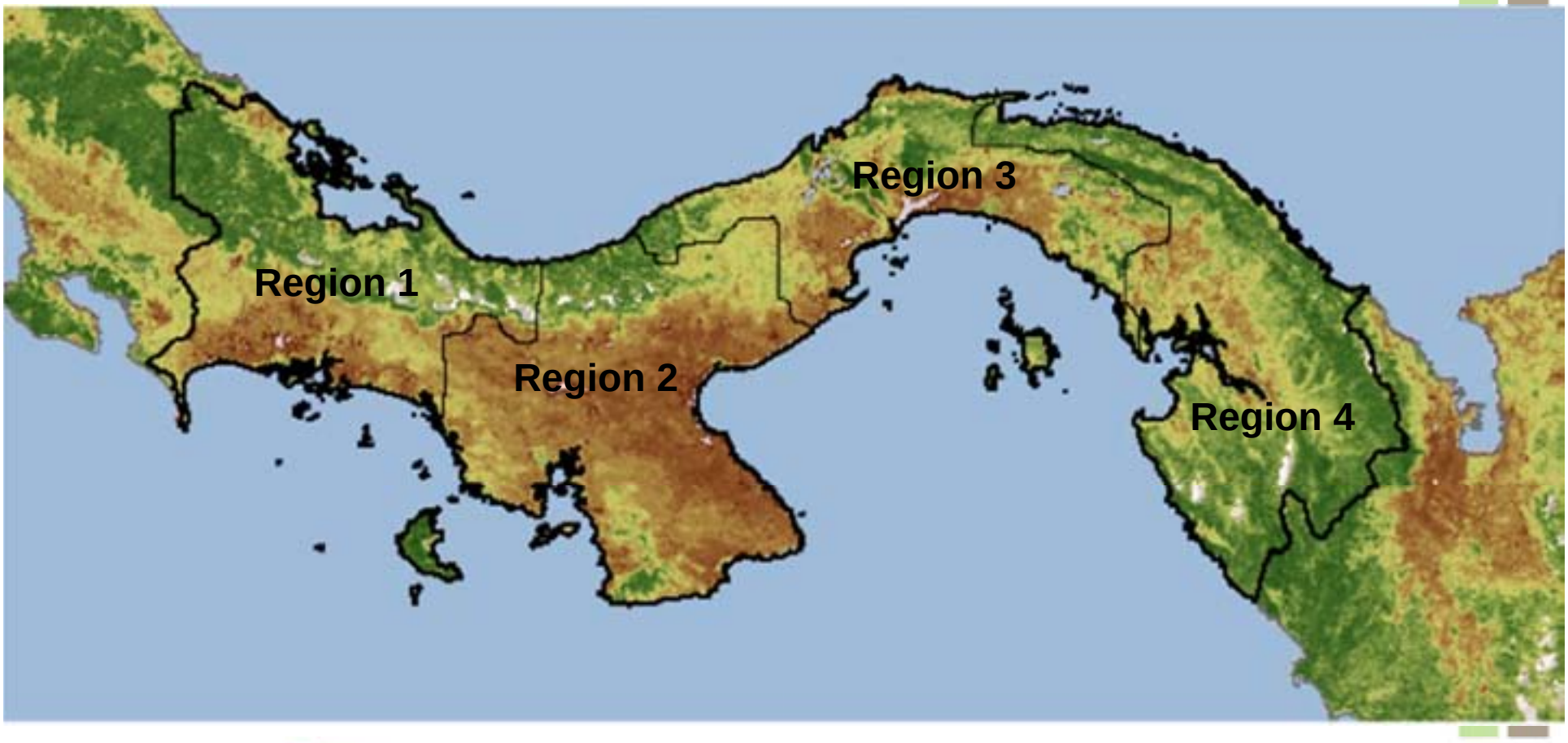
GHG Inventory

- Create / strengthen a unit responsible for the national GHG inventory of the forest sector.
- Training in the application of IPCC methodology.
- Capture and processing System of information from different sources.
- Reporting requirements under REDD+(to be defined in detail, it is expected to be similar to those applied under the Kyoto Protocol). IPCC methodologies are the basis.

Example of Sampling Units Distribution (Stratified by: Carbon Content)



0 87.5 175 Kilometers

Above-ground Live Woody Biomass

0 50 100 200 300 400 503

Megagrams per Hectare (Mg/Ha)

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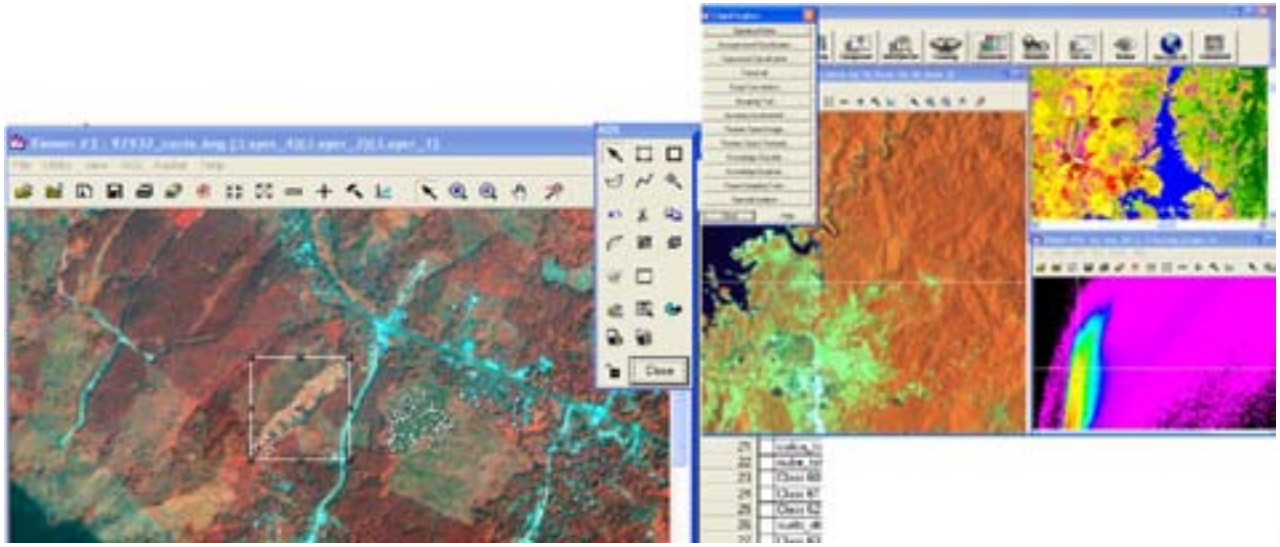
Remote Sensing Monitoring

- Compilation of information available on issues related to REDD+, relevant for MRV.
- Evaluation of international experiences of existing monitoring systems (Brazil, Mexico, others) to support the MRV process.
- Strengthening of ANAM GIS with new equipment, software and staff training.
- Study of varios technological possibilities for a national carbon map.

Land Cover and Land Use Mapping

- Definition of the Land cover and land use Classification System for Panama.
- Develop the national land cover and land use mapping.
  - Initial Stage: scheduling logistics and human resources, requirements, selection of sensor and data acquisition.



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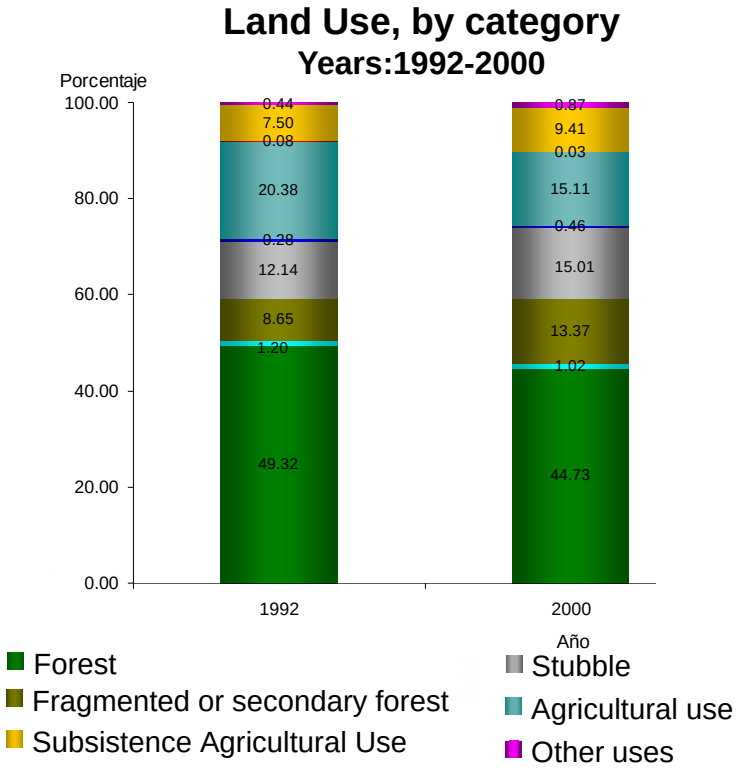
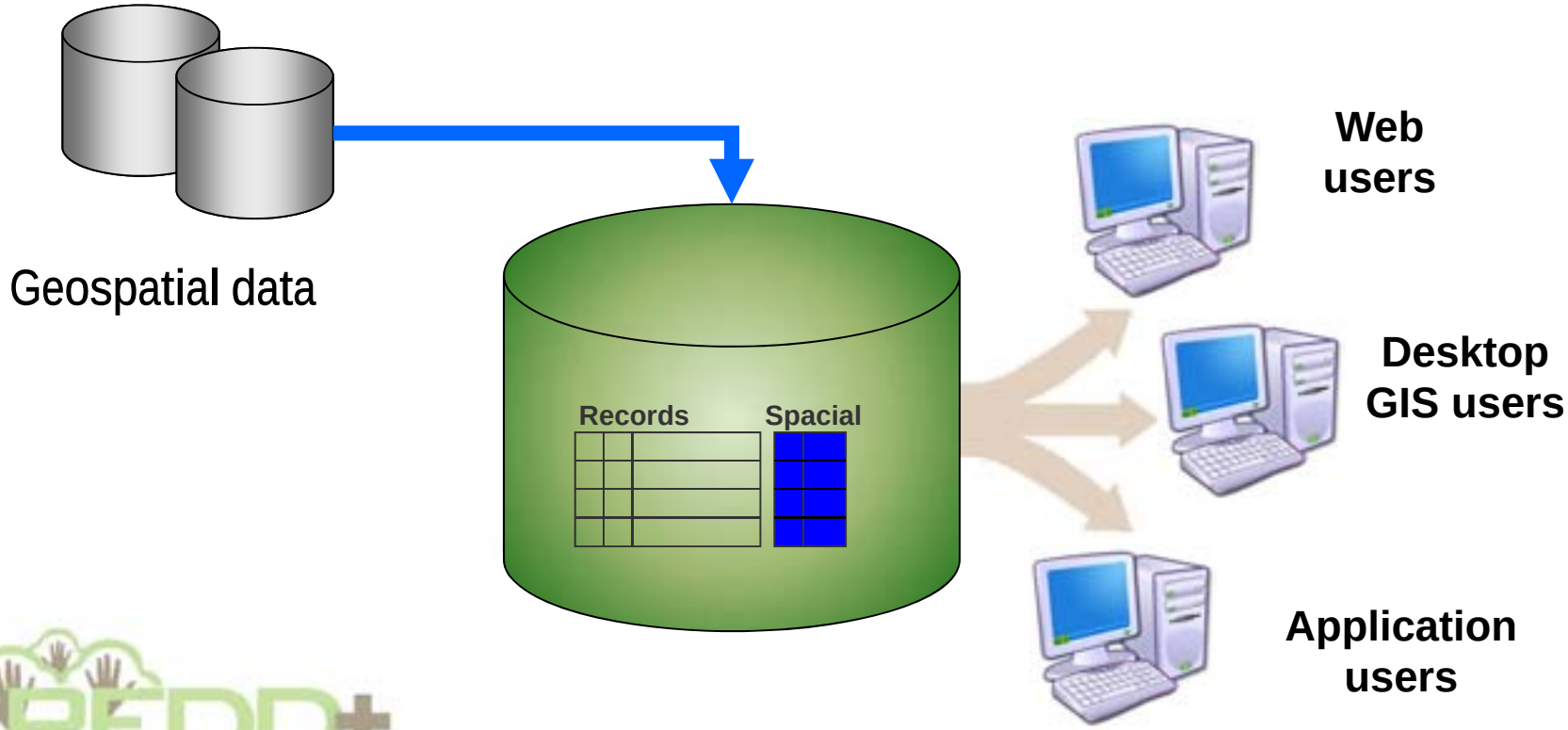
Actions to Monitor the Land Use Change

- Detecting periodic land use changes in the country by using satellite images of moderate / medium / high spatial resolution.
- Analysis of land use changes (deforestation, regeneration, others).

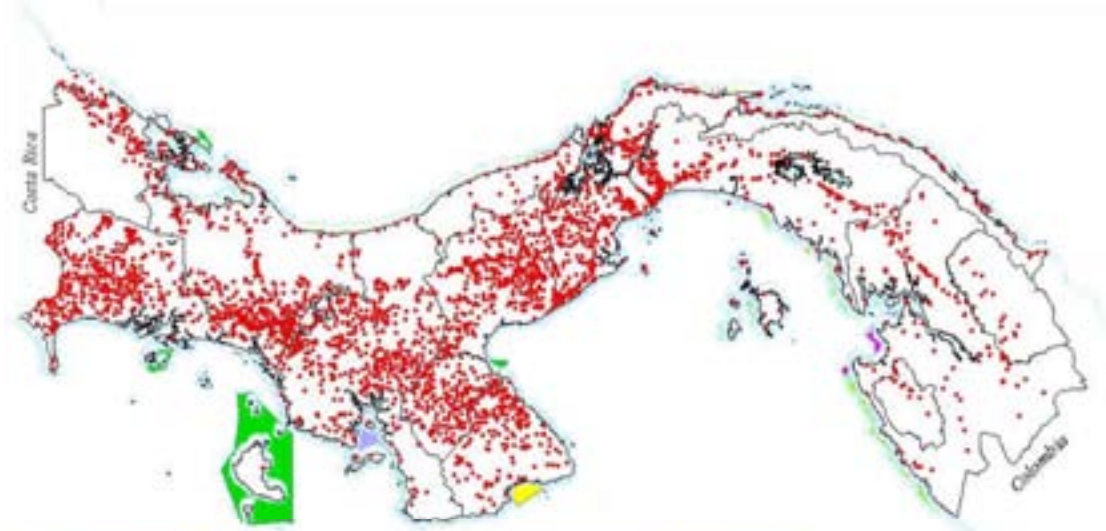


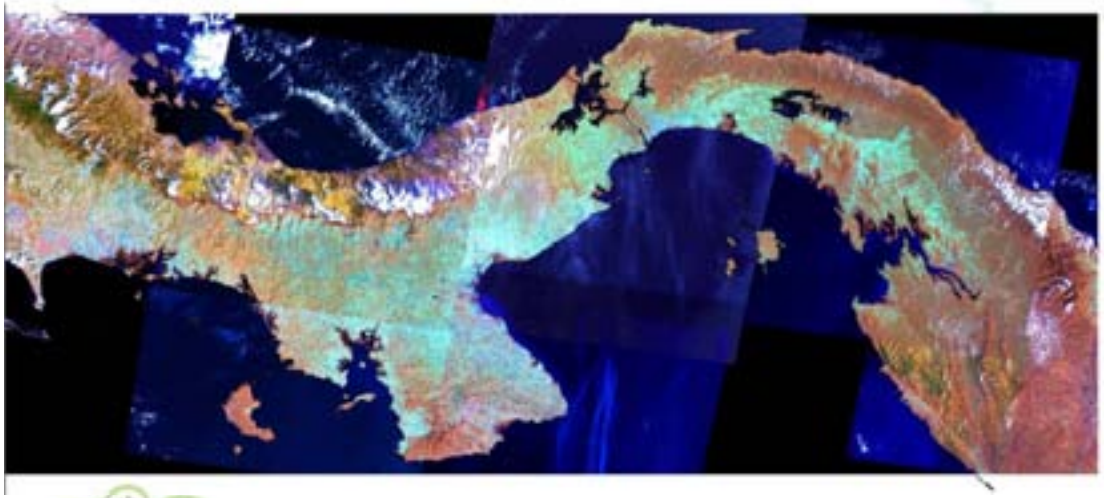
Geographic Database

- Multipurpose geodatabase.
- Publication of geographic information through Internet (Geoportal).



Geographic Database





EXAMPLE OF DATA AVAILABLE
Base map: populated places, road network, hydrography, political-administrative division, geodetic network
Forest cover and land use Land use change Vegetation Territorial ordering Protected areas Watersheds Agrological capacity Reforestation CDM Projects Cadastre Elevation data Ecoregions Climate Satelite images Orthophotos
Others

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Outreach, Training and Communication

REDD+ Training Plan

STAGES OF THE REDD+ TRAINING PLAN	APPROACH	ACTORS
	Phase I: ANAM	All personnel of ANAM by operational level and field experience
	Phase II: Inter-institutional environmental system - SIA	SIA,Sectoral Environmental Units, local goverments, environmental advisory committees (provincial, district, traditional and indigenous)
	Phase III: Economic groups and opinion formers	Cleaner Production and corporate social responsability and environmental companies; micro and small enterprices, environmental business cooperatives
	Phase IV:“The Social Network”	Environmental volunteers, conservation groups, networks of environmental educators, community - based organizations

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Phase I: Activities Developed

REDD+ in Panama Workshop

Where we are and where are we going?

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Phase I: Activities Developed

Oportunity costs and causes of deforestation

Forest Monitoring System INPE-Brazil

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Phase I: Regional Workshops

- **Western Group**
  Bocas del Toro, Chiriqui y la Comarca Ngöbe Bugle

- **Central Group**
  Veraguas, Herrera, Los Santos y Cocle

- **Metro Group**
  Panama Metro, Panama Oeste y Colon

- **Eastern Group**
  Panama Este, Darien y comarca Kuna Yala

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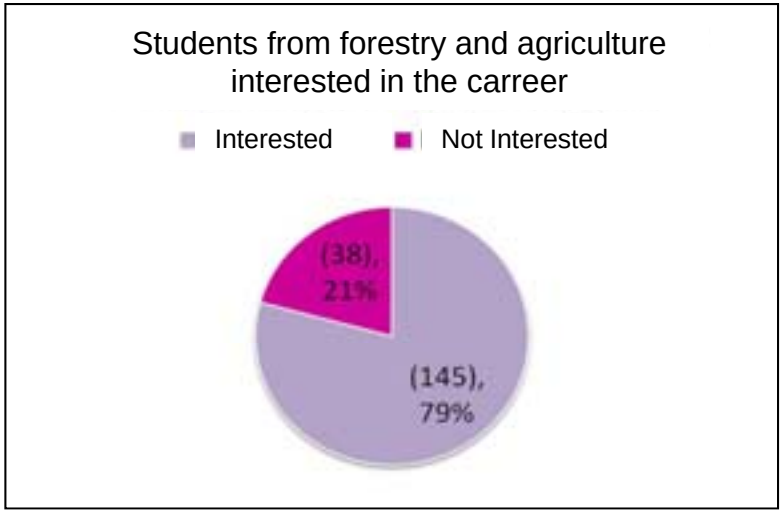
Forest Engineering Career in the Framework of REDD+ Technological University of Panama - UTP

- Academic Unit: **School of Science and Technology – UTP**
- Place where the career will be offered: **Province of Panama**
- Date expected to perform the opening: **First semester 2012**
- Duration of the carreer: **five years (10 semesters)**



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Opportunities

REDD+ iniciative is presented as an opportunity to promote sustainable development in rural areas through the following actions:

- Strengthening institutions at national, regional and local levels through the training of technicians and administratives of the institutions involved, in order to improve the administrative management of natural forests through sustainable management, oversight and monitoring of the forest resources.
- The international fundraising to strengthen the conservation management of forest resources.

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Opportunities

- The establishment of agreements with community groups to implement local development projects with sustainability criteria.

- Joint work with indigenous and peasant organizations to strengthen their capacities for sustained use of goods and services provided by natural forests, thereby contributing to reducing poverty in rural areas.

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Actions to Develop

1 Institutional Development and training on REDD+

2 Conservation of forests through carbon projects with local communities

3 Restoration and conservation of forest ecosystems

4 Sustainable community development in communities near to the forest

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