The Forests Dialogue

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# Investing in Locally Controlled Forestry

## Introduction and Working Paper


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## SUMMARY

Every time he walks into the forest, my grandfather says "a dialogue about forests is a dialogue with our brothers the trees. We must ask the trees and Mother Earth permission to take the day's livelihood from them."

To speak about indigenous peoples and their lands is to speak about history, and to do so from a cultural perspective. But this conversation is not yet possible. Thus, this paper focuses on Panama and its indigenous peoples and lands—first and foremost, we must understand what it means to be indigenous.

In Panama's case, indigenous peoples are ruled by their own customs and traditions, as well as by specific laws. The comarca is legally recognized as indigenous peoples' land, where all social, economic, and ecological activities; these are carried out in order to achieve sustainable development and according to the people's specific world view. Panama has five comarcas: Ngöbe Bugle, Kuna Yala, Embara Wounaan, Madungandi and Wargandi, and Naso Teribe, which is currently under review by the Assembly of Representatives as well as within Naso's own congress.

According to official estimates published by Panama's Comptroller for the 2000-2015 period, the country's population in 2008 reached 3,395,346, with a growth rate of approximately 1.66% between 2007 and 2008. The population within indigenous comarcas reached 323.234, which represents 9.5% of the Panama's population.

This paper discusses the Kunas' experience in the management and development of the Nargana protected area (PEMASKY/AEK) and, specifically, the process leading to the creation of a strategic plan for this area, the "General Plan for the Management and Development of the Kuna Yala Comarca." For this comarca's management, the Plan proposes a "Biosphere Comarca" category; every activity carried out in PEMASKY follows the indigenous peoples' right to "free, prior and informed consent (FPIC)."

Additionally, this paper offers a view into the laws and norms that currently apply to forest management in Panama. Many of these laws stipulate the need for citizen and stakeholder participation, especially those whose livelihoods depend on the forests and are directly affected.

Finally, the paper recognizes potential conflicts among stakeholders who live in and from the forests or among landowners. There are two topics currently being debated of great importance to many interest groups in the civil society: the payment system necessary to reduce deforestation and the distribution of benefits among stakeholders.

## 1 Indigenous Peoples and Their Territories

### What does it mean to be indigenous?

Much has been said about this term. The International Labor Organization (ILO), the World Bank, and indigenous movements, peoples and organizations, agree on the following definition (based on elements defined by Convention 169 of the ILO):

Tribal peoples [are those] in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations; and peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.

In Panama, indigenous peoples self-identify as: Ngöbe, Kuna, Emberá, Bugle, Wounaan, Naso Tirdi, and Bri Bri. Specifically, we the Kunamar identify ourselves not as 'indigenous' or 'indians,' but rather as Kuna. Nonetheless, all these peoples share common elements that differentiate us from other cultures, such as language, orally-transmitted culture, a shared solidarity, collective use of certain goods (such as land), a sense of belonging, cultural practices in general and practices surrounding land use, the social and political order, values, beliefs, and common rites.

### The Indigenous Comarca

The country is politically divided into 9 provinces, 3 comarcas (Ngöbe-Bugle, Kuna Yala, and Embera-Wounaan), 75 districts, and 621 magistrates or corregimientos, 2 of which are also considered comarcas (Kuna de Madungandi and Kuna de Wargandi). Thus, in practice, there are 5 comarcas nationwide.

Both the Indigenous Reserve and the Comarca are concepts included in the country's legislation and recognized in the socio-political realm, each having its own judicial tradition and relatively distinct functions. Since the establishment of the republican government in Panama, the Reserve and the Comarca have been alternately used to achieve a distinct and special control over territories that are geographically distant from the central governmental power. These legal concepts have also been used as a flexible way to give land concessions to the indigenous peoples living in these areas, without posing a threat to the state's sovereign rights over them.

In contrast, the indigenous movement sets forth an idea of the comarca, on the one hand, as a mechanism to prevent land awards given the ancestral relationship between Mother Earth-Nature, Culture, and Human Beings; on the other hand, the comarca can guarantee the right to non-alienation. Moreover, as a concept, the comarca works toward the recognition of indigenous peoples' political structure and traditional management system; their autonomy and their right to guide their own destinies; their identity; their historic and cultural values as an active element in the nation. These principles have all been included in the laws that created the comarcas. The Kunas, pioneers in this area, have an extensive experience that can help guide other groups in Panama as well as elsewhere; in the comarca, each law as well as the overall administrative charter aims to perfect this vision of indigenous peoples' rights. Table 1 summarizes the laws that created the comarcas in Panama.

**Table 1:** Main laws and norms governing the creation of Indigenous Comarcas

| Comarca | Law / Regulations |
|---|---|
| Comarca Kuna Yala* | Law Nº 16 , February 19th 1953 creates the San Blas (see Gaceta Oficial, Nº 12,042, April 7th 1953). Law N° 99, December 23rd 1998, officially changes the name to Comarca Kuna Yala. |
| Comarca Emberá Wounaan | Law Nº 22, November 8th 1983, creates the Comarca Emberá de Darién (see G.O., Nº 19,976, January 17th 1984). The administrative charter for Comarca Emberá Wounaan was adopted through Executive Decree Nº 84, April 9th 1999. |
| Comarca Kuna de Madungandi | Law Nº 24, January 12th 1996 (see G.O., Nº 22,951, January 15th 1996). The administrative charter was adopted through Executive Decree Nº 228, December 3rd 1998. |
| Comarca Ngöbe Bugle | Law Nº 10, March 7th 1997 (see G.O., Nº 23,242, March 11th 1997). The administrative charter was adopted through Executive Decree Nº 194, August 25th 1999. |
| Comarca Kuna de Wargandi | Law Nº 34, July 25th 2000 (see G.O., Nº 24,106, July 28th 2000). |
| | |

*Before it achieved legal recognition, this area existed as "Comarca" Tulenega (Colombian Government Law from 1870), which was not recognized after Panama separated from Colombia in 1903. The legal history of this comarca includes: Decree N° 43, March 6th 1915, which creates the San Blas Circumscription; Law N° 59, December 12th 1930, which declared some vacant lands in San Blas as 'indigenous reserves'; and Law Nº 2, September 16th 1938, which created two comarcas, San Blas and Barú.

## Demographic and Cultural Characteristics

The great majority of the indigenous population in Panama lives in the western- and eastern-most parts of the country. In the west, there are the Ngöbe, Bugle, Naso, and Bri-Bri. In the east, there are the Kuna, Emberá, and Wounaan.

According to official estimates published by Panama's Comptroller for the 2000-2015 period, the country's population in 2008 reached 3,395,346, with a growth rate of approximately 1.66% between 2007 and 2008. The population within indigenous comarcas reached 323.234, which represents 9.5% of Panama's population

(see Table 2 below for the distribution of indigenous peoples in Panama).

### 1. The Ngöbe

With 206,239 people, this is the largest group in the country, the majority of which lives in the Comarca Ngöbe-Buglé and is distributed across three regions: 1) the Ñö Kribo region, which has two districts or municipalities (Kankintu and Kusapin); 2) the Nedrini region, which has three districts (Besiko, Mironó, and Nole-Duima); and 3) the Kädriri region, divided in two districts (Muna and Ñurun). Each of these regions was formerly a part of three provinces, Bocas del Toro, Chiriquí, and Veraguas, respectively.

2. The Nasos

This group lives in the Bocas del Toro province, by the Teribe river. With a relatively small population (3,305), the Nasos live in 11 communities inside La Amistad International Park, along the boundary between Panama and Costa Rica. At present, representatives in Panama are discussing a bill that would create a comarca in this area in order to protect the Naso territories.

3. The Bri Bri

By the year 2000, the Bri-Bri population reached 2,521. This group is the least privileged and lives far from other indigenous populations in Panama. Because of this, most of its economic and social activities are carried with the neighboring Costa Rica. The Bri-Bri communities live by the shores of the Sixaóla and Yorkín rivers.

4. The Buglés

This group is located between the Comarca Ngôbe-Bugle and the Veraguas province. By the year 2000, its population reached 18,724, of which many live outside the Comarca Ngobé Buglé; after the creation of this comarca part of the Buglés territories were left out.

5. The Kunas

With a population of 61,707, the Kunas are distributed across the coastal cities of Panama and Colón, as well as across three comarcas:

a) Comarca Kuna Yala - located in the San Blas archipelago (which is why it was formerly known as Comarca de San Blas) and with a population of 37,212.

b) Comarca de Madugandí – located in the Bayano river basin (Bayano Lake in the Panama province), it has 3,305 inhabitants.

c) Comarca de Wargandi – located between the Comarca Emberá Wounaan and the Comarca de Madungandi, its legal boundaries were established after the 2000 census. For this reason, we do not have official population estimates; however, the population itself claims it has more than 1,000 people.

d) Pucuro and Paya populations – located in the boundary region between Panama and Colombia, on the heights of the Tuira river, these two Kuna communities were also not part of the 2000 census.

6. The Emberá and the Wounaan

These groups are linguistically different but nonetheless occupy the same geographic area, both within the Comarca as well as outside of it. They live in the districts of Cémaco and Sambú, in the boundary region with Colombia. A part of the population is also located across different provinces: Darién, Panama (Chepo and San Miguelito), and Colón (Chagres river). The Emberá has a total population of 23,579.

7. The Wounaan

The Wounaan has a total population of 6,882. A minority lives inside the Comarca Emberá. The great majority lives across the Darién province in small land-based communities, which the Wounaan refer to as "Collective Lands of the Darién." Upon the creation of the Comarca Emberá-Wounaan, many Wounaan and Emberá were excluded from this territory. The Legislative Assembly's Indigenous Commission is currently discussing a bill to legally define these peoples' lands.

**Table 2:** Populated Surface and Total Indigenous Population in Panama (by Ethnic Group, Comarca, and Gender)

| Indigenous Peoples | Area ($Km^2$) | Population | | Population by gender | |
|---|---|---|---|---|---|
| | | Total | Inside the Comarca | Men | Women |
| **Total** | **19,095(a)** | **323,434** | **201,269** | **163,023** | **160,211** |
| Ngöbe | 6,944 | 206,239 | 143,189 | 103,136 | 103,103 |
| Bugle | | 18,724 | 5,707 | 10,314 | 8,410 |
| Kuna | | 61,707 | | 30,641 | 30,866 |
| Kuna Yala(b) | 4,480 | | 37,212 | | |
| Madungandi | 2,318 | | 3,305 | | |
| Wargandi | 955 | | 1,133 | | |
| Embera | 4,398 | 23,579 | 9,432 | 12,200 | 11,379 |
| Wounaan | | 6,882 | 1,291 | 3,518 | 3,364 |
| Naso(c) | | 3,305 | | 1,707 | 1,598 |
| Bri-Bri(c) | | 2,521 | | 1,228 | 1,293 |
| Undeclared | | 477 | | 279 | 198 |
| | | | | | |

(a) The comarcas, defined by Laws 16 (1958), 22 (1983), 24 (1996), 10 (1997) and 34 (2000), represent 22.7% of Panama's total area.

(b) Recent studies show that this Comarca's total land area is 4,480 km2. Including the water areas, the Comarca has a total area of 7,513 km2.

(c) Boundaries have not yet been defined.

The Darién-Kuna eco-region has other indigenous populations that have not yet gained status as stand-alone comarcas. These include: two Kuna communities, the Paya and the Pucuru, located in the Takarkunyala region in the Darién National Park (Executive Decree 21, 1980); and the Wounaan and Emberá Collective Lands of the Darién, not included in the Comarca Emberá-Wounaan. Due to geographic differences, part of the Wounaan and Emberá populations left the Collective Lands of the Darién and created the Collective Lands of the Alto Bayano.

52% of these populations lives inside indigenous comarcas. Approximately 48% lives across the 9 provinces, especially in Bocas del Toro, Chiriquí, Darién, Panama, and Veraguas.

It is important to note that in Panama City and Colón, the Kunas have created self-organized, neighborhood entities. It is possible that these entities are being replicated in other parts of the country.

## 2 The Right to Free, Prior, and Informed Consent

The right to "free, prior, and informed consent" has been central to the political debate about the protection of indigenous knowledge and traditional cultural expressions. This right is often discussed in the political debates surrounding intellectual property, genetic resources, traditional knowledge and folklore. Thus, many sui generis laws, norms, and regulations include the right to free, prior, and informed consent. Additionally, existing intellectual property rights can serve as judicial basis to uphold (or deny) this right.

One of the implications of this right is that the traditional knowledge and cultural expressions that are part of a specific indigenous group or local community, as well as the products of this knowledge and expressions, cannot be accessed, adapted, defined, utilized, or commercialized without prior, informed consent from the group in question. Some suggest that this right could give way to a legal and practical mechanism to establish "mutually defined conditions" between two or more Parties, whenever these must agree on the access to, and the distribution of benefits from, traditional knowledge and cultural expressions.

In Panama, this right is embodied in the intellectual property rules of the Ministry for Commerce and Industry. In other entities, this right is often mentioned but is not yet written down in official rules. The reality is that many claim this right is being exercised, when in fact it is not. This is most likely the reason why indigenous peoples seem opposed to some governmental projects and programs such as hydroelectric dams, open-air mining, and infrastructure for energy transmission, among others.

Free, prior, and informed consent is a basic and fundamental element, necessary for indigenous peoples and local communities to agree and implement Treaties and Conventions; to exercise national sovereignty and protect our lands and resources; and to create, and participate in, processes to repair and compensate for damages committed against our lands and our rights, conferred to us through recognized treaties. The right to free, prior, and informed consent is essential for the establishment of the conditions and criteria governing our negotiations with different States to address any and all issues affecting our lands and livelihoods.

According to Article 15 of the Convention on Biological Diversity, which recognizes the sovereign rights of States over their natural resources, "each Contracting Party shall endeavor to create conditions to facilitate access to genetic resources for environmentally sound uses by other Contracting Parties" and to ensure equal distribution of benefits derived from these resources. According to Article 15, paragraph 5, "access to genetic resources shall be subject to prior informed consent of the Contracting Party providing such resources, unless otherwise determined by that Party." If States currently apply these principles with each other, then why do they not do so with indigenous peoples and local communities? This is because, in the end, it is precisely in these groups' lands that key projects and programs are developed.

## 3 Kuna Yala – Protected Wilderness Area and Biosphere Reserve

In light of the issues discussed above, the Kuna experience should serve as an example for other indigenous and peasant groups fighting for the recognition of their rights and for the power to decide over their destiny. The Kuna believe in a fundamental principle, the duigua negsed: "together we can draw or plan our own destiny".

The Kuna culture is deeply connected to nature. This relationship not only has socio-cultural implications, but also offers practical means for development. Concepts such as conservation and co-habitation with nature are embodied in our medical practices, which use the fruit, roots, leaves, and bark of trees and plants and are part of our ceremonial practices. This deep relationship with nature is reflected in our oral culture, transmitted across generations by great historians and traditionalists.

Starting in the 50s, there have been plans to build a road in the Western part of the Kuna Yala, which would connect Panama City to the rest of the country as part of a larger road system. In 1970, construction began between the Cartí coast and the El Llano de Chepo community. Since the beginning, the Kuna have been actively involved in this project due to the potential impacts on our lands and culture, and due to the adverse effects of spontaneous colonization and deforestation along the Southern part of the Kuna Yala territories.

In the summer of 1975, one of the brigades of the Kuna Youth Movement (MJK, in Spanish) established a settlement on the Udirbi Mountains to oversee and control the incursions of non-Kuna colonizers into this area. In 1976, the Kuna Workers Union—today known as the Association for Kuna Employees (AEK, in Spanish)—replaced the MJK and managed the settlement.

This agricultural project, known as the Udirbi Project, failed due to lack of technical, environmental, and financial resources. Soil analyses carried out by the Ministry for Agricultural Development (MIDA, in Spanish) did not find the area viable for either agriculture or cattle. Nonetheless, in 1980, the Udirbi Project was officially recognized by the Kuna General Congress (CGK, in Spanish); the same year, a team from the Center for Research and Teaching on Tropical Agronomy (CATIE, in Spanish) recommended a number of viable, long-term options for the Udirbi Project, including the creation of a Forest Park in the area. This idea was accepted by the Kuna, since it closely matched our traditional beliefs: the jungle and the earth is our mother, which is why we keep her dressed in green; the trees are our brothers. Thus, in 1983 begins the Study Project for the Management of the Wilderness Area of Kuna Yala (PEMASKY, in Spanish).

PEMASKY, with help from CATIE, has successfully obtained financial support from conservation and development agencies, such as the United States Agency for International Development (USAID), the Inter-American Foundation (IAF), the World Wildlife Fund (WWF-USA), the MacArthur Foundation, the Smithsonian Tropical Research Institute (STRI-Panama), the Center for Human Ecology and Cultural Survival, among others. Similarly, the project has the support of governmental institutions such as the National Institute of Natural Resources (INRENARE, in Spanish; today, this institute is known as the National Environment Authority - ANAM), the Ministry of Education, the Ministry of the Interior and Justice, the Defense Forces (today known as Public Force/National Police), and the University of Panama, among others.

PEMASKY, as originally planned, entered its second phase in 1993 when it became the Program for the Ecology and Management of the Wilderness Area of Kuna Yala – PEMASKY. The Program, overseen by the AEK but with a semi-independent executive administration, was one of the first non-profit, indigenous organizations working on ecological topics. Its goal was to find viable solutions for the sustainable development of the Comarca Kuna Yala; its main and most important task was to define and protect the physical limits of the Comarca, especially in the west. Milestones and patrolling units were set up for this purpose. A center for biological research and an administrative camp site were established in Nusagandi.

The program included a Technical Team, composed of Kuna professionals representing a variety of scientific fields. The Team received assistance from the CAITE, STRI-Panama, the University of Panama, among others. Thus far, the Team has carried out research on different topics relevant to the lands set for conservation, the comarca, and the surrounding areas, such as biophysics, biology, forests, ecology, socio-economics, and culture.

The main goal of PEMASKY/AEK was to design a strategic plan for the area's management. On November 7th 1987, in the Achudup community, after two and a half years of hard work, studies and planning, the Kuna Congress approved, through Resolution No. 3, the General Plan for the Management and Development of the Comarca Kuna Yala. The Plan recommended that the Comarca be defined as a "Biosphere Comarca." During the development of this document, PEMASKY/AEK kept an open dialogue with the community and observed the Kuna's right to free, prior, and informed consent, which accounts for the Plan's success.

Since 1987, the Plan has been revised twice. The most recent changes were done in 1995, with support from the International Tropical Timber Organization (ITTO). At present, the document has three chapters: 1) National, regional, and international background; 2) Analysis of the conservation unit; and 3) Management and development of the conservation unit, which describes the programs and subprograms for implementation.

On August 2nd 1994, through Resolution JD-023-94 the INRENARE officially defined the Kuna Yala as a wilderness area, located within the Narganá district and with a total surface of 100,000 hectares (excluding water areas). Resolution JD-023-94 also stipulates that this protected area is to be managed by the Kuna Congress, with technical and administrative support from the INRENARE. Additionally, this Resolution supports the Kuna Congress' recommendation to designate the Kuna Yala area as a Biosphere Reserve and as a World Heritage Site.

Currently, there is an unpaved road, the Llano-Carti Highway, which cuts through the Kuna Yala Wildlands and is used day and night by merchants, both kunagan (wagas) and non-kunagan, to carry passengers and goods. This road has had negative effects on the area's environment, culture, and society. Unfortunately, the Kuna Congress, in spite of having a seat in the Nusagandi Mountain near the road, has no control over the Llano-Carti Highway.

The Kuna Yala possesses beautiful, pristine ecosystems rich in biodiversity. The area's waters are also rich in biodiversity—75% of the coral reefs can be found in a natural state. The Panamerican and Llano-Carti highways connect Panama City to Nusagandi, home of the Narganá Wilderness Areas QUE ES ASP; the trip takes about two hours.

## 4 Panama's Forests

Panama has a total surface of 75,717 km2. Located in Central America, the country occupies the southernmost section of the Mesoamerican Biological Corridor. It is bordered by Costa Rica to the northwest and Colombia to the southeast. Panama is recognized worldwide for having some of the most diverse ecosystems—the country has 8 of the 200 recognized 'ecoregions' in the world and its tropical climates host 12 of the 30 Holdridge Life Zones.

The country's vegetation can be organized in 24 categories, including: forests, savannahs, swamplands, marsh wetlands, mangroves, water-plant formations (floating and submerged), highland vegetation (páramo), woody vegetation and associated productive systems, homogeneous and heterogeneous forests, and others, such as productive systems and coral reefs. Most of the country's forests are found near the country's Atlantic coast, and are home to a variety of relatively untouched and well-conserved species, and include some of the most diverse ecosystems in Panama.

**Table 3:** Forest cover as a percentage of total area
Panama – 1992, 2000, and 2008

| | Years | | |
|---|---|---|---|
| | 1992 | 2000 | 2008 |
| **Total** | **49.32** | **44.91** | **43.28** |
| Bocas del Toro | 75.55 | 73.39 | 72 |
| Coclé | 13.97 | 13.22 | 10.83 |
| Colón | 58.87 | 53.93 | 51.29 |
| Chiriquí | 16.11 | 18.6 | 16 |
| Darién | 82.95 | 71.43 | 69.2 |
| Herrera | 4.37 | 3.99 | 3.52 |
| Los Santos | 5.6 | 7.38 | 6.76 |
| Panama | 48.39 | 42.48 | 40 |
| Veraguas | 28.54 | 26.76 | 27 |
| Comarca Embera-Wounaan | 92.54 | 91.56 | 90.05 |
| Comarca Kuna Yala | 88.28 | 86.96 | 86.13 |
| Comarca Ngöbe-Bugle | 55.11 | 43.12 | 43.7 |
| | | | |

Source: National Environment Authority (ANAM), 2008

As Table 3 shows, in the year 2000 Panama had 3,364,591 hectares of forest cover (45% of the total surface). By 2008, this figure had decreased to 43.3%, equivalent to 32,433.12 km2 (ANAM-CATHALAC, 2009). This number does not include secondary forests, which represent approximately 921,553 hectares. The yearly deforestation rate in 1992-2000 was 41,325 hectares.

Between 2000 and 2008, the forest cover lost 109,055.03 hectares, a decrease from 44.9% to 43.3% of the total surface. In this period, the yearly deforestation rate was 13,428 hectares, or 0.41% (ANAM-CATHALAC, 2009). Altogether, between 1992 and 2008, the deforestation rate was -0.71%, representing 33,531.61 hectares lost each year.

Panama had 43 protected areas in the year 2000, representing 26% of the country's surface. In 2006, according to the Report on the Protected Areas System, the total number of areas reached 65, or 34.43%; by 2008, there were 70 legally declared protected areas, representing 35.81% of the country's total area. In other words, in 1999-2000, 46,696 hectares of land came under protection and were recovered through reforestation.

Together, the provinces of Bocas del Toro, Darién, Panama, and the Comarca Embera-Wounaan account for 62% of all the forest cover. However, both Darién and Panama, provinces that include the Comarca Ngöbe-Bugle CONFIRM, have the highest rates of deforestation. Other vulnerable areas include the Veraguas savannah, Cerro Punta, Arco Seco, and the Comarca Ngöbe-Bugle, greatly affected by deforestation and unsustainable farming practices.

In 2008, the Comarca Kuna Yala alone possessed 86% of all forest cover. While deforestation rates have been very small over the last twenty years (1 or 2% in 1992, 2000, 2007, for example), the rate reached 3% in 2007-2008. However, deforestation is not noticeable in the Comarca due to the agroforestry systems utilized by kunamar producers. Secondary forests are always kept under a recovery process through natural regeneration (see Table 4).

Environmental degradation and social distress are directly connected to deforestation, which also has a very damaging effect on climate change. Because of these linkages, the only way for the State to achieve sustainable forest development is to also join the fight against poverty, illiteracy, hunger, discrimination against women, poor access to clean water, and overall environmental degradation.

Due mostly to expanding agriculture, deforestation can claim close to 13 million hectares of forests each year. According to the Food and Agriculture Organization (FAO), excluding the value of environmental goods and services, forest products, including NTFPs, accounted for approximately $70 million in revenues in 2005. Forests generate 10 million jobs and are home to millions of people, providing them with their livelihoods and economic activities, and nurturing their cultural identity.

In Panama, "forests resources" include all tree species and forest types, including primary and secondary forests, as well as lands with forest soils. Panama's forest patrimony includes all primary forests and the lands they occupy, state lands with forest soils, and secondary forests established by the government on public lands.

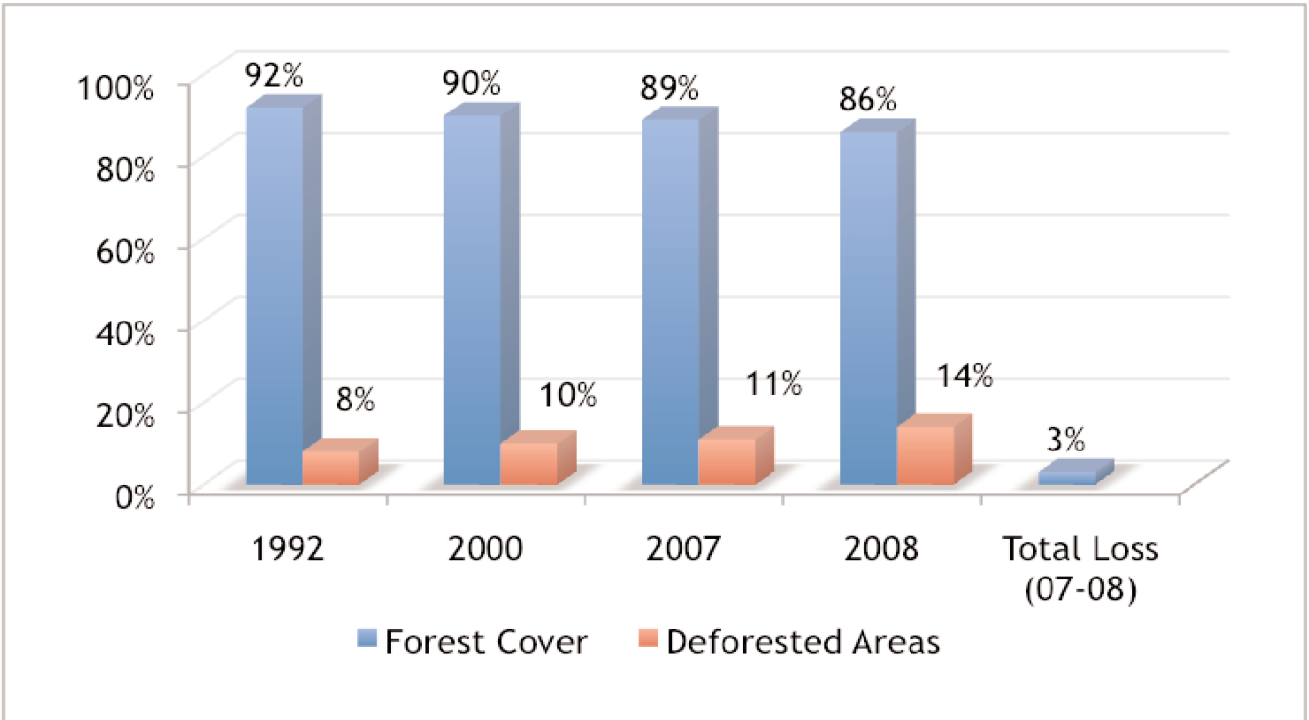
Forests provide a number of environmental goods and services, which usually go unaccounted in national economic estimates. Some of these goods and services are listed in the chart below.

Environmental Goods and Services Provided by Forests

- Supply and quality control of ground and underground water
- Watershed protection (reduced flooding, reduced soil erosion)
- Regulation of chemical changes in the atmosphere
- Habitats for local flora and fauna
- Coastal protection
- Climate regulation
- Protection against erosion and sediment control
- Plague and disease control
- Biomass and soil fertility
- Biodiversity conservation
- Natural resources and raw materials

Economic development in Panama has taken place mostly on the western, Pacific coast. Because of this, environmental degradation has affected this region the most. However, the lands near the Caribbean are now feeling the pressure of economic development, a situation that requires land use planning capable of minimizing environmental impacts and strengthening conservation areas in the region. Such planning requires the participation and control of communities currently living in the forests.

**Table 4:** Loss and Regeneration of Forest Cover in Kuna Yala
1992, 2000, 2007, and 2008




| Total Area = 4,480 km$^2$ | Forest Cover | | Deforested Areas | |
|---|---|---|---|---|
| 1992 | 4,121.6 km$^2$ | 92% | 358.4 km$^2$ | 8% |
| 2000 | 3,673.6 km$^2$ | 90% | 448.0 km$^2$ | 10% |
| 2007 | 3,225.6 km$^2$ | 89% | 492.8 km$^2$ | 11% |
| 2008 | 3,852.8 km$^2$ | 86% | 627.2 km$^2$ | 14% |
| | | | | |

Source: Castillo; ANAM, 2009

**Degradation and Changes to the Forest Cover – Main Causes**

Most of the causes behind changes in the forest cover and degradation come from outside the forest sector. These causes are the result of economic, social, and demographic processes, which are interrelated and present complex causal relationships between them. To better understand these relationships, it is necessary to differentiate between three different elements: agents, immediate causes, and underlying causes.

Inside the different comarcas there are five types of agents that can have direct impacts on forest land cover, which can ultimately result in degradation or in temporary or permanent changes to the ecosystems, depending on the particular land use. Inside the comarca we can identify three agents: nainu agriculture, currently under threat due to the loss of traditional knowledge and the prevalence of formal education, (b) small-scale Kuna loggers, and (c) agricultural monoculture. External agents include (a) timber companies and (b) subsistence agriculture and cattle farming carried out by non-Kuna populations.

Immediate causes of forest loss and degradation are rooted in, and have an impact on, the activities of the agents mentioned above. There are three immediate causes: (a) agricultural expansion placing forest under pressure, caused by nainu agriculture, (b) livestock expansion unto kuna forests and territories, and (c) claims for ancestral lands.

Underlying causes point to governmental policies, which fall short of protecting and conserving the forests. As these continue to be destroyed, it is clear that it is the government, and not local communities, the one responsible for this degradation, and that local communities are the ones working for the protection and conservation of forests.

Some of the underlying causes include political factors such the need for true and participatory democracy (versus simple consultations); timber concessions, to an unregulated forest industry; land tenure or security, which can lack proper management and security; loss of traditional knowledge, which happens when local communities ignore traditional norms governing their organization and land ownership.

## 5 Forest Policy and Legislation

The General Environmental Law of Panama sets forth a series of policies, laws, and norms governing environmental management. It promotes the idea of sustainability and capacity building, offers information about the environment, proposes and directs a new vision for development, provides guidance for the use of natural resources, and offers ways to control, monitor, incentivize, and sanction its policies and rules. All of these elements are designed to benefit the State, society, and the country's ecosystems.

The ANAM designed a Model for Sustainable Forest (MFS in Spanish), which closely follows the principles and basic guidelines included in Panama's National Strategy for the Environment (ENA) and the country's forest policy. The MFS gives people different options for forest activities, such as reforestation practices on both commercial and community scales; conservation and restoration; information about the emissions caused by deforestation and forest degradation; forest research and education; tools for institutional improvement and job generation; among others. These options aim to improve the commercialization and competitiveness of the forest, in order to generate benefits for the population and increased revenues for the country.

The MFS consists of three large programs: Program for Ecosystem Restoration; Program for Forest Management; and Program for Capacity-Building, Research, and Outreach. These programs emphasize the need to build a national forest history, a fact that is also mentioned in Part 5 of the National Strategy. All three programs use the watershed as the management unit, including protected areas to promote industrial and community-based reforestation, as well as improve social, economic, and environmental indicators. Moreover, MFS programs ensure that all sectors and stakeholders participate responsibly in the conservation and sustainable use of forest ecosystems to minimize vulnerability by engaging local communities in order and improve carbon sequestration and climate change adaptation.

Additionally, Panama also has an Action Plan to Combat Drought and Desertification, which follows the mandate of the United Nations Convention to Combat Desertification, which was legally ratified through Law 9 of 1996.

Current environmental legislation stipulates that all sponsors of development projects need to file an environmental management plan with ANAM, which must include a reforestation project that will offset the environmental impacts on the area's forests. The project will undergo review by the ANAM. Environmental legislation envisions this offset as a management tool to be applied in development projects at a national level.

On January 17th 2003, the ANAM introduced Executive Decree 2, which "approves the principles and basic guidelines established in Panama's Forest Policy," and thus officially supports the Forest Policy's scope and strategic guidelines, actions, and goals.

The Policy's principles and basic guidelines are included in Panama's National Strategy for the Environment and are therefore an essential aspect of the country's economic and social development policies. The Strategy has a number of critical mandates, including: "It is the duty of the State to grant the population a healthy environment that is adequate for life and sustainable development; to use and manage the State's Forest Patrimony in a sustainable way; to develop a national plan for forest plantations; to promote and support forest protection, among others."

Title III, Chapter 7 of Panama's Constitution, which governs the country's Ecology, establishes four fundamental principles around sustainable development and the rational use of renewable and non-renewable resources. These principles are:

– It is the fundamental duty of the State to guarantee that its population lives in a healthy, pollution-free environment, where air, water, and food provide for the proper development of human life.

– The State and every citizen must follow an economic and social development that prevents pollution and ecosystems destruction, and maintains an ecological balance in the environment.

– The State will define, observe, and apply rules that guarantee the rational use of the fauna found on land, in rivers, and in oceans, so as to prevent depredation and ensure its preservation, renovation, and permanence.

– Finally, the fourth principle defines, observes, and applies rules governing the use of non-renewable resources.

Title III, Chapter 8, which governs the country's Agriculture, stipulates that the State shall strive for the integral development of the agricultural sector. This development must achieve an optimal use of the soil and ensure a rational and proper distribution, utilization and conservation of the land, so as to sustain its productivity and satisfy every farmer's right to a proper livelihood. Additionally, Article 259 dictates that every land and forest concession must observe public interest and social well-being.

The Constitution stipulates that the State will give special attention to rural and indigenous communities , striving to promote their economic, social, and political participation at the national level; the State must also guarantee the rights and collective ownership of indigenous communities over the lands they require to ensure their economic and social well-being. Article 90 recognizes the ethnic identity of indigenous communities and ensures programs that promote their material, social, and spiritual development.

The above mentioned sections agree with Article 5, which legitimizes the country's political division into provinces and other entities, including the indigenous comarca.

The State Forest Patrimony was recognized in Law 1 issued on February 3rd 1994, which "establishes the Republic of Panama's Forest Legislation and other related dispositions." Article 10 stipulates that the Forest Patrimony comprises all natural forests, the lands they occupy, state lands with forest soils, as well as forest plantations established by the government on public lands.

Law 10 of April 12th 1995 ratified the full text of the United Nations Framework Convention on Climate Change (UNFCCC), finalized on May 9th 1992, in New York City. Law 88 of November 30th 1998 approved all parts of the Kyoto Protocol of the UFCCC and signed on December 11th 1997.

Resolution AG-0040-2001 of February 14th 2001 created the National Program for Climate Change (PNCC, in Spanish) as the entity responsible for assisting the ANAM in the implementation of all activities and committments to comply with UNFCC. The National Program for Climate Change is based in CATHALAC, the Water Center for the Humid Tropics of Latin America and The Caribbean. The Program has four sub-programs necessary for the implementation of international activities at the national level, including compliance, vulnerability and adaptation, mitigation, and public awareness.

The National Policy for Climate Change was approved by Executive Decree 35 of February 26th 2007, which upholds its principles, goals, and main action.

Executive Decree of January 9th 2009 created the National Committee for Climate Change in Panama (CONACCP), which works closely with ANAM in the implementation and monitoring of the National Policy for Climate Change.

## 6 Conflicts Among Forest Stakeholders

Who has ownership over Panama's forests?

Historically, conflicts among forest stakeholders have been directly related to the growth and expansion of activities such as mining, tourism, agriculture, urban development, and others. These factors have put enormous pressure on many forests across the country. In the case of hydroelectric dams, some of the associated impacts have been offset through mechanisms for ecological compensation, such as reforestation in especially vulnerable areas.

While some of the policies on land tenure and property rights have benefited many low income families, these policies have also contributed to financial and real estate speculation. In addition, they have contributed to reducing the lands available for agriculture and to conserving standing forests (non-apt for agriculture), but has forced populations to expand the agricultural frontier. This can be partly attributed to the lack of proper 'green' incentives, extension services, technical assistance, and funding to stimulate sustainable practices.

At the local level, the divide between poor and rich is reflected in their economic activities: the former practice slash-and-burn agriculture, the latter industrial cattle ranching. The main difference between these groups and activities is land ownership: those who do not have land must are forced into the forest and the mountains to find it. Rural dwellers and farmers go into protected forests and comarcas to practice slash-and-burn or simply to find a plot of land to sell to a wealthier party. This, in turn, originates of conflicts over the land.

The expansion of cattle ranching has been the result of the concentration of good, productive lands in the hands of a few. Cattle ranchers first took over lands on the Pacific watershed and then made their way inland. As land was consolidated in the west, many farmers and rural dwellers were forced toward the Atlantic in search for new land; by the late 1960s, new cattle ranching were being marked near the Atlantic and the western parts of Darién province.

Loggers also play an important role in these processes; when they do not own the forest lands, they lease or buy timber directly from the owners. This situation affects the Madugandi and Wargandi comarcas.

Indigenous comarcas are managed and protected according to their specific circumstances. In Kuna Yala, for example, local indigenous communities have complete control over the comarca, but this is not the case everywhere; many comarcas have seen some of their lands occupied by non-indigenous populations. In those areas where indigenous communities live in the forests and rely on them for their livelihoods, the State must work with the communities in a sustainable way to guarantee the protection and proper use of resources.

Many civil society groups and landowners in Panama have recently began to oppose those development projects from which they have been excluded, such as open-air mines and important hydroelectric projects. These stakeholders have created groups such as the Peasant Front Against Dams, later renamed as Peasant Front for Life. This group is composed of rural organizations that oppose large projects, which are likely to have serious environmental

impacts. Local groups like the Santeño Front Against Mining and some indigenous organizations are also resisting.

Other important currently debated topics concerning a large portion of the civil society, regard the potential payments for reduced deforestation and the distribution of these benefits among stakeholders, as well as the recognition of the rights of indigenous peoples, local communities, and other forest users, and how to address the fragile land tenure structure.

## 7 Conclusions

1. Indigenous reserves and comarcas are integral pieces of Panama's legislation and socio-political reality, in spite of the swinging pendulum of the changing governments. The indigenous movement believes that the comarca should not be subject to standard land concessions. On one hand, the ancestral relationship between Mother Earth, culture, and human beings needs to be respected; on the other hand, the comarca should guarantee the prevention of marginalization by other parties.

2. Free, prior, and informed consent is a fundamental right for Indigenous Peoples and local communities. Without it, they cannot celebrate or execute treaties and conventions, exercise their sovereign rights and protect their lands and resources, or generate and participate in processes to repair violations to their land rights and other rights recognized in these treaties.

3. PEMASKY is still not widely known, yet we believe it offers valuable positive and negative lessons because forests provide livelihoods, employment and cultural identity to the millions of people who reside in and depend on them.

4. By 2008, Panama's forest cover was 32,433.12 km2, or 43.3% of the total area. The total forest cover, however, is larger; these figures do not include secondary forests, which account for 921,553 hectares of forests currently undergoing natural regeneration or being used for agroforestry.

5. There are underlying factors that cause forest land cover change, and which originate outside the forest sector. These factors are the result of economic, social, and demographic processes, which are interrelated and present complex causal relationships between them.

6. It cannot be denied that in recent years, Panama has drafted important environmental legislation for the protection of forests, which takes into account participation by civil society and indigenous peoples. The General Environmental Law establishes a series of policies norms and instruments that govern environmental management. It promotes the idea of sustainability and capacity building; it offers information about the environment and sets the tone for and proposes a new vision for development; it provides guidance for the use of natural resources; and it offers ways to control, monitor, incentivize, and sanction its policies and rules. All of these elements are designed to benefit the State, society, and the country's ecosystems.

7. Historically, conflicts among forest stakeholders have been directly related to the growth and expansion of activities such as mining, tourism, agriculture, urban development, and others. These factors have put enormous pressure on many forests across the country.

8. Another source of conflict in forest areas is land grab by migrant settlers who take over 'presumably vacant' lots inside indigenous territories and comarcas. The settlers introduce livestock, and with that, clearcuts, timber removal, establishement of grasses, only to then sell or lease the land.

9. Panama's forests are currently in the hands of indigenous peoples living in the comarcas, farmers and rural people, and/or local communities; landowners and companies.