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IMPLEMENTING REDD+ IN NICARAGUA: AN INDIGENOUS PEOPLES' ANALYSIS

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BACKGROUND

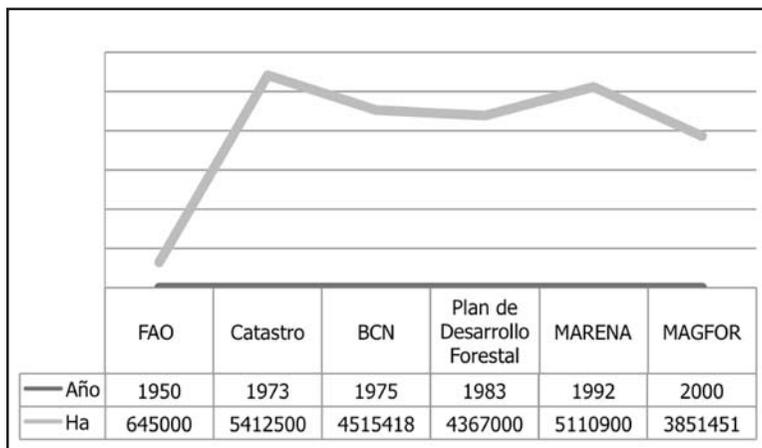
Central America's biophysical characteristics, as well as the characteristics of its current ecosystem, are indications that it is predominantly a forest region. The forested area of the seven Central American countries accounts for more than 60 per cent of its surface. In 2005, only 36.5 per cent (20.6 million hectares) of land in the region retained forests, which indicates that 13.5 million hectares have been cleared. It is estimated that over the past three decades, the annual rate of deforestation reached 375 thousand hectares, or a 2.1 per cent loss of vegetative cover per year (Soto and McCarthy 2008).

At the beginning of the 1990s, the Central American countries agreed to the Forestry Action Plan in Central America (Plan de Acción Forestal en Centroamérica: PAFT-CA), a product of regional consensus due to a common agenda on forestry issues. The Plan achieved a new dynamic in the region and allowed for the publication of the paper *Forest Policies in Central America: Analysis of Constraints on the Development of Forestry*.

Despite these achievements, market forces pushed Central America to give priority to economic and political sectors not fully compatible with the environment and forestry sectors. So deforestation reached levels of 416 thousand hectares in the first five years of this century, or 48 hectares per hour.¹

For its part, Nicaragua contributes 150 thousand hectares to that deforestation process annually.²

Figure 1³ (National Forest Inventory NFI-2009) refers to the massive amounts of forest lost in the country since 1950, the year of the greatest destruction of forests in the country (especially on the Caribbean coast), a product of timber exploitation by foreign companies, linked commercially with the Somoza family.

Figure 1. Estimate of deforestation between the years 1950-2000

Source: Inventario Nacional Forestal INF (Nacional Forestry Inventory NFI) – 2009.

This figure makes clear that governmental policies did not encourage rational and sustainable management of forest resources and did not have a vision of the pine and hardwood forests as potential resources for development, but saw them rather as a hindrance. Therefore, they were given a low economic value in the domestic market despite the fact that the international market might have granted them a higher economic value. This image of forests as having little value has become so pervasive that mainstream media—radio, television and press—publish prices of meat, sugar and basic grains daily, but are unable to publish the prices of different species of wood in the domestic or international markets.

However, in 2005, forestry activity accounted for 393 million Córdoba (Córdoba Constant of 1994. This year the exchange rate was from 6.38 in January to 7 Córdobas x USD1), equivalent to 1.25 per cent of the Gross Domestic Product (GDP) and six per cent of primary sector production. While the GDP grew at an average rate of 3.06 per cent over the period from 2001 to 2005 and the primary sector grew at a rate of 2.33 per cent, the forestry sector grew at a rate of 2.81 per cent—a rate above the average growth rate of the primary sector.

Therefore, it is believed that the combined national policy approaches implemented since the 1960s have led to the advancement of the agricultural border. Faced with population displacement, the poor peasants who have been dispossessed of lands in the central and northern regions of the country due to development policies that favor the agro-industrial and monoculture sectors, have found land where they believe it is available: on Nicaragua's Caribbean Coast. On the one hand, migrants are unaware of the system of collective ownership of land that exists on this side of the country, and on the other hand, they believe the economic logic that land is more valuable without forests because livestock and agriculture generate profits in the medium and short term.

On the other hand, we see that State policies have neither considered nor respected the intrinsic traditional relationships between indigenous and Afro-descendant peoples and the biodiversity that can be found in the forests. In many cases, the government also failed to take into account the collective ownership of existing territories in the Caribbean region. For the first time in the 1980s, Nicaragua, with support from the Swedish government, made a Forest Development Plan for the country, which sought to integrate industry into the forest, but without integrating other sectors.

It was not until 1987, in the context of the Sandinista Revolution when the Autonomous Government was established in the Caribbean Coast, that the consent of these peoples was taken into account. By September 1987, the National Assembly approved Law 28 granting autonomous status to almost half the national territory. This new status remains a challenge today for the coastal peoples because this implies the ability to develop skills for the self-determination of their own development.

At the beginning of the 1990s, after 10 years of war and with a new generation of neo-liberals in government, the pressure on natural resources intensified. By 1992, the Forestry Action Plan for Nicaragua (PAF-NIC), which sought to conserve, restore and use the forest, was completed. Another attempt was made in 2005, and it found that the forestry sector is central to

development in Nicaragua. However, deforestation has continued.

The results, published under the National Forestry Inventory (2009), indicate that the forest in Nicaragua currently covers only 25 per cent of the country, equivalent to 3,254,145 hectares. Of this, 98 per cent of the area (about 3,180,466 hectares) is made up of natural forest and only two per cent are forest plantations (73,679 hectares).

It is noteworthy that 62.7 per cent of the existing forests are concentrated in Nicaragua's Caribbean regions: 19.3 per cent (628,050 hectares) in the RAAS and 71.7 per cent in the RAAN. The entirety of this wooded area is located in the territories of indigenous and Afro-descendant peoples⁴ (See Figure 2).

What are We Talking About?

Nicaragua has three climate zones:

- a. Tropical dry zone which includes the Pacific plate up to 500m; this zone has rainfall between 700 and 1,500mm and average annual temperature between 25°C and 30°C;
- b. Subtropical transition zone which reaches the northern and central parts of the country between 500 and 1,500m; it has rainfall between 1,500 and 2,500mm and average annual temperature between 22°C and 27°C;
- c. Tropical humid zone which covers the Caribbean lowland and Rio San Juan from 0 to 500 m; this zone's rainfall is between 2,500 and 5,000mm and has an average annual temperature of 30°C.

Most of the forests in Nicaragua are located in the Autonomous Regions in the Caribbean Coast (Table 1). This large rainforest region is irrigated by several large rivers and is very sparsely populated. The Wangly River (or Coco River) is the largest river in Central America; it forms the border with Honduras. The Caribbean coastline is much more sinuous than its generally straight Pacific counterpart; lagoons and deltas make it very irregular.

The large biosphere reserve in Central America, BOSAWAS, is located in the North Atlantic Autonomous Region (RAAN) with an area of 728,434 hectares. It is the largest natural rainforest north of the Amazon rainforest.

Figure 2.



Source: MARENA. http://www.marena.gob.ni/index.php?option=com_content&task=view&id=58&Itemid=409.

The climate is predominantly tropical with high temperature and high humidity. The extent of forest is estimated at 25 per cent of the country which is equivalent to about 3,254,145 hectares. Of this area, 98 per cent (about 3,180,466 ha) is natural forest and only two per cent are forest plantations (73,679 ha).

Table 1. Status of Forest Resources in Nicaragua

Area of national territory	130,373 square kilometers (MARENA, 2007)
Population	5,484 inhabitants
Forest cover:	3,254,145 hectares
Percentage of national territory with forest cover	24.5%
Deforestation (annually)	150,000 hectares
Authorized volume	210,720 square meters/annually
Carbon and fuel consumption per capita	1.06 cubic meters
Nationally protected areas	2.16 million hectares
Protected areas in RAAN and RAAS Autonomous Regions	1.87 million hectares

Source: PFN. Centroamérica en el límite forestal. 2005. ProARCA-IUCN and National Forest Inventory 2009.

Nicaragua has the following four forest classification: broadleaf, coniferous, mixed and mangrove. The National Forest Inventory Report indicates that the broadleaf forest is the largest occupying 87 per cent of the total forest area (about 2,760,018 ha), natural conifer forest 12 per cent (374,739 ha), mixed forest 0.5 per cent (16,789 ha) and natural mangrove forests around 0.9 per cent (28,919 ha).

The forest coverage by department and autonomous regions indicate that 62.7 per cent of forests are concentrated on the Caribbean coast, (this percentage, the RAAN has 43.4%, the RAAS has 19.3%), Jinotega has 9.3 per cent and Rio San Juan has 8.9 per cent, among others, which means that almost 80.9 per cent of the country's forests are in areas with low population density and high poverty rates.

DRIVERS OF DEFORESTATION

General

Anthropogenic intervention in forests has come largely as a result of policies promoted by governments; actions which, as we said before, favor the advance of the agricultural border—a model in which forest resources are extracted in an uncontrolled and illegal manner. This, in turn, produces a drastic change in land use. In the late 1970s, Nicaragua was a leader in the production of meat and milk in Central America; however, in 1980, the sector was devastated by the war which negatively affected the production of milk. That decade was a respite for the conservation of forests because military action did not allow loggers to enter the mountain for logging.

At the end of the war in Nicaragua in the early 1990s, the government of Violeta Barrio handed over huge tracts of land, in what were called *Development Poles*, to members of the demobilized troops—both the armed forces and those who had participated in irregular armed groups of the counterrevolution—who were definitely not prepared for forest management in these assigned areas because many of them came from a farming culture rather than a forestry culture.

An important factor in this land delivery process was that it violated the system of collective land ownership of the Indigenous and Afro-descendant peoples which is established in Nicaragua's Constitution and in Law 28 which created a Statute of Autonomy for Nicaragua's Caribbean Region in 1987. This colonization, promoted by the Barrio government, marked a new milestone in the resumption of strong migratory processes in the area following the war. Continuing today, this process puts even more pressure on forest resources.

Sustainably managing forests that still exist in the country especially within the Autonomous Regions is the biggest challenge facing the national, regional, municipal, territorial and community institutions as taking no action assumes a high risk when faced with an accelerating loss of natural forest cover. This affirms that indigenous peoples and Afro-descendant com-

munities play an integral part in this process and it will only come through the reaffirmation of their ethnic identity and culture.

The arrival of this migrant population to the Autonomous Regions entails a high rate of deforestation mainly due to live-stock development and to the high consumption of firewood which is estimated nationally at 3.97 million cubic meters representing more than 55 per cent of net energy consumption in the country.⁵ According to the Council of the Caribbean Coast, this area has more than 5.8 million hectares on degradation condition. Of this total, approximately 1.3 million hectares of soils are suitable for food production and agribusiness.

The estimated annual rate of change (ARC) in both the Northern and South Autonomous Caribbean Regions of the country is being quantified by the forest management program which is driven by the INAFOR through the University of the Autonomous Regions of Nicaragua's Caribbean Coast (URACCAN). Although the results have not yet been officially published, there are estimates that the ARC is 39,000 hectares per year in areas outside protected regions.

In an interview of a bakery employee in Bluefields⁶, *Porfirio*, he indicated that he occasionally goes to the protected area of Rio Indio-Rio Maíz where trees are cut for charcoal which is sold in Bluefields. For this operation, he ventures into the protected area at night to avoid the military personnel guarding the area.

The rate of deforestation indicated above will be difficult to reverse if the following actions continue: rapid population growth, the creation of new settlements, the worsening poverty levels within the region and, of course, the insufficient coverage (technical and budgetary) by the national and regional bodies called upon by legal mandate to monitor forest activities especially those related to deforestation.

In that sense, the document on the Strategy of Development for the Nicaraguan Caribbean Coast indicates that between 1995 and 2005, the population in the autonomous regions was doubled

mainly by internal migration from the Central-Pacific of Nicaragua to the Caribbean of the country. This reality imposes additional pressure on land, environment, forests and basic services.⁷

In addition to the above, it should be noted that Hurricane Felix completely changed the forest physiognomy of the Caribbean. This hurricane destroyed more than 1.3 million hectares of forest, leaving about 10 million cubic meters of fallen wood available for immediate use.

This situation would have meant that national and regional authorities had been more flexible in their rules and controls in order that the community had achieved a high utilization of the fallen wood and thus have been benefited. But this did not happen because both municipalities and the central government maintained the same procedures and formalities to be observed in normal situations for forest exploitation. In this way, after three years of being on the ground, the wood of those species known as soft wood are rotten, but it is still possible to use the fallen hardwood.

Activities which Encourage and Intensify Deforestation

In the Autonomous Regions, the term *mestizo culture* has been synonymous with deforestation. This is because indigenous peoples and Afro-descendants have the strong perception that mestizo peoples are the main predators of the forest. Mestizo peasant are still seen as individuals involved in less than environmentally harmonious activities and who have a heightened belief in a capitalist standard of enrichment.

This way of life and sense of valuing assets began to permeate the belief systems of indigenous and Afro-descendant peoples to the point that it is possible to find mestizo, indigenous and Afro-descendant individuals alike who contribute to deforestation. According to the Deputy Director of the National Forestry Institute (INAFOR), Engineer Jorge Canales,

Indigenous peoples practice deforestation and burning in an extensive way, but there is one key element: subsistence practices are less

intensive. They (the indigenous peoples) burn ¼ of a block per family, and this is permissible because they do not have a commercial purpose compared to the extensive practices of the mestizos (Canales 2009).

The model of the Rama peoples on the sustainable use of natural resources⁸

According to Rama people interviewed, they make use of one hectare of wood most of their life. In the first two quarters of this area, they rotate their crops (maize, cassava, malanga, musaceas) and when the soil reaches its production limit, these quarters are left fallow and not used again for two to three years while the other two quarters of the block are used; the rest remains fallow, and this cycle is repeated again and again.

As for the amount of wood used, Rama communities consume about 250 feet of wooden boards and 400 palm leaves every eight to ten years. The other method of survival of the Rama people is hunting and fishing which provide them part of their diet.

Source: Information collected by A. Balladares and D. Siu (February 2010).

In the Autonomous Regions, there is a strong tendency to change the patterns of land tenure as we experienced during the last week of June 2010 when the main road in the RAAN from the crossroad of Prinzapolka toward Sahsa was blocked by hundreds of mestizos who have settled in indigenous territories. They claim the individual title of the land as opposed to several laws that establish the collective or communal ownership of land according to indigenous tradition. This was a clear demonstration of the pressure of the agricultural border and the trend to change land use toward livestock activity.

This paper does not intend to find faults based on ethnicity, but circumstances have shown that although both Mestizos and Indigenous and Afro-descendent peoples practice slash and burn agriculture, the Mestizos do it in such a way that the change in land use is permanent and the land is used in the following order: agriculture, pasture and livestock. Indigenous and Afro-descendant peoples' land use is temporary, cyclical and rota-

tional, giving the ecosystem time for renewal. Obviously, the impact on the environment is different. A second tier of deforestation is created by logging, firewood collection, mining and road infrastructure. The last two issues are not addressed in this study.

Mestizo Communities

The arrival of the Mestizo ethnic group to Nicaragua's Caribbean Coast is associated with Nicaragua's incorporation of the territory formerly known as *Moskitia Territory* at the turn of the 19th century. Therefore, from the perspective of those who live on the coast, Mestizo people are considered a post and neo-colonial culture. At present, the Mestizo ethnic group is dominant in the political and economic life of the country.

The predominance of this population at national and regional levels, combined with its economic model based on agriculture and livestock, is what has driven deforestation.

Deforestation among the Mestizo communities is more intense in non-coastal municipalities.⁹ Its causes are attributed to:

- Illegal extraction of timber and firewood¹⁰ for personal consumption and sale (the average size of a Mestizo family is 5-9 people so its demands on the forestry sector will always be greater than that of Indigenous and Afro-descendent families);
- Illegal extraction of timber for commercial sale in local markets;
- Expansion of grassland areas (for this activity, between 15 and 100 hectares of forest are cut usually every two to three years);
- Small and medium-scale shifting cultivation;
- Illegal buying and selling of land;
- Uncontrolled agricultural burning to increase soil productivity. This cultural pattern would jeopardize the implementation of any policy that focuses on payment for environmental services as a method to stop deforestation.

Photo 1. Firewood stored in Mestizo housing in Siawas, municipality of El Tortuguero, RAAS. September 09, 2009. Photo taken by Shanda Vanegas.



The amount of area deforested by a Mestizo family ranges between 15 and 100 hectares of forest, and usually this extension of land is required every two to three years.

This rate of deforestation clearly reveals that the Mestizo economy is not just meant to meet their basic needs like food and education, but also to accumulate capital in order to possess the greatest possible number of livestock.

This cultural pattern would jeopardize the implementation of any policy that focuses on payment for environmental services as a method to stop deforestation.

Source: A. Balladares & D. Siu (Notes from March 2010 for this study).

Indigenous peoples and Afro-descendant communities

Unlike the Mestizo ethnic group, indigenous and Afro-descendant peoples are in the minority in terms of population, political participation and economic development both at the national and regional levels. Their link to conservation and the

sustainable management of the environment has allowed them to live in their communities in a way that is rational and non-consumptive and which requires little circulation of money. Though many would classify this situation as an incidence of high level poverty, this lifestyle has allowed them to retain within their territories, as mentioned earlier, the last forested areas of the country according to results of the National Forestry Inventory (INF).

The culture and ways of production of indigenous and Afro-descendant peoples are traditional systems designed to preserve forests with gradual, rational and rotational usage to meet their basic needs. In these systems, they remove only the resources absolutely necessary to meet those needs.

Source: Boork, Edgar. Trustee of Kuakuail II. Interviewed on January 22, 2010, by D. Mairena.

This way of life is sometimes violated by the actions of a few corrupt leaders who have allied themselves with government officials and have been granting licenses to large foreign and domestic dealers for the use of forest resources. In the last five years, there have been cases of Indigenous people who have tried to sell collectively owned lands albeit this activity is illegal. The intervention of the current government authorities, on behalf of indigenous peoples, has stopped these attempts from going any further.

Mapiinicsa Case

According to the newspaper La Prensa, on 20 September 2009, the logging company MAPIINNICSA and indigenous territorial authorities from Awas Tingni (including Tunkusna and Tuburus communities, note the author) signed a contract through which the firm exploits 17.630 ha., which just a year ago were titled in favor of the indigenous people. The company owned by Clement Marie Ponçon, is paying \$15 per cubic meter of precious wood species like mahogany, and \$7 per cubic meter of other species. The interesting thing here is that the land was titled in favor of the community after an international trial in the Inter-American Court of Human Rights that took more than five years against the state of Nicaragua. This

case became a worldwide paradigm because it was the first time that an indigenous community won a case against a nation-state and claimed its rights. In previous years, the same company had *bought* land in Awás Tingni, but the General Attorney Office canceled the operation. Later, the community rented the land thus giving away the resources there. Some indigenous leaders have denounced such operations and they continue to struggle for their causes.

Another factor of deforestation identified in this study is the increase in the practice of the annual burning of grasslands and pine forests in the savannah of Puerto Cabeza (with fires that are often uncontrolled) with the goal of obtaining fresh pastures after the rains begin. The intention when they burn the grassland is that the new tender grass will attract animals to hunt and/or be good for grazing the few cattle that exist in the area.

Photo 2. Grassland fires on the savannah of Puerto Cabezas (miskitu territory), RAAN. January 22, 2010. Photo taken by Dennis Mairena A.



Other effects of forest fires are: the reduction of forested areas, economic losses, disappearance of or decrease in water resources, exposure of soil to erosion, desertification, loss of biodiversity, increase in greenhouse gases, increase in temperature, reduction of environmental and ground moisture, alterations in human life patterns and migration of local wildlife.¹¹

Invasions and Displacements

We have seen that the state has no ability to apply the law to those engaged in forest burning and deforestation. Many ranchers and farmers who violate the laws have gone unpunished and this lack of strict implementation of the law has further accelerated the severity of cases to such an extent that they have caused the displacement of Indigenous communities.

In meetings involving the Territorial Government of Rama, the Community Board of Tic Tic Kanu and Mestizo settlers who have arrived in the area, there are continuous discussions about the issue of boundaries between communities, when in fact, the settlers are invading communal lands of the Rama people. A more critical case is that of the Punta de Aguila (Eagle Point) community where Mestizo settlers have displaced several Indigenous families from their cultivated lands to the point of causing physical injury to one of them. The municipal authorities have filed complaints with the National Police and the Public Ministry, but these have shown no ability to respond solely based on the rights of Indigenous Peoples.

Some members of the Rama community have expressed:

we have the title to our territory, but we feel threatened by Mestizo peoples; we cannot move freely in our forests; the areas where our natural medicines are extracted have been turned into pastures; we cannot take a tree to sell it in Bluefields City when we need some money because a family member is sick.

This situation makes us wonder: Are the indigenous communities the owners of their own territory? Are these territories inalienable, descriptive and inalienable? Are the indigenous peoples not the ancestral owners of these territories?

Some communities like Tasba Pouny in the RAAS have used the police to cope with these circumstances, allowing them to

regulate the entry of settlers and to reduce the illegal extraction of natural resources within their territories. Some respondents still believe that the results of the presence of the security forces, police and army are still not entirely satisfactory.

Source: Information compiled by Balladares, A., and Siu, Danny. February 2010.

The scenario described above about invasion, displacement, migration, slowness or inability of authorities to deal with issues was taken up by the current government of National Unity which was created during the last week of August 2010. Within the national army, an ecological battalion composed of 700 soldiers was created. Its mission is to protect the natural areas of forests against deforestation, migration and the incursion of illegal loggers. It seems, then, that the conservation of forest reserve areas has become a matter of national security. We must wait for time to tell us the results.

Effects of Deforestation

According to authors like Koopen and Holdridge,¹² the relative humidity in an area within the humid tropics (specifically in the case of the Caribbean regions) can reach up to 90 per cent during the month of July; its temperature can range from 22 to 30 degrees Celsius, and precipitation ranges between 4000 to 4500mm.

These figures have now been altered due to deforestation; studies published today by IUCN estimate that by 2010, temperatures will have risen from 1.5 to 1.9 degrees Celsius above what they were in 1990; precipitation will have changed to the point that severe flooding will have started and; the relative humidity will have increased thereby causing hydrological destabilization.

Regardless of ethnicity, religion, color and sex, individuals all experience the effects of deforestation on climate.

According to the National Research Institute for Development (INIDE), municipalities are classified as coastal and offshore. In the particular case of indigenous and Afro-descendant

territories, most of these are located in coastal areas, both in the RAAN and the RAAS, and have a close connection to forests, grasslands, pit lands, wetlands, mangroves and fisheries.

From this logic, it is possible to begin to differentiate between the effects produced by deforestation in each ecosystem.

Photo 3. Affected area by burning of forests in mestizo settlement in indigenous communal lands. Bilwi Road-Sumubila. Photo by D. Mairena. April 13, 2010.



In non-coastal areas, the major impacts of deforestation are:

- The ground is bare and exposed to erosion;
- Loss of soil fertility; loss of chemical elements in the soil as a result of leaching (each time the productivity performance is lower);
- Eco-systemic imbalance;
- Drought in major sub-watersheds and micro-watersheds;

- Loss of flora and fauna;
- Increased poverty;
- Shortage of quality drinking water;
- Increase of poverty levels;
- Increased intestinal and skin diseases.

In coastal zones, the principal effects are:

- Sedimentation that adversely affect corals and reefs;
- Closure (product of sedimentation) of the main waterway communication between communities;
- Flooding of the main sub-watersheds and micro-watersheds;
- Loss of products grown based on traditional and cultural criteria on the shores of the sub-watersheds and micro-watersheds;¹³
- Loss of vegetal species with medicinal properties;
- Decrease in productivity of fisheries;
- Loss of cultural identity due to a break in the links that exist between life and the environment;
- Limited access to forest resources to meet basic needs in and out of the home;
- Increased poverty;
- Increased intestinal diseases due to the poor quality of drinking water.

In addition to these effects, there are those directly related to abiotic factors (climate, soil, rainfall and humidity).

Without a doubt, the aforementioned effects are being felt throughout the country and the Caribbean regions. Arresting the impacts of these conditions becomes a challenge for the authorities, who, through their policies¹⁴ have led to the development of the forestry sector as well as defense, environmental protection, climate change and risk management. Now the Autonomous Regional Government will need to create specific

mechanisms and objectives for adaptation according to the context of each territory without undermining cultural, traditional and legal systems as well as indigenous peoples' rights.

LEGAL FRAMEWORK FOR THE IMPLEMENTATION OF REDD+ IN THE CARIBBEAN AUTONOMOUS REGIONS

General

The development of Nicaragua's legal framework from 1992 to 1999 was made part of a reconstruction process of technical and material capacity of state agencies tied to forests (MARENA, INAFOR, MAGFOR). Such reconstruction was part of comprehensive measures for conservation and responsible consumption, and it was the first step to creating indicators for good management and processes for voluntary forestry certification.

In Nicaragua, it could be argued that the legal framework for forestry is wide enough to introduce the topic of REDD+. However, it should ensure the safeguarding of the rights of indigenous peoples and Afro-descendant communities permanently.¹⁵

In that sense, Law 28 on the status of autonomy and law 445 on indigenous territories and collective rights, should be the frameworks for all initiatives of REDD+.

The interviewee F. Buitrago has a similar view, saying that "the creation of a new legal framework for the implementation of REDD is unnecessary." He noted that the important thing is to understand that REDD will involve all state agencies and therefore, its governance should be decentralized. F. Buitrago stated that:

this issue can not only be managed by MARENA, but must engage the Ministry of Health (MOH), the Ministry of Education (MINED), and MAGFOR in addition to MARENA; but it is not enough to have just the efforts of one ministry—they need to work together to legislate in a comprehensive manner.

In order to provide evidence for the above comments of F. Buitrago¹⁶ it is necessary to cite a few articles of the various

environmental laws which confirm that it is not necessary to create a new legal framework for the implementation of REDD+ in the country:

Law 217: General Law of the Environment and Natural Resources

As set out in Law 217, MARENA has the power to:

morally recognize natural or legal persons and institutions at the forefront of protecting the Environmental Natural Resources, and it may also establish and implement a policy of economic incentives and benefits targeted at those who contribute through their investments to the protection, improvement and restoration of the environment (Articles 38 and 39 of Law 217).

Law 462: Law of Conservation, Promotion and Sustainable Development of the Forestry Sector

INAFOR's power also exists:

to prohibit the cutting, removal or destruction of trees in those species and areas that are endangered, those that are registered in the national list and those in the international conventions ratified by the country, with the exception of trees from plantations that are registered with the National Forestry Registry (Article 19, Law 462).

Similarly:

the State shall promote and encourage the restoration of forests through protection and conservation and establish rules to ensure the restoration of conservation areas. Forest Restoration Areas are those that are not covered by forest vegetation and which have natural conditions which make them suitable for forest use, guided by the aim of conservation and preservation (Article 28, Law 462).

Regarding the Production of Oxygen and Carbon Sequestration, it seeks to:

create the Fund to encourage forest owners to opt for the preservation and management of the forest in order to produce oxygen for humanity. The Fund will be supplied with resources that the Government of the Republic negotiates in the international arena, within the carbon sequestration and environmental preservation programs.

This matter shall be regulated (Article 29, Law 462).

It is up to MAGFOR (Article 6, Law 262) as a State institution:

to establish an incentive policy which has the basic objective of promoting forestry development, promoting the incorporation of natural or legal persons in activities of appropriate management of forest resources, and involving them in increasing the national forest cover and the reversal of the deforestation process suffered by the country (Article 37, Law 462).

Throughout this process of creating legislation and management tools, it appears better to speak about Payment for Environmental Services rather than carbon market as an economic alternative to benefit landowners in forested areas. Actually this has been the political position of Nicaragua during the UNFCCC negotiation sessions.

National Environmental and Climate Change Strategy

On April 6, 2010, the government of Nicaragua announced the National Environmental and Climate Change Strategy and Action Plan. This strategy emerged after much discussion between MARENA, Ministry of Education, Ministry of Health, INAFOR and others, but the public was not adequately consulted about it. The overall national strategy on climate change is based on the recognition of the rights of Mother Earth; it opts for the sale of environmental services; it calls attention to the ecological debt of developed countries and it rejects the carbon market. The action plan has a strong focus on education and environmental awareness to the public. This strategy does not mention anything on REDD+.

Development Strategy for Nicaragua's Caribbean Coast

The strategy for the development of Nicaragua's Caribbean Coast is a new management and guidance tool for the region, one whose main purpose is developing an economic, political and social reality for restoring the rights of the inhabitants of the autonomous regions of the Caribbean. An alternative to the

economic development in the region is the rational use of forest resources through a program of use that combines income for oxygen, forest management and sustainable industrialization in modules of 20,000 ha per year that include reforestation.

The strategic plan, through its program of defense and environmental protection, climate change and risk management, further justifies what was previously stated, revealing that environmental degradation is a matter of emergency and national security. It is therefore urgent to activate a sustained effort of the state, using public forces if necessary, to stop environmental degradation in the Bosawas Biosphere Reserve and Indio-Maiz River, the Cola Blanca, Cerro Bolivia and Wawashang Nature Reserves, for the protection of RAMSAR sites, coastal wetlands, and vulnerable ecosystems such as Miskitu Cays, Pearl Cays and Corn Island.

Given this regional development strategy, one problem that arises is the case of administrative procedures, which as we shall see, needs to be adjusted to actual needs and abandon procedures that prevent the use of these resources by their owners. Most indigenous communities in the Autonomous Regions of Nicaragua's Caribbean Coast use the forest as a source of plant and animal foods and therefore it is closely related to food security and livelihood. Few communities perceive the forest as a source of generating foreign exchange and capital growth for attaining wealth as perceived in Western societies. However, as a way of overcoming poverty and addressing social and economic impacts, Nicaragua's government has designed the Caribbean Coast Strategy which allows the rational exploitation of the forest by the community.

Most of those interviewed for this study perceive that through these political lines, financial resources have been provided to investors dedicated to buying and selling timber. As a result, the community receives little economic gain. These two cases illustrate such condition.

Access to forest resources

The RAAS Case is one in which the company IBAN DUSA (Medlar Tree) has approved a General Management Plan to use 16 forest species, but due to lack of money to pay all taxes to the municipality and to MARENA and INAFOR, the community has chosen to sell the mahogany and granadillo wood to an investor in the timber industry. These investors are always hovering in the area because they know the financial weaknesses of the communities.

This problem can be attributed to legislations on forest that do not provide a viable option for communities to use their forest resources. For example, a law could establish a moratorium on taxes in order to develop the market of forest resources. According to interviews, the law should establish a mechanism that would allow low-income communities to have access to a small-scale forestry permit so they can pay their taxes after the sale of wood and not before removing the trees.

Source: (Information collected by A. Balladares and D. Siu, February 2010).

The RAAN Case

As coastal peoples, we see that we have resources such as red and white wood, but we cannot extract these because administrative procedures are very expensive. Once prepared, the management and extraction plan enters a slow process for approval; meanwhile the wood is lost—it rots (this refers to timber felled by Hurricane Felix).

My plan is to extract 4,000 cubic meters, and I had it approved since two years ago, but the wood had already deteriorated...it is also expensive. I don't have money to get new permits so it becomes necessary to extract the wood illegally.

Given this situation, the large loggers come and propose to us that they will pay and get the permits for taking the wood. The cost that the municipality office requires is a high percentage per board foot plus a dollar per cubic meter to approve the permit. In total, I need \$4,000...where would I get that if I hadn't extracted the wood?

The authorities need to be more flexible in facilitating permits so that we will be able to sell the small amount of (fallen) wood that we have (in the forest).

Source: Interview with E. Boork, in Kuakuail II–Tasba Pri. Dennis Mairena.

Just as the administrative procedures are difficult to fulfill, it seems that these are not designed to allow the legal extraction of timber by the communities; such arduous procedures and expensive fees have left no choice for community members but to illegally extract fallen trees.

Referring to this illegality, the documentary video *Emergency in Bosawas: The Struggle of the Mayangnas* (2010), presents the state's inability to deal with the problem. It also indicates that in order to bring order to the illegal system of extraction, the judiciary needs to be strengthened. Currently, both the police and the judicial system in Bonanza, RAAN, have low capacity for action to stop illegal loggers and migrants. For example, the above mentioned video signals the lack of a Public Prosecutor in the area and this makes it impossible to bring criminal charges against illegal loggers.

In these circumstances, the development model of the Caribbean Coast needs to overcome these problems by establishing a link between traditional and state systems. It needs to revitalize and strengthen the community government and balance this with the environment. Otherwise, it will carry major consequences that will threaten the survival of indigenous peoples and will lead to an increase in the already high rates of extreme poverty.

Education and Natural Resources

The inclusion of indigenous peoples, principally women and children, in the national laws and policies.

One of the great weaknesses we found in the laws is that they do not promote educational policies on conservation of natural resources with the young population. The only direct mention that we found in this investigation on this issue is Article 37 of the National Policy of Forestry Development of Nicaragua which states in Article 37 that:

The State shall establish a policy of incentives to promote forestry development, promote the incorporation of natural persons or bodies in appropriate management activities of forest resources and ensure their participation in the increase of the national forest mass and the reversal of deforestation the country suffers. The Ministry of Education, Culture and Sports, will include in the subject of practices and activities that each student, from the third grade of primary school to the fifth grade in high school, will plant four trees, whether fruit, lumber or ornamental, preferably close to watershed or any sources of water or river banks during the year of study.

Despite this provision, curriculum reforms are still needed to improve environmental education for children of Nicaragua's Caribbean Coast. Some community leaders argued that education is deficient in indigenous communities and they perceive this situation as a hindrance to the development of these communities. In some sense, this idea is paradoxical because the indigenous communities are the only people on the planet who have been able to establish a balance between human needs and the capacity of ecosystems even if this economic model is based on early systems such as hunting and gathering. In short, the creation of educational programs for indigenous peoples requires special attention in order to preserve this conservation culture that indigenous peoples have inherited.

Civil Society and Climate Change

The newly created Nicaraguan National Alliance on Climate Change (ANNCC), which brings together recognized environmental NGOs in the country, started in the second half of 2010 a series of consultations with civil society partners on the National Environmental Strategy and Climate Change. The intention of this process is to deliver the comments to the government on the above strategy, and perhaps, induce policy changes. This consultation process, however, came too late because the strategy was already issued; therefore, the government may ignore any suggestion for changes.

All these efforts show a collective and common interest on the issue of climate change, but there should be means of proper communication and coordination.

It seems that Nicaragua's legal framework provides sufficient possibilities for the implementation of the REDD mechanism and the assurance of the rights of indigenous and Afro-descendant peoples concerning territoriality and collective rights.

Despite this, a critical element for the protection of forests is related to the flow of finances and the final destination of those funds. In Nicaragua, the central government, through the Ministry of Finance and Public Credit, transferred 25 per cent of the taxes collected on the sale of timber to the Indigenous Territories which have approved licenses and permits for the use of natural resources. According to some interviewees from the communities, there is no transparent, fair or standard set of rules guiding access, timing and distribution of those benefits in the communities; therefore, they fear that the same problems might occur if these aspects are not considered when promoting negotiations under the REDD+ initiatives.

Case: Transfer of Funds

The interviews yielded a number of aspects of violations of the rights of indigenous peoples related to forestry laws. Among these, we will refer to the economic aspect of forestry laws related to the tax distribution system. While the rule of Nicaragua gives 25 per cent of taxes to the communities in which licenses or permits are approved for use of natural resources, this mechanism lacks instruments to ensure access and transparent distribution of those benefits in communities. Some community leaders expressed that the Ministry of Finance and Public Credit neither gives the amount of money established in the law nor does it deliver this amount on the deadline set. These irregularities significantly affect the development of the communities.

In addition, respondents commented that the problem with the transfer of funds to communities hinges on two issues: the first is the lack of capacity for social control over the funds, and the second is the lack of internal instruments in Indigenous communities and territories to ensure good social investment. A classic example to illustrate this point is that corrupt community leaders hold 25 per cent of these currency transfers from the Ministry of Finance and Public Credit for their personal needs.

During the case study, respondents said that the leaders end up living in the cities of Bilwi, Bluefields, Bonanza or Rosita, and they do not provide any more information to the community.

It is absolutely necessary to create legal instruments to promote social investment through a community development model which neither obviates traditional customs nor facilitates the buying and selling process of timber and other forest resources for the capitalists.

A. Alemán, in an interview, reinforced this idea. He pointed out that prior to negotiations and coordination of legal instruments, it will be necessary to define the working mechanism through specific stages in order to monitor and assess the potential impacts of REDD+.

REDD+ AS A MECHANISM FOR DEVELOPMENT?

To answer this question positively, it is necessary to integrate several factors in order to maintain a balance between the forest mass, the peoples, their culture, and their rights. The task of creating specific mechanisms for this is not easy, especially where illegal extraction of forest resources is a source of income for hundreds of Caribbean families and when the institutional capacity of law enforcement is weak.

Regardless of the mechanism developed by the authorities, it must be proportional, i.e., it must control illegal logging and restore degraded areas, but without affecting the household economy. Therefore, it is necessary to seek an alternative that encourages the owner of the forest to continue the hard labor necessary to preserve the environment for the good of mankind, but at the same time it allows that individual to financially support his/her family.

As a third world country, Nicaragua is not part of the big polluters, instead it possesses and preserves the forests that capture CO₂ emission from others. In view of this, the measures of encouraging conservation of the forests are the only way to ensure that this inheritance will exist for future generations.

Therefore, the incentives to protect the forest must be greater than the income people would receive through the extraction of timber.

As reported by D. Mairena in the article titled “The agricultural frontier mentality arrives for coastal politicians” (an article which was widely circulated by e-mail), one valid alternative for stopping deforestation is REDD+; REDD+ could become an additional mechanism of development as long as the mechanisms respect the rights of indigenous peoples and forest owners. It is clear that we need to know the progress of negotiations on REDD+ within the discussions on climate change (UNFCCC) and it is also necessary to continue the analysis of the experiences of the pilot projects of the World Bank and UNDP in order to make the necessary adjustments to ensure the protection of rights of indigenous peoples to their territories and resources.

Many indigenous peoples in the world are afraid of REDD because of the risks it presents to their rights, to their lands, territories and resources. But in Nicaragua’s Autonomous Regions of the Caribbean, there is a comparative advantage over other countries in negotiating REDD mechanisms in such a way as to secure the rights of indigenous peoples because we have the Statute of Autonomy (Law 28) and the Law on Indigenous Territories (Law 445) (Mairena 2010).

The current government of Nicaragua has been taking a very cautious position in respect to the REDD mechanisms. While it is true that Nicaragua is among the first 15 countries selected to pilot REDD based on the plans of the World Bank, the government has not decided what to do about it. In almost all of the countries selected, there have been problems related to the consultation process and the process of free, prior and informed consent. In many of the countries with REDD pilot programs, the World Bank is being questioned due to the lack of transparency in the decision-making processes, especially when those decisions affect indigenous peoples’ territories.

Advance of the REDD Process in Nicaragua

In Nicaragua, more than 60 per cent of emissions of greenhouse gases (three times the world average and twice the Latin American average) are caused by the change of land use, i.e., deforestation and forest degradation.¹⁷ There are five factors that cause this situation: extreme poverty; an increasingly frequent and strong incidence of extreme natural phenomena; the expansion of the agricultural frontier; lack of state capacity to implement the law; the lack of an international framework to provide positive incentives for reducing deforestation and forest degradation.¹⁸

At the 13th Conference of the Parties (COP 13) of the United Nations Framework Convention on Climate Change (UNFCCC), decision 2/CP.13 establishes that “parties should propose a system of policy approaches and positive incentives to reduce emissions from deforestation and forest degradation and the role of conservation, sustainable forest management, and improvement of forest carbon stocks.” This led to the creation of the so-called Forest Carbon Partnership Facilities (FCPF). This is in addition to national efforts to raise the standard of living in rural populations, which must take into account the rights of indigenous peoples and local communities and traditional knowledge. It should be designed to cope with the consequences associated with the development.

In Central America, the proposals of the following countries were approved for inclusion in the World Bank’s REDD project: Panama, Costa Rica, Nicaragua, El Salvador, Honduras and Guatemala.¹⁹

By 2008, Nicaragua was reported to be among Independent Forest Monitoring’s global projects.²⁰

In this regard, in Nicaragua the R-PIN has been approved and the World Bank has allocated US\$200,000. Once Nicaragua submits the R-package to the FCPF, it will be able to receive an additional \$3.2 million for the demonstrative phase. Up to this moment, the government has met 80 per cent of the contractual conditions to get the disbursement; now it just needs to sign the grant agreement with the World Bank.

Nowadays the Ministry of Environment (MARENA) is developing the first draft of R-PP (Readiness Preparation Proposal) to be submitted to FCPF in September, to be analyzed in the PC (Participant Committee) in November 2010. This first R-PP draft is being prepared with the financial support of the Technical German Cooperation (MASRENACE-GTZ Project). Once the government has the \$200,000, it will start the detailed formulation of R-PP, followed by massive consultation process.

On the other hand, the government has conducted a video conference with UN-REDD to analyze the conditions to work with in Nicaragua and to know about funding. In this regard, UN-REDD expressed that it does not have enough financial resources at this moment, but it expects to have it. However, the first step must be made by Nicaragua, sending a letter of interest to the political committee of UN-REDD, indicating its interest in being a member. This action is under the responsibility of MARENA and the Presidency of the Republic.

Moreover, this study found that the present government of Nicaragua has requested to the Central America Regional Project REDD-CCAD Unit, under the Commission on Environment and Development (CCAD), to provide more information about the process that will be carried out on REDD in Nicaragua which may take after the lead of El Salvador. The interest of Nicaragua is that the Central American regional effort does not hamper the definition of the national strategy for avoided deforestation.

In order to define the national strategy on avoided deforestation in a participatory way, Nicaragua has established a coordination mechanism with three levels of decision making and consultation. In Level I, the participants are: the Minister of MAGFOR, MARENA, INAFOR, INETER, the Presidents of both Regional Councils of the Autonomous Regions and the Secretary of Natural Resources (SERENA) of the RAAN and RAAS.

In Level II, the institutional arrangements on REDD Platform comprise a technical staff from MARENA, INAFOR, MAGFOR, Regional Governments and relevant organizations of the International Technical Cooperation such as GTZ, FAO, UNDP, CATIE. It is expected that this level would be the tech-

nical body that specializes in the REDD issue which should prepare the ToR (Terms of Reference) and technical review, determine the R-PP, track the REDD strategy process and provide appropriate recommendations to Level I.

Finally, Level III involves the National Forestry Commission (CONAFOR), Forest Governance Committees (GOFO), including the Cabinets of Citizen Participation (GPC), indigenous communities and forest owners.

The current government of National Unity must work with these bodies along the following phases:

First Stage: Preparation of a National Institutional Framework through capacity building:

The definition of a National Institutional Framework includes the generation of capacities of indigenous peoples and communities, nongovernmental organizations and institutions in the process of adjusting the existing legal framework.

Second Stage: Implementation of Pilot Projects:

This comprises the implementation of pilot projects aimed at the appropriate Institutional Framework.

Third Stage: Full Implementation of the REDD Mechanism:

The full implementation of the REDD mechanism where the medium-term goal is to stop deforestation and the long-term goal is to avoid it altogether.

N. Zepeda²¹ indicates that “one of the main activities that needs to be implemented before REDD mechanism is the characterization and determination of the influences of each area, as well as checking if there is presence of the Official Institutions in the area and which laws are related to existing problems.”

For the implementation of the REDD mechanism, it is necessary to understand processes, methodology, and specifications and to see if these are feasible. It is also necessary to take action because there is a forest framework and an environmental framework, but the application of both is complex, in part due to the lack of information.

This lack of information is reflected in the comment made by E. Mairena (interview in October 2009) when Mairena said,

Already in the year 2009, CADPI began a project of case studies in the RAAN and RAAS on climate change and indigenous peoples; and CADPI also has a project that demonstrates leadership training on climate change and REDD as a mechanism of territorial management in Tasba Pri; for its part, the GTZ is beginning on this issue in Nicaragua; and it is assumed that Nicaragua is included in the World Bank's REDD program, though from the outside, it is not very clear what is happening between INAFOR and MARENA with respect to REDD mechanism.

In this regard, the authorities of the autonomous regions of Nicaragua's Caribbean Coast are holding meetings with representatives of International NGOs and some agencies of the UN system, indigenous organizations and regional universities in order to design its own regional strategy on climate change. This strategy seeks to strengthen the regional autonomy process and its institutions. There are serious commitments to launch a broad consultation process that will begin in September 2010.

In addition, the regional authorities of the RAAN and RAAS have begun talks with MARENA to perform an extensive process of consultation specifically on the topic of REDD+. MARENA has shown great political will to implement the rights of indigenous peoples' free, prior and informed consent, and avoid the experiences of the governments of Panama and Guyana where both UN-REDD and the World Bank have been strongly questioned by the lack of transparency in the processes of consultation with indigenous peoples on REDD.

Advantages Related to REDD

The Nicaraguan government has a serious problem with regard to the registration of land ownership and tenure to such an extent that it is still possible to perceive the effects of the process of confiscating property and of reassigning land during the Sandinista Revolution as well as the handing over of properties known as People's Property Area, which became Workers' Property Area in 1990. Much of the problem is due to the weak National System of Land Registry.

Some of the current agricultural problems have come to affect the communal property of indigenous peoples of Nicaragua's Caribbean coast. This situation can largely be overcome by Law 28 which provides for a Statute of Autonomy for the Autonomous Regions of the Atlantic Coast of Nicaragua and by Law 445 which relates to the rule of communal property of indigenous peoples. In both laws, the rights of indigenous peoples over their territories is clearly established, but they are also tarnished by the recognition of land reform titles released before 1987, the year that the Statute of Autonomy was established.

Thus, with the Statute of Autonomy and the demarcation and titling process under way, Nicaragua and specifically, indigenous peoples and Afro-descendant communities (Creole and Garifuna) are at an advantage compared to other countries and peoples in ensuring the rights of indigenous peoples for those REDD processes.

On the Caribbean Coast of Nicaragua, most of the land that still has forested areas is collectively owned by indigenous and Afro-descendant peoples, and therefore, analyzing their direct participation in REDD programs will be valuable.

Indigenous Peoples Linked to REDD

Indigenous peoples as political subjects

There is consensus among the various nongovernmental and governmental entities and research centers in stating that the indigenous peoples and Afro-descendants of the Autonomous Regions should be considered relevant actors within the REDD mechanism since they own most of the forests of the country. They must also be the main beneficiaries of any program relating to forest management due to the way in which they have cared for the legacy of their ancestors for centuries.

The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) should be the platform for the implementation of REDD policies because this statement acknowledges the rights and activities of indigenous peoples. It should be indigenous peoples themselves who must decide whether or not they

want to participate in the REDD mechanism as a way of exercising their right to self-determination. The government or of any other body should not dictate the establishment of the REDD processes. Indigenous peoples must have the power of decision-making, including the power to waive the application of this mechanism within their communities if they will be affected or at risk of being affected.

However, in practice, the implementation of the REDD mechanism is based on the operation of the market. The current rate of deforestation on lands controlled by indigenous peoples and communities puts them at a disadvantage. Because the rate of deforestation is low, there may not be a great willingness on the part of contributing countries to pay more for the conservation of these lands. The implementation of this mechanism with a market view might have a negative effect on conservation.

SWOT analysis which identifies the advantages and disadvantages of linking the REDD program to indigenous peoples

In this section, the SWOT analysis can provide a legal and technical interpretation of the events that make the various non-governmental and governmental entities and research centers state that the main players in Nicaragua to be involved in the REDD mechanism should be the indigenous peoples of the Autonomous Regions.

Table 2. The SWOT Analysis

15 titled and organized Indigenous territories, the equivalent of 22,478 square kilometers (Near to 18% of the national territory)	Opportunities for the sale of environmental services (Carbon Sequestration and Hydro-Environmental Services)
The land's high potential for forestry	The region's technical and agro-ecological potential to develop projects of forest production of timber and energy
Important remnants of forest	A government willing to promote the rational use of forest resources through a program that capture carbon and the oxygen production
The existence of high quality forest seed banks	
Comprehensive environmental legal framework	
Internal community regulation	The design of environmental programs directed at providing adaptability, prevention and mitigation actions on climate change
Community development plans that take into account cases of payment for environmental services	
Not enough budget for the development and conservation of forestry	Pressure from squatters for the illegal logging of timber and firewood
No community coordination strong enough to resume the development and conservation of the forestry sector	Inefficient inter-institutional coordination for the control of forestry activities in the region
A lack of budget does not allow for other options to offer peasant farmers who degrade the forest	Damage to forests and plantations by natural phenomena such as hurricanes
	High levels of organization in illegal timber trade networks

According to the Deputy of INAFOR, Engineer Jorge Canales, "Implementation of the REDD mechanism should avoid asymmetries, and this requires capacity building both for Mestizo producers and for indigenous peoples, exactly 50 per cent for each."

With this proposal, it is understood that by pushing REDD programs within Indigenous territories, they will not necessarily exclude the Mestizo population. Therefore, it is sufficient to clearly identify potential areas to promote REDD programs, and thus, to meet the potential direct and indirect beneficiaries.

INDIGENOUS TERRITORIES WITH POTENTIAL FOR THE APPLICATION OF REDD

The entirety of the forested area of the Autonomous Regions has the potential to work under the REDD mechanism, but first there should be: full and effective participation of indigenous and Afro-descendant peoples; free, prior and informed consent; and the application of the UNDRIP.

In Nicaragua, there are not yet any REDD areas. Before deciding on those areas, various technical and diagnostic studies should be conducted, and consultations should be done in order to define them. Many aspects still need to be determined including: the issue of carbon sales; the design of national action and strategy plans; security or the study of country risk; opportunity costs; and above all, it will be necessary to have results that demonstrate that the incentives are higher than the costs of deforestation opportunities, with all their collateral benefits.²²

The Proyecto Corazón (Heart Project)²³ was specifically noted by J. Gutierrez (2010) in an interview as a receiving area for REDD. While the process of demarcation and titling of Indigenous territories continues, it is hoped that all of these territories will be able to participate in the REDD mechanism. Up to date, the titled territories are:

Table 3. Summary of Indigenous and Afro-descendant Territories with Titles by year²⁴

Year	Territories	Communities	Area (Sq. Km)
2007	5	85	5,756.01
2008	2	17	3,147.01
2009	5	50	6,415.80
2009	3	62	7,160.17
TOTAL	15	214	22,478.98

The area of 22.5 thousand sq kilometers represents almost 18 per cent of the national territory. This evolution in the demarcation and titling process is a good signal that the State will take into account the indigenous peoples rights in any matter related to REDD+ or another initiative. The complete information of this summary can be found in the Annexes.

An important limitation of this process is that the state leaves to the people the task of negotiating overlaps in territories. Such overlaps may be between neighbors, communities or neighbor territories. This apparent laxity of the state shows its failure to conduct or facilitate negotiation processes.

But then, another question arises here: will the state allow communities to solve the case of third parties in their territory? During the roadblock last June 2010, it was interesting to note that the indigenous peoples of the two autonomous regions were silent and they seemed to accept that the government resolved for them the claim of the third party. Only the Mayangnas reacted with a press statement reaffirming their rights to communal territories. What if the government submitted an offer for individual titling?

These concerns emphasize the need to define criteria for any initiative of REDD+ based on the right approach of indigenous peoples over all things.

The specific selection of a potential territory can be made based on the following technical and legal criteria:

1. Legality of land tenure;
2. Representativeness and legitimacy of the territorial authorities;
3. Strong institutional capacity which is organized and well-structured, one with instruments and mechanisms of social control and administration to ensure transparency and accountability to prevent damage or undercutting of legitimacy of readers;
4. Significantly large area or of high importance within its territory;
5. Technical and agro-ecological potential for the development of projects on forestry production of timber and energy;
6. Potential to stop the illegal and accelerated logging of timber and fuel;
7. Reduction of the impact of agricultural border areas;
8. High potential for the sale of environmental services (Carbon fixation and Hydro-Environmental Services).

Based on these criteria, there are nine potential areas suitable for REDD to work. A total of 132 communities are located in the interior of this geographical area, for a total of 55,907 people and more than eight protected areas of diverse categories of management.

Although there are 15 (titled) territories, some people interviewed identified specific locations to prioritize within these territories so as to have a higher impact during possible implementation:

In the case of the North Atlantic Autonomous Region (RAAN) of Nicaragua, the following areas were mentioned: Mayangna Sauni As; Sikilta; Tasba Raya.

Among the potential communities of RAAS that still conserve forest resources are the following: Karawala, Makantaka, Betania, la Estrella, Wuaula Tikni, Pajara Tikni, Caño Wilson, Tasba Pouny, Orinoco, la Fe, Río Maíz, Río Indio and Great

Town. The communities in the northern part of RAAS have weaknesses in terms of mass mobilization which is very different from existing communities in the south where there are groups of trained and equipped volunteer rangers for guidance, mobilization and communication.

It should be noted that the specific areas which were identified within the territories are located in strategic zones that not only have significant wooded areas, but are also located in sub-watersheds and micro-watersheds of high socio-economic and cultural sensitivity. These zones need to be preserved and restored to maintain the stability of the ecosystem.

Ultimately, the choice of locations must be based on factors such as the updating of mapping, governance mechanisms, knowledge of the causes of deforestation and the definition of indicators – what these are and what their specific weight is.

Other Actors in REDD Programs

In addition to the indigenous peoples, other actors must exist in the REDD programs due to the power that government laws and standards confer on these actors.

In Table 4, the range of different positions of REDD actors is summarized (at the discretion of the persons interviewed).

Table 4. Actors within the REDD program

Communities	GRAAN	International NGOs
MARENA	CRAAN	Churches
INAFOR	SERENA	UNDP
Regional Universities BICU and URACCAN	MAGFOR	Cooperatives de productores
Territorial Organizations	FAO	National NGOs
	Municipalities	Civil Society
	Army and Police	Young Professionals

Groups: The actors in column (A) were mentioned with more frequency (at least five times); the actors in column (B) were mentioned with medium frequency (at least three times) and the actors in column (C) were mentioned in minor frequency (one or two times).

According to E. Mairena²⁵ “the development and implementation of this mechanism of REDD requires integration into local organizations that work on the issue of forest resources and climate change” who will no doubt be of technical support to indigenous peoples as key players.

For F. Buitrago,²⁶ the actors in column A should range from producers in territories where the forests are located, to the people who cut wood, the owners of the lands and forests, as well as those from the municipalities where there are forests.

In general, there is a definite consensus that women, young adults and children should be involved in the processes of REDD as they are active parts of indigenous communities and peoples.

A. Alemán²⁷ agrees that “... it is necessary to take into account the gender perspective and the integration of young people within this mechanism.”

This is the same feeling that Zepeda expressed, saying that, “in fact, it may promote women’s and youth organizations, and really, in many indigenous communities and peoples, they do not even make this distinction and have women and youth representatives; it is also important to take the children into account.”

Within these processes, it is important to involve the organizations and/or blocks of indigenous territorial communities – local and national organizations that know the culture and are aware of how to work with indigenous peoples. It is important to consider the experience that some local and national organizations have with indigenous peoples and environmental programs in starting the mechanism.

Column B highlights the role played by the state authorities such as MARENA, INFOR, MAGFOR and the National Assembly – authorities which design environmental and forestry regulations and are the main facilitators in ensuring that communities participate in this process and that their rights are preserved.

Buitrago opines that “the government must intervene, not as a beneficiary, but as an entity committed to expanding the economic capacity of indigenous peoples in the management of subsidies.” The main obstacle in this regard is the lack of financial resources and low technical capacity that state institutions have in confronting such a complex issue. They do not have adequate material, human and technical resources so their capacity for action is very limited.

Municipalities can also be REDD players, as can regional and national research centers, which can help strengthen regional authorities through these REDD processes. It is hoped that international cooperation will become the main source of funding.

In general, interview respondents have expressed that the programs, projects and NGOs under column C of Table 4 have had very little connection to forest management and territorial negotiations so far.

When universities were mentioned, all interview respondents considered them relevant actors for the extension, research, generation of knowledge and education, as a dialectical process for capacity building. Universities are currently offering graduate and specialized courses, many of them aimed at raising the capacity of community leaders and/or technicians in forest areas. Universities are recognized to have enormous opportunity and capacity to generate and strengthen the human capital of their own territories.

By analyzing the flow of the process, the administrative processing and the bureaucratic apparatus related to forestry, this study determined that one of the high risks – and one that arises repeatedly related to the use, management and exploitation of forests – is “corruption.” During the study, respondents repeatedly indicated that cases of corruption occur in both the formal structures as well as in regional, territorial and community structures. It is a means of overcoming the obstacles that the same system of laws established for the control and management of forests. Clearly then, there is a need to strengthen the organizational structures with the establishment of mechanisms to ensure transparency in resource management and capacity build-

ing of social control and enforcement. In turn, this could be accompanied by the development of an information process (promotion and dissemination of information about the REDD processes) within the communities.

MONITORING AND EVALUATION MECHANISMS FOR REDD PROGRAMS

One of the hottest topics being discussed at international conferences about REDD, under the UNFCCC negotiations, has been the forms of monitoring and evaluating the capacity of forests to sequester carbon. This involves the preservation of a wooded area which is precisely what provides the capacity for carbon capture and oxygen production. It has been proposed that the monitoring be done both by the department purchasing the carbon sequestration service and by the forest owner so it could be done physically in the field or via satellite.

The actors of these mechanisms will then be autonomous regional entities, municipalities, regional authorities and indigenous communities. They should build capacity for implementing official monitoring while operating a parallel monitoring by indigenous peoples or NGOs.

It is vital that the community organization acquire this capacity so that their proposals and/or demands are heard, and so it is not the government that guides the process; i.e., there must be open and equitable participation.

RISKS THAT REDD PRESENTS TO INDIGENOUS PEOPLES

So far, there has been no consultation on REDD processes among indigenous communities and peoples or with institutions of the autonomous regions, civil society and research institutes. If the government continues to formulate its national strategy on climate change and REDD policy without consulting indigenous and Afro-descendant peoples, it could put indigenous peoples at a high risk of having their collective rights violated.

The system of autonomy enjoyed in the Caribbean Coast of Nicaragua has enabled indigenous and Afro-descendant peoples to build elements that facilitate greater participation of citizens through community boards, city councils, regional boards and regional councils. In the latter case, there is representation from 45 regional councilors—one from each region of RAAN and RAAS—who should represent the interests of the territories and communities of the Caribbean Coast. However, it is necessary to consider that the participation in communities through the elders' council has been part of their ancestral culture. Furthermore, it is important that the national government should systematically and accurately convey information to actors concerned. Currently, there are few means of communication which convey information in a transparent and effective way.

To ensure that this exercise is done with the right approach, it must ensure the right to free, prior and informed consent.

Conclusions

1. The environmental legal framework of Nicaragua is strong, but its structure for the enforcement is weak. The lack of technical resources, low capacity of human resources, and the issue of corruption are the factors that create weakness;
2. Human rights and indigenous peoples' rights, the UNDRIP and the ILO 169, must be the legal umbrella for any kind of program in indigenous territories;

3. So far, the current government has been timidly working alone on the definition of environmental strategy and climate change, and even REDD+. It seems to be afraid to openly face the participation of all national sectors in order to widen its perspective;
4. The presence of mestizos and their production model in indigenous territories is a challenge to overcome; but REDD+ could be an interesting mechanism to stop deforestation, and in parallel to improve land use, grassland management and other measures. The regional governments with the central government should apply the law as written but they should also provide incentives to indigenous and mestizos;
5. Through the REDD+ program, it is possible to improve the lives of the owners of the territories with important wooded areas due to their forestry potential and high biodiversity;
6. In order to bring the real owners of the forests into the REDD program, it will be necessary to work on building human, technical and financial capacity – mainly those types related to the implementation of social auditing tools;
7. There are sufficient legal tools which only require adjustment for the topic of REDD+ starting from the communities as active agents in the process, reaching to the governmental institutions of the regional government and ministerial delegations in the Autonomous Regions and extending through universities, local NGOs and those who make the decisions;
8. For the development and monitoring of policies, there must be an Autonomous Regional Committee to oversee this process; the committee may be made up of individuals or businesses (not consumers) who work in a way that is fair, equitable and based on the potential of the soils;
9. There is interest on the part of the communities in gaining access to these potential benefits, but it is necessary to first work on the institutional strengthening of the

communal and territorial government's system for preventing corruption and for achieving the creation of social, economic and environmental development processes for these communities and territories.

10. The process for the implementation of REDD is making great strides in the international field through the concerted interest each geopolitical and economic group or block takes. At the community level, progress is slow and has very little participation; therefore, the central government – with support from the autonomous regional governments – must increase the participation of territorial governments and initiate a process of Dissemination, Promotion and Education on climate change and REDD+. Access to the centers of discussion, information and advocacy is required nationally, as well as internationally;
11. REDD should promote non-sectoral, non-partisan political participation with a focus on law and autonomy in order to allow real participation without interference from partisan political interests.

RECOMMENDATIONS

1. One of the major problems that indigenous peoples are exposed to within the REDD mechanism is that this mechanism is not yet well-defined. If indigenous peoples access and sign agreements without everything being defined, they may be at a disadvantage in terms of the application of those mechanisms for the short and medium term. They may fall into something restrictive and find themselves unable to make use of their natural resources. However, if they are the owners of natural resources and have a title to the property, the REDD mechanism can serve to strengthen territorial organizations – provided that a structure is defined in which indigenous peoples are integrated – and the process of

- regional autonomy can also be strengthened at the regional, territorial and community levels;
2. Both Autonomous Regions in Nicaragua must work closely in order to define their own climate change strategy that could come part of the national strategy. To do this, they should establish the creation of a baseline data on environmental and climate change;
 3. The autonomous regional governments should also be prepared to negotiate with the central government for the management of the funds they can get for REDD+ initiatives. There are sectors that propose that this issue is a nationwide topic, but considering the self-determination (autonomy) and the existence of the forest mass in this area, the funds should come to the forest owner;
 4. Indigenous peoples should use this new REDD mechanism to advance their organization by putting all types of organizations into operation the way that the Council of Elders and Community and Territorial Boards are. "It is through this mechanism that they can create the concept of administration and management in a stable manner, in an office in the community, and not from the briefcase of one person,"²⁸ which is what usually occurs.
 5. In order for indigenous peoples to strengthen their rights, they must be present in the negotiations process, either by pressing that the information they are provided has to be correct, true and not manipulated, or by participating directly in the negotiation process; i.e., there must representatives of the communities and municipalities physically present in the room where negotiations are carried out. It is through the information obtained by the representatives that indigenous peoples assume an important role in community organizations where they can channel clear and timely information to their communities;
 6. The REDD mechanism should support actions that promote indigenous peoples' rights; in particular, trainings should be done in addition to providing necessary tools to each community;

7. National and Regional authorities should not only provide communities with relevant information on REDD+ but also offer them the correct tools and instruments for the development of the REDD+ process;
8. To enable indigenous peoples to enforce their rights, they must first be clear about their rights within the territory because they are often not recognized. If they are clear about their rights, it is possible that these will provide the capacity to evaluate actions to be undertaken when faced with a REDD+ mechanism, which would otherwise be complex.

Specific recommendations to ensure the recognition of the rights of indigenous peoples

1. In order for the rights of indigenous peoples to be recognized, it is necessary that they exert their right to autonomy, and although this right is recognized by the state, the struggle for decentralization and autonomous regional capacity building should continue;
2. Indigenous peoples should request that the informational and skill-building trainings are conducted at their place of origin and in their language;
3. There should be a unified position of indigenous peoples.

Recommendations for strengthening the rights of indigenous peoples in the REDD processes

1. In general, through the REDD+ mechanism, there exists the possibility that indigenous peoples strengthen their rights if they incorporate resources that enhance their participation into the mechanism and promote methods that are used for communication and transmission of information;
2. If the REDD+ mechanism provides access to economic resources, it is possible that communities and indigenous peoples will find themselves in the position of taking

steps to mitigate climate change and that the community would not be affected;

3. It is fundamental that indigenous peoples are able to strengthen their organizations and that they solicit support from other organizations in order to work together. But this is not possible unless their property status has been secured.

ENDNOTES

¹2. Rodríguez Quiróz, Jorge Eduardo. Centroamérica en el límite forestal: desafíos para la implementación de las políticas forestales en el Istmo. Edit. Gabriela Hernández. San José, Costa Rica. IUCN. Regional Office for Central America, 2005. 172 p. "Central America in the forest edge: challenges for the implementation of forest policies in the Isthmus."

² Id.

³ The report presents national data that is not broken down by region, but it is believed that almost 50 per cent of the area belongs to the Nicaragua's Caribbean regions.

⁴ Nicaragua is located in the middle of the isthmus of Central America. It is the largest country in Central America with an area of 130,373.47 km², and is located between latitudes 10° and 15° 45' north and between longitudes 79° 30' and 80° west; it is bordered by Honduras in the North, the Atlantic Ocean in the East, Costa Rica in the South and the Pacific Ocean in the West. (MARENA 2007)

⁵ ProArca-IUCN, 2005. p. 113.

⁶ Interview with *Porfirio*, by D. Mairena. Bluefields. December 12, 2009.

⁷ El Caribe de Nicaragua en Ruta Hacia el Desarrollo Humano. Estrategia de la Costa Caribe Nicaraguense. Consejo de la Costa Caribe. Managua. Nicaragua.

⁸ The indigenous Rama are located exclusively in the Atlantic Coast of Nicaragua. Most of them live in the South Atlantic Autonomous Region (RAAS), in an island near the city of Bluefields, and a small population of these people is located in the municipality of San Juan de Nicaragua in the department of Rio San Juan. The village of Rama is the smallest population in the country comprising about 1,600 inhabitants. The Rama people are distributed over a wide territory that includes an island and the mainland south east of Nicaragua which they consider

their ancestral territory and which have become customary use for farming, hunting, fishing, gathering and forest resource use commercial building boats, paddles, fishing gear, housing. The majority of the Rama peoples are living on the island of Rama Cay of 22 hectares. It is located in the Bluefields Lagoon, 15 miles south of the city of Bluefields. They live close to the sea and rivers.

⁹ Information gathered by A. Balladares and D. Siu. February 2010.

¹⁰ In the case of the RAAS, a study conducted by fifth year Agroforestry Engineering students from URACCAN University/Bluefields Campus (2009) estimates the annual demand for wood for fuel at 180,467 m³, which could amount to approximately 1,071 ha/year. This amount is only for areas outside of protected areas, which indicates the figure would increase when combined with the demands of those living in protected areas.

¹¹ Miranda, Guadalupe. Deforestation. <http://www.monografias.com/trabajos14/deforestacion/deforestacion.shtml#AGENTES>.

¹² Information published in their book *Characteristics of Humid Tropical Areas*.

¹³ The Water Law sets certain guidelines regarding planting on the banks of rivers, lakes and ponds...however, the culture of some peoples and the lack of institutional resources makes it difficult to control this activity. The population is always looking for riverbanks to do their planting but they do this on a smaller scale.

¹⁴ Government policy is clearly stated within the development strategy for the Caribbean coast of Nicaragua, which reads verbatim, "We seek a rational use of this resource through a program for use that combines oxygen revenue, forest management and sustainable industrialization in modules of 20,000 ha per year which includes the reforestation" and therefore incorporating REDD into this program will not present any difficulties.

¹⁵ The majority of interview respondents do not know all the content and focus of environmental laws, but laws which do seem to dominate and are quite frequently mentioned are: Law 462, relating to the conservation, promotion and sustainable development of the forestry sector; regulation of Law 462 issued by Decree 73-2003; Law 217 – General law about the environment and natural resources, adopted March 27, 1996 and published in the Gazette no. 105 of June 6, 1996; Law 647, Law on Amendments and additions to the aforementioned Law 217; Decree 01-2007 Regulations of Nicaragua's protected areas; Decree 09-96. Law of closure for cutting, harvesting and marketing of forest resources, penal code (Act 641) of Nicaragua, municipal law, coastal law, water law, decree 76-2006 systems of environmental evaluation. Law 28 Statute of Autonomy of Nicaragua's Atlantic Autonomous Regions; Law 445, on

communal lands; climate change strategy; sustainable development policies of forestry in Nicaragua. Law 612, law of reform and additions to act 290, law of organization, jurisdiction and procedure of the executive power. Decree 104–2005 rules of procedures for the establishment, acquisition and application of incentives for forestry development in the law of conservation, promotion and sustainable development of the forestry sector Law 462; Decree 106–2005, provisions regulating forest concession; Decree 37-98 measures to prevent forest fires; Administrative Resolution 81-2007, administrative arrangements for the sustainable forest management of broadleaved forests, conifers, plantations and farms. According to the compilation of the current legal framework in Nicaragua, while it is true that the forestry issue is well founded, there are still gaps in the issue of climate change and REDD+ and REDD++, and this is logical because the topic is new and there are still many unknowns and uncertainties in this regard.

¹⁶ Interview by M. R. López. October 2010.

¹⁷ INAFOR. (Managua, Nicaragua). 2009.

¹⁸ Summary of a series of interviews conducted by Orlando Lacayo, CIPAD research assistant in Bilwi, carried out October 20–25, 2009 for purposes of this study. More specific reference is made below.

¹⁹ Carbon Finance Unit–WB. Forest Carbon Partnership Facility. Washington DC. April 2009. It is also possible to consult Forest Peoples Programme. Rights, forest and climate briefing *Moving the goal posts? Accountability failures of the World Bank's Forest Carbon Partnership Facility (FCPF)*. UK. October 2009. 8.

²⁰ Global Witness. Building Confidence in REDD. *Monitoring Beyond Carbon. Executive Summary*. Washington, DC. October 2009. 5.

²¹ Zepeda, N. Interviewed October 2009.

²² Initiatives like POSAF, Agricultural Estates (MAGFOR) are good examples of how these incentives work.

²³ The trans-boundary Biosphere Reserve Project “Heart of the Mesoamerican Biological Corridor” seeks to protect the Bosawas Biosphere Reserve and the Rio Platano Reserve, in Nicaragua and Honduras respectively.

²⁴ Source: Attorney General’s Office-Vice quartermaster property. 30 Augusto 2010. A press release on April 30, 2010, mention the new titling of indigenous territories: *Wangki Twi-Tasba Raya, Prinzu Awala and Wangki Maya* are the three new titling Miskitu indigenous territories in the Caribbean Coast of Nicaragua. Carlos Alemán Cunningham, president of the National Commission for Demarcation and Titling (CONADETI) and chairman of the RAAN Regional Council explained that these three indigenous territories are being finalized for certification of the municipality of Waspam and half the town of Prinzipolka.

- ²⁵ Mairena, E. interviewed October, 2009.
- ²⁶ Buitrago, F. interviewed October 2009.
- ²⁷ Alemán, A. interviewed October 2009.
- ²⁸ Sergio Sánchez, Rainforest Alliance in Nicaragua.

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Annex

List of Interview Respondents

Name of Respondent	Related Institution
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Sergio Sánchez	Rainforest Alliance
Alejandro Alemán	Humbolt Center
Jorge Canales	INAFOR
Norma Zepeda	Institute for Democracy and Development (IPADE)
Fabio Buitrago	German Technical Cooperation Service-DED
Jader Guzmán	Ministry of Forestry Agriculture
Luis Lezama	Vice President of AFORAAS (Forestry Association of RAAS).
Hector Canller Brooks	Technician from UGA of Bluefields
Ronny Manuel López Valeriano	Owner of a cabinetmaking workshop
Fabio Hooker Smith	Regional Government Planner RAAS
Karl Tinkam	Haulover Community
Rojas Carlos	Regional Councilor/Tasbapaunie
Jorge Siu	Owner of a cabinetmaking workshop
Santiago Thomas	Territorial President of Rama Kriol
Troy Thomas	Técnico INAFOR RAAS
Romel Spelman	Municipal Delegate INAFOR–Mouth of Rio Grande
Donovan Joiner	Forestry Regent RAAS
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