

AT THE CROSSROADS OF CONSERVATION AND DEVELOPMENT
THE CHALLENGE OF THE MAYA FOREST



A Report to the Coalición de la Selva Maya and the Tropical Ecosystem Directorate of the United States Man and the Biosphere Program

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Prepared by:
Thomas T. Ankersen¹
Luis Arriola²

¹ Director, Conservation Clinic, University of Florida Levin College of Law and member Tropical Ecosystems Directorate, United States Man and the Biosphere Program

² Phd Candidate, Department of Anthropology, University of Florida

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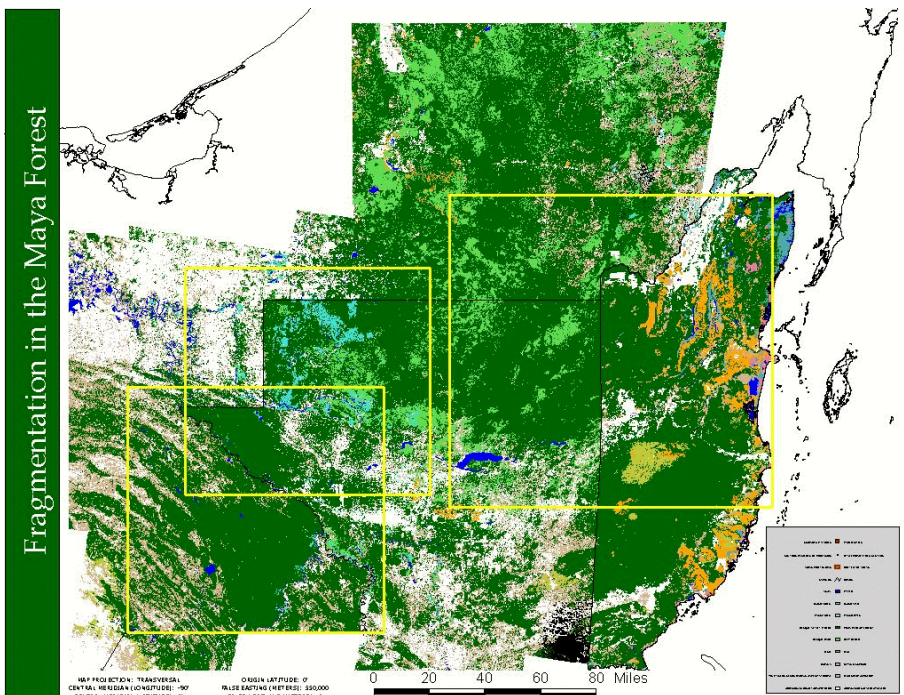
1. INTRODUCTION: LA(S) SELVA(S) MAYA(S)?

Before the time of Columbus, where North America transitions into Central America, a vast and sophisticated civilization rose and fell in the trinational bioregion we now call the “Maya Forest,” a 25,000 square kilometer complex of forested land in various categories of protection occupying Southern Mexico, Guatemala and Belize. The reasons for the fall of the lowland Maya remain shrouded in the forests that now cover their ruins. At its peak scientists estimate that as many as 4 million Maya may have inhabited the Maya Forest. Before the Spanish arrived, the Maya fled to the highlands and the forest reclaimed their land. But it is undoubtedly a different forest; perhaps a richer forest for its former human inhabitants. Scientists speculate that the Maya enriched the forest through species selection, preferring the trees and plants preferred by forest herbivores, increasing the prey base for its top carnivores. Today fewer than 1.5 million people now inhabit the same region, a demographic that is rapidly changing. Humans are reinhabiting the Maya Forest.

The Maya Forest is often described as the largest contiguous block of tropical forest North of the Amazon. That status is jeopardized. At critical junctures, “ecological choke points,” human uses of the land threaten to fragment this biologically and culturally rich region.

As a result, the deep forest will shrink, taking with it a refugia for ecological processes.

Fragmentation is itself a process. Smaller blocks of intact forest will be much less likely to repel further iterations of fragmentation, a self fulfilling prophecy that will ultimately result in the replication of traditional neo-Western conservation - islands of parks too small to sustain the ecological processes that maintain biological diversity.



2. BACKGROUND: CORRIDORS FOR CONSERVATION; CORRIDORS FOR DEVELOPMENT

Since the 1960s conservation biologists have been seeking answers to the dilemma of forest conservation in the face of forest fragmentation. One of these answers has been through the development of a conceptual framework for “regional reserve design” that incorporates a land

use mosaic of “core areas” and “buffer zones,” linked by so-called biodiversity or conservation “corridors.” Corridors reflect land uses that foster the protection and maintenance of migratory routes for free-ranging species and for genetic material of all species. Landscape ecologists broadly define corridors as “linear habitats that differ from the extensive matrix in which they occur.” Corridors may vary in their nature, scale, and dimension, from single species migratory routes to forest fragments connected by compatible human uses of the land. However, they share a common feature. Corridors promote ecological connectivity. Another feature of corridors is that there is no single recipe for developing conservation corridors across intervened landscapes. Understanding the human uses of the land sought for connectivity represents an first important step. Understanding the possibilities for affecting how humans use the landscape represents a second step. Finally, these possibilities must be translated into a concrete strategy for retaining or restoring landscapes that are compatible with the connectivity principles of corridors.

Conservation is not the only context in which the term corridor has meaning. Well before the advent of contemporary conservation, the term corridors was used in another context as well; a meaning often at cross purposes with its ecological context. Development planners use the term corridor to refer to the transportation and infrastructure routes that fuel development. Indeed, the “ecological choke points” of the Maya Forest described in this article represent both new and ancient development corridors, some which may date back to the time of the Maya. It is these “crossroads” of conservation and development that represents the challenge of contemporary conservation, in the Maya Forest and elsewhere.

3. CROSSROADS IN THE MAYA FOREST

In June of 2000 an international, interdisciplinary group of governmental and non-governmental conservationists met in Flores, Guatemala, the island city in the Maya Forest that served as the last refuge for the lowland Maya during the conquest. The group was convened under the auspices of the recently formed Coalicion para la Selva Maya and the Tropical Ecosystems Directorate of the United States Man and Biosphere Program to identify the threats to the contiguous forest from fragmentation, and discuss a strategy to address these threats using principles of regional refuge design. The group identified the critical choke points, the complete loss of any one of which will permanently fragment the contiguous forest. These choke points, the conservation and development crossroads of the Maya Forest are characterized below.

A. THE LACANDON CORRIDOR: SELVA LACANDONA TO SIERRA DEL LACANDON (MEXICO-GUATEMALA)

The corridor connecting the Lacandon Forest in Chiapas, Mexico and Parque Nacional Sierra del Lacandon in Guatemala represents a narrow but prominent gap in protected area coverage. In Guatemala, the Sierra del Lacandon Park in Guatemala extends all the way to the Usumacinta River on the Mexican Border. In Mexico, the Selva Lacandona in Mexico represents a complex mosaic of overlapping protected areas and communal lands that stops short of the border, creating the possibility that these two great forest blocks will be severed by human encroachment.

Unfortunately, unlike their sister park across the border in Guatemala the major protected areas in the Selva Lacandona in Mexico do not extend to the frontier. Instead, a linear gap in legal protection of the forest spans the length of the two selvas, interrupted by two key federally protected archaeological sites, Bonampak and Yaxchilan, and the communal reserve self-designated as Cojolita by the people of the Comunidad Lacandona. The future of this reserve remains uncertain because it has no official governmental sanction. Although once proposed as a federal protected area to called “Yaxbe” (Green passage in Maya) for its significance as a biological corridor between the two nations, it was instead established as a local initiative under the governance structure of the Comunidad Lacandona. It is uncertain how the division of the Comunidad Lacandona into sub-comunidades will effect the governance of La Cojolita. In addition a non-contiguous segment of federally protected forested lowland described as the “Area de Proteccion de Flora and Fauna Chan K’in” occupies a strategically important forested gap between the Lacantun Biosphere Reserve and the border.

The Lacandon corridor is also traversed by the Usumacinta River which forms part of the geopolitical boundary between the two countries. Indeed most of the Maya Forest may be found within the Usumacinta’s vast watershed which serves as both an aquatic barrier to some species interchange and a riparian and aquatic corridor for others. The Usumacinta may have played a significant role in commerce during the time of the Maya and continues to represent a major cultural feature today. Considerable fragmentation of the forest cover within the corridor can be found in and around the river’s border communities of Frontera Corozal on the North bank of the Usumacinta and Bethel and La Tecnica on the South Bank in Guatemala. Satellite imagery suggests that the Riverine corridor itself is made up of non-contiguous forest patches interspersed with human settlement throughout much of the length of the corridor. Efforts to dam the Usumacinta and flood vast areas of forest have abated but resource competition continues between Mexican and Guatemalan fisherfolk, threatening the migratory tarpon and snook with gill nets that span the river.

Also traversing the corridor between the Lancantun Biosphere Reserve and the Usumacinta is a major highway known as Carretera Fronteriza. The Carretera was recently paved and bridged by the federal government, in part to improve military access to Zapatista strongholds. The paved road now encircles the Selva Lacandona. Not surprisingly, satellite imagery also reveals the growing presence of human settlement along this paved road. Another feeder road had been proposed connecting the highway to the Yaxichilan Archaeological site, currently only accessible by motorized launches from Frontera Corozal. Human use of the land use in the deforested areas is dominated by cattle ranches, smaller human settlements and traditional milpa agriculture, often within the boundaries of the protected areas. Uncertain and inequitable land tenure plagues the private lands outside the reserves and encourages invasions. In addition, the fires of 1998 devastated large tracts of forested and disturbed land within the corridor.

At the same time there are encouraging developments in the complex land use and land tenure situation in the Lacandon corridor. In Mexico there is a proposal to extend the Coholita Communal Reserve along the corridor transverse to the Northwest, encompassing a relatively large linear patch of intact forest across the River from Sierra del Lancandon National Park in Guatemala. The precise implications of this proposal for management of the forest within the

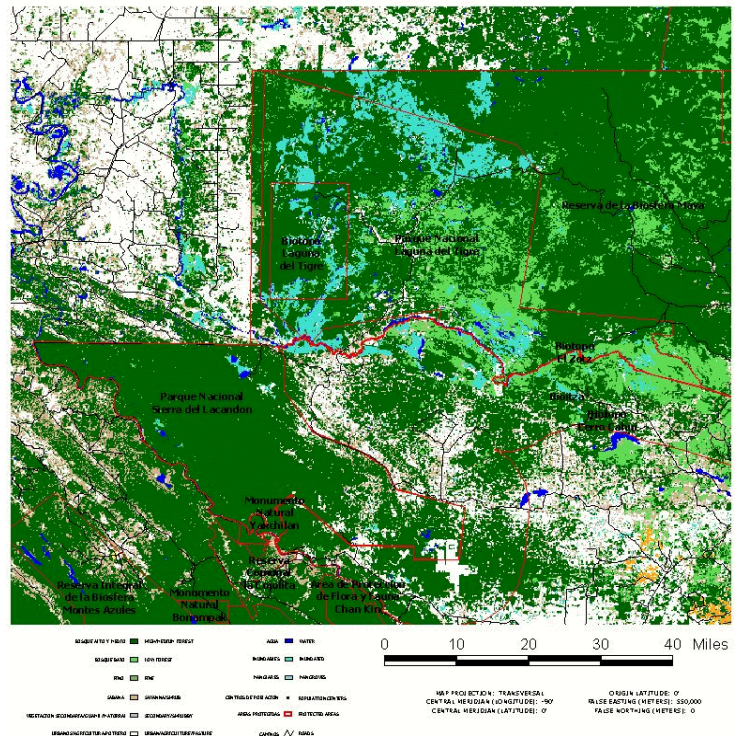
proposed extension is not clear, other than the fact the ownership will be communal rather than private. In addition, the Chol Subcomunidad at Frontera Corozal has created several small communal reserves near the town in order to provide for fuelwood and other extractive activities. Though small, if well-managed, those could be strategically important links in the land use mosaic of this Corridor. In addition, significant portions of the Corridor, including portions of the Communal Reserves and lands bordering the highway have been formally declared ecological restoration zones under Mexican law. This zonation was created after the 1998 fires to encourage reforestation and fire management.

In Guatemala the end to Civil War has enabled the national protected area authority to reassert itself in Sierra del Lacandon National Park. Local forestry cooperatives adjacent to the Sierra del Lacandon National Park have sought green certification under international standards. Under the auspices of the Coalicion para la Selva Maya a joint project in ecotourism on the Usumacinta River has been initiated. Moreover, the proposal for a land route to Yaxchilan was defeated by the Comunidad Lacandona which feared that opening the site to land based transportation would threaten the growing river based eco-cultural tourism industry at Frontera Corozal. At the same time, threats remain. The end of the Civil War has had its own repercussions for conservation, creating a competition for land in the Peten with refugees from the War. Resettlement communities have been established in the MBR buffer zone.

B. THE CEIBO CORRIDOR: SIERRA DE EL LACANDON Y PARQUE NACIONAL LAGUNA DEL TIGRE (MEXICO - GUATEMALA)

To the North of the Lacandon Corridor lies the El Ceibo Corridor. Together, these two gaps in protected area coverage have the capacity to effectively isolate Parque Nacional Sierra del Lacandon from the greater Maya Forest. The El Ceibo Corridor represents a wide belt of fragmenting landscape that narrows as it approaches the convergence of two of Guatemala’s most significant protected areas in the greater Maya Forest, Parque Nacional Sierra del Lacandon to the South and Parque Nacional Laguna del Tigre to the North. The Corridor itself is split between the “buffer zone” and the “multiple use zone” of Guatemala’s Maya Biosphere Reserve. The Maya Biosphere Reserve is a massive complex of protected areas that encompasses most of the Peten. The buffer and multiple use zonations represent protected area categories that contemplate human use of the landscape, but in a manner consistent with a regulatory master plan. The Usumacinta’s largest tributary, the Rio San Pedro, and its

Ceibo Corridor



associated wetlands traverse the corridor where it narrows between the two parks and enters into Mexico. Where the corridor emerges in Mexico the landscape is largely deforested. Indeed there are human encroachments into Guatemala from Mexico along the border north of the San Pedro River. The dramatic satellite view of a political border characterized by forest in Guatemala and cattle pasture in Mexico has been widely publicized as a case study of the effect of differing development patterns in neighboring nations on a single environmental resource. Today the human encroachments from Mexico are eroding the elegant simplicity of this characterization as the Mexican development model penetrates the border into the Guatemala forest.

The El Ceibo corridor now represents the most significant colonization front in the northern Peten a result of its strategic importance as a transportation and commerce corridor into Mexico and the access it provides to oil fields within Laguna del Tigre National Park. The commercial and human population center of the region is El Naranjo, a still small town of 3-5,000 inhabitants that began as a chicle and logging camp on the banks of the San Pedro River. When these industries declined in the 1980s many of the itinerant workers remained to work the land, invading the estate of a Mexican cattle baron operating in Guatemala. By far the most significant developments however, were the completion in 1985 of an all-weather road to open the region to oil extraction and the opening of the Xan well field within the boundaries of Laguna del Tigre National Park. The pattern of deforestation that occurs along the all weather road from the municipal capital of La Libertad to El Naranjo is being repeated along the oil road within the Park. The road and oil exploitation has fueled a land boom in the region; one that is only now abating as available land has diminished and enforcement of park and private land boundaries has increased. A 1998 study indicated that as many of 3000 people lived within the boundaries of Laguna del Tigre National Park, most engaged in subsistence agriculture and oil jobbing. Despite the apparent abatement of colonization pressure, new threats have emerged.

From El Naranjo, the still unpaved road to Mexico leads 20 kilometers to the tiny border village of El Ceibo. The road from Mexico into Guatemala has been recently paved however, and there are imminent plans to complete the pavement between El Ceibo and El Naranjo, part of a regional economic strategy linking the two countries. The transportation corridor fuels two economies, however. The transportation corridor designed to link Guatemalan and Mexican commerce also provides improved access for longstanding illicit trade in artifacts, wildlife, timber and human cargo. This illicit economy has been a longstanding feature of this part of the Peten frontier, Guatemala's "wild, wild west." It may be that legal economic alternatives will mitigate the notoriety this border region has achieved. Tourism planners view this route as a major access point for the Mundo Maya, a massive governmental and international lending institution economic development initiative predicated on promoting cultural tourism.

While macroeconomic planning is fueling speculation about the development of the region, conservationists have begun examining means to ensure that the zone of deforestation is contained along the road corridor, and promoting sustainable development alternatives to secure a biological connection between the two parks. First and foremost among these efforts is the desire, supported by the Naranjenos, to promote Naranjo as the "border town," even though it lies 20 kilometers within Guatemala. This would promote the development of Naranjo while avoiding "sprawl" along the road to El Ceibo. In addition, with support from The Nature

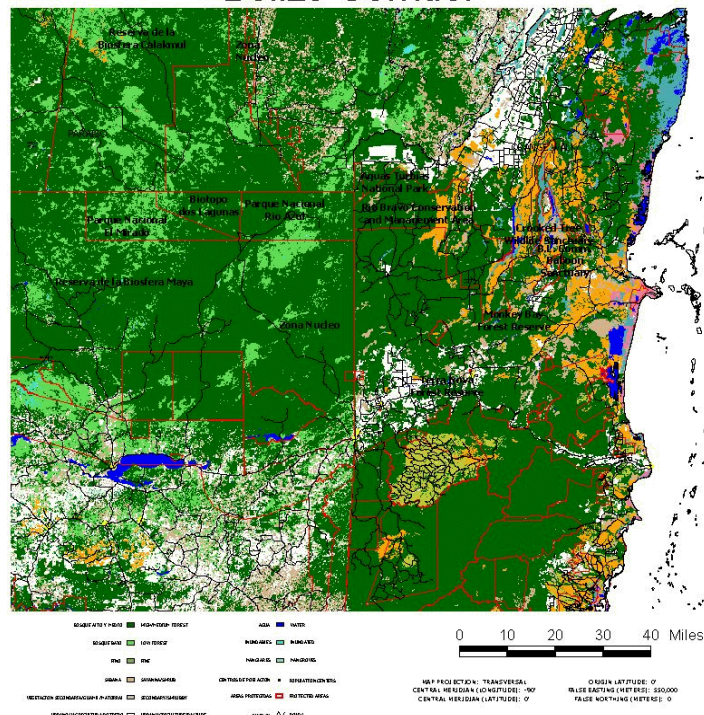
Conservancy, conservationists have begun promoting the concept of urban and regional planning within and around El Naranjo. Consideration is being given to acquiring and reforesting strategically important ranches within the corridor as part of a larger conservation strategy aimed at maintaining biological connectivity. Conservationists are also working with local forestry cooperatives to improve forest management practices and gain “green certification” for international markets.

Conservationists are also seeking to stabilize the eastern border of Sierra del Lacandon National Park. The Naranjo road defines the Park border, and land invasions from the road threaten it. According to one study, there are some 2,500 “pueblitos” along the Naranjo Road. Indeed invasions have proceeded to the point that consideration has been given to redrawing the Park’s boundaries to recognize the deforested reality. At the same time the Park’s Management Plan now includes a zoning plan that contemplates some human use with the Park’s boundaries, even though under the Maya Biosphere Reserve Master Plan, the Park is a core area to be used only for purposes consistent with forest preservation. Recognizing these realities conservationists have adopted two very different strategies to stabilize the Park - land titling within the Park and resettlement to the MBR buffer zone. The land titling initiative represents an effort to create a permanent settled population between the Park and the Naranjo Road, in hopes that the secure title provided will stabilize the process of invasion. The resettlement initiative offers *invasores* secure title outside the Park in exchange for the promise the vacate invaded land with in the Park. The success of these initiatives is a key factor in insuring that the Peten Forest of Guatemala remains connected to the Lacandon Forest of Mexico.

C. THE BELIZE CORRIDOR AND THE HEART OF THE FOREST

North from the lower Peten region and East from the great lake Petenitza and its island city of Flores a broad band of deforestation juts deep into Belize, threatening to sever the Maya Forest of Southern Belize from the vast northern heart of the forest shared by Belize, Guatemala and Mexico. This band of deforestation represents both an ancient and contemporary trade route. Archaeologists believe that the ancient Maya may have used the Peten lake system to trade from the northern reaches of the empire on the Yucatan coast deep into the heart of the empire via the Usumacinta drainage. Today this same corridor represents the contemporary overland route for trade and tourism between Belize and Guatemala. From Flores a recently

Belize Corridor



paved road leads east past the Peten lakes through miles of *milpa*, cattle pasture and scattered patches of forest to the border town of Melchor de Menchos. To the north of the road, beyond the pasture land, lies a complex of protected areas and community governed forest concessions that together represent the heart-and the hope- of the Maya Forest. Three contiguous protected areas, Tikal National Park, the El Zotz Biotope and the recently created Yaxha-Nakum-El Naranjo Natural and Cultural Monument extend across the Southern edge of the forest from Lake Petenitza almost to the Belizian border. To the north of these protected areas, within an area designated for “multiple uses” by the MBR Master Plan lies Guatemala’s great experiment in community based resource management. Nearly given over to industrial timber concessions a decade ago, management of the forest has been returned to the frontier communities that inhabit the forest and who depend upon it for their livelihoods. These communities, Carmelita, Uaxactun, San Andres and others, continue to rely on an extractivist semi-subsistence economy supported by timber and non-timber forest products such as chicle, xate and all-spice. The last best storehouse of mahogany in Central America may also be found within the community concessions of Guatemala. More than a million acres of Peten forest has recently been “certified” for sustainable production of tropical hardwoods. In some communities the debate continues over whether to extract timber at all, while promises of carbon payments for maintaining the forests remain just that.

Though stable for the time being the Maya Forest’s heartland is not immune from threats. The relentless pressure for roads affects even this remote region. Speculation routinely reappears that macroeconomic tourism development interests seek to split the forest with a paved road to link the great *Mundo Maya* sites of Tikal in Guatemala and Calakmul in Mexico. Even the unpaved seasonal roads that now track the chiclero paths through the forest are viewed as threats to the forest’s integrity. Conservationists fear that the development of the western and eastern trade routes to Mexico and Belize will increase legal control over those points of entry and shift the illicit trade in hardwoods, wildlife and humans to the remote heart of the Maya Forest.

More ominously, even the communal heart of the forest is overlaid by a latticework of oil concessions. The pressure to open new areas to exploration for the low quality crude of the Peten Basin is seemingly relentless. Unfortunately, the lessons from oil exploitation in the heart of Laguna del Tigre National Park do not bode well for the rest of the forest. Satellite imagery of the Park reveals that the oil road into the Park’s interior wetlands has created a colonization corridor.

The community concessions of Guatemala are buffered to the north by another contiguous triumvirate of polygonal protected areas, Parque Nacional El Mirador, Biotopo Nacional Dos Lagunas and Parque Nacional Rio Azul. These remote parks link directly across the Mexican border to the Calakmul Biosphere Reserve and across the Belizian border to a small rectangular border park known as Aguas Turbias National Park and a large private reserve known as the Rio Bravo Conservation and Management Area. Under the auspices of the Coalicion de la Selva Maya, park officials in Mexico and Guatemala have pledged joint research and training exercises. In Belize, to the south of the Rio Bravo Conservation Area, the largely intact forest remains either in large private landholdings without a conservation status ascribed to it or consists of national lands that also have no particular conservation status. Most significant of these areas is the large

private landholding known as Gallon Jug. At the southern edge of this northern Belizian forest lies the tiny but symbolically significant El Pilar Archaeological Reserve. El Pilar is a Maya ruin whose ancient temples span the Belize-Guatemala border. Conservationists and archaeologists on both sides of the border have been working together to develop a pilot project in joint protected area management at El Pilar, an effort that may hold the keys to the future of the forest.

The swath of deforestation that threatens to bisect the Eastern Maya Forest follows the paved road from Flores through Melchor de Menchos and its Belizian sister city of Benque del Viejo deep into the heart of Belize and its capital city of Belmopan. Within the deforested areas land use is characterized by cattle farming, small scale milpa agriculture and in the case of Belize, a substantial component of mechanized industrial agriculture and livestock farming practiced by immigrant Mennonites. In the Cayo District of Belize a tourism industry thrives, providing opportunities for economic growth within the corridor and the consequent effects that such growth can bring to the landscape.

South of the zone of deforestation lies a large complex of protected areas that reach from the Guatemalan border to the coast. These include Chiquibul National Park, a network of national forest reserves, the Caracol Archaeological Reserve and the Bladen Nature Reserve. Here the Belizian government has proposed to dam the Chalillo River in hopes of gaining a modicum of energy independence from its volatile neighbors. The dam would flood more than 800 hectares of the Maya Forest and ruin an important breeding ground for the Scarlet Macaw, one of the Forest's signature species and a symbol of the forest's interdependence on three sovereign nations. Here also the border remains porous to immigrants from Guatemala, though the stream of refugees from the civil war has abated. Moreover, the southern border itself remains an ongoing political dispute, frustrating governmental level joint conservation initiatives between the neighboring countries.

4. UNDERSTANDING THE HUMAN USE OF THE LAND: TOWARD A TRINATIONAL LAND USE AND LAND TENURE TYPOLOGY

The institutional and biophysical characteristics of the corridors described above present the challenge for conservation planners seeking to reconcile the human uses of the land with the needs of the region's biota. Probably the most significant factor affecting the development of any forestwide corridor strategy stems from the fact that each of the conservation and development corridors (or fragmented areas) described above spans a geopolitical border. The three countries of the Maya Forest have unique political and human histories that have shaped the evolution of colonial and post-colonial legal regimes, formal and informal tenure systems, and human uses of the land. In Mexico the landscape is dominated by the presence of indigenous Maya, most of whom are recent immigrants to the Maya Forest. Communal forms of land tenure represent the most significant institutional arrangement in the Lacandon Forest. Federal protected areas overlap this tenure regime, but in the most critical segments of the Lacandon Corridor there is no overlay of federal protection. Within the formal tenure regime informal mechanisms for landscape occupation and distribution persist. These must be understood and addressed if biological connectivity is to be maintained.

In Guatemala land tenure remains problematic but the Guatemalan Peten has a very different history. Reinhabitation of the Maya Forest during much of the colonial and post-colonial era occurred by Ladinos seeking to exploit the forest resources. The Petenero represents an almost mythical frontier figure who developed a strong sense of self-reliance based on an extractivist economy based on forest products. Many conservationists consider the extractivist lifestyle to represent the Forest's best hope. Local communities have been given control over the very heart of the Maya Forest in the form of 25 year concessions to harvest timber, as well as chicle, xate and other non-timber forest projects. Management plans govern the extraction of resources but the human use of the land remains subject to community decision-making. The communities have managed to suppress immigration and invasion of these lands more effectively than the government has managed to do on its own lands, but internal fertility rates remain high and the future of non-timber forest product industry, which relies on international markets, is uncertain.

Outside the community concessions and protected areas, along the roads and in the gaps in protected area coverage (and sometimes within the protected areas), land use continues to be dominated by large and medium scale cattle ranching and small scale commercial and subsistence farming. Here the tenure regime remains unsettled. The peace agreements have renewed pressure on the Guatemalan government to provide land to refugees and others and the Peten continues to be viewed as a politically acceptable safety valve for the landless poor, a role it has played throughout modern times. The paving of the road from Guatemala City to the Peten has made the trip from the highlands much easier, establishing an overland commercial connection that will further integrate Peten into the national economy.

Land in the Peten may be titled and titled land may nonetheless be occupied by someone other than the titleholder. Titled land takes several legal forms, cooperatives, parcelamientos, comunidades agrarias, and individual private property. All of these may be found in the mosaic of land use within the corridors. Invaded lands or "agarradas" represent the informal land tenure pattern in the Peten that must be understood if conservation objectives within the corridors is to be achieved. Agarradas may occur on government lands within protected areas, in private large landholdings or on the smaller "parcelas." In either case, Agarradas are bought, bartered and sold in a complex informal land market and for which the law affords mechanisms to formalize occupation status.

A. TOWARDS A LAND USE CLASSIFICATION SYSTEM FOR THE MAYA FOREST: The case of the El Ceibo Corridor

Land use classification systems are commonly used in the planning profession as an analytical tool to understand and zone lands for specific applications, including conservation. They are frequently used as a policy tool in the field of comprehensive planning. Geographers have developed uniform classification systems that enable land use information to be compared across jurisdictional boundaries.

The draft matrix below represents an initial effort to develop a land use classification system that describes the human uses of the landscape based on the El Ceibo Corridor of Guatemala, described above. The categories below do not represent all of the potential categories that may

apply but are intended to provide an example of how this sort of classification system may assist corridor planners in understanding the nature of the human use of the landscape and its potential for conservation. Completing this matrix and preparing similar matrices for the remaining corridors in each of the Maya Forest countries represents an ongoing effort.

A PRELIMINARY LAND USE CLASSIFICATION FOR SELECTED LAND USE TYPES IN THE EL CEIBO CORRIDOR

Land Use Type

+ class tenure/subtenure

**Ocurrence level
Ceibo Corridor**

**Potential for
conservation**

Cropland

CROPS in titled land that is rented out	Common
CROPS in titled land that is borrowed	Occasional (?)
CROPS in titled land under sharecropping	Common
CROPS in titled land with squatters	no guess
CROPS in agarrada that is rented out	Very common
CROPS in agarrada that is borrowed	Occasional
CROPS in agarrada under sharecropping	Occasional (?)
CROPS in agarrada with squatters	no guess
CROPS in usufruct plot that is rented out	Common (?)
CROPS in usufruct plot that is borrowed	Occasional (?)
CROPS in usufruct plot under sharecropping	Occasional (?)
CROPS in usufruct plot with squatters	no guess
CROPS in Concession	Common (?)

Pastureland

PASTURE in titled land that is rented out	Common
PASTURE in titled land that is borrowed	no guess
PASTURE in titled land with squatters	no guess
PASTURE in agarrada that is rented out	Common
PASTURE in agarrada that is borrowed	no guess
PASTURE in agarrada with squatters	no guess
PASTURE in usufruct plot that is rented out	Common
PASTURE in usufruct plot that is borrowed	no guess
PASTURE in usufruct plot with squatters	no guess
PASTURE in Concession	Occasional (?)

Fallow lands

FALLOW REGIME in titled land either rented or borrowed to someone else	Common (?)
FALLOW REGIME in agarrada either rented or borrowed to someone else	Common (?)
FALLOW REGIME in usufruct plot either rented or borrowed	Common (?)
FALLOW REGIME in Concession	Common (?)

Wetlands

WETLAND in titled land	Common
WETLAND in agarrada	Common
WETLAND in usufruct plot	Common (?)
WETLAND in Concession	Not common

Private Forestlands

ASTILLERO or RESERVE in titled land	Infrequent (?)
ASTILLERO or RESERVE in agarrada	Infrequent (?)
ASTILLERO or RESERVE in usufruct plot	no guess
ASTILLERO or RESERVE in Concession	no guess

5. TOWARDS A CONSERVATION AND DEVELOPMENT CORRIDOR STRATEGY FOR THE MAYA FOREST**[TO BE COMPLETED BY THE MAYA FOREST COALITION]**

The list below identifies some of the common factors that affect the development of a coherent, trinational conservation strategy for the Maya Forest. These factors, and others that may be identified during regional strategy meetings should be considered by conservation planners.

Common Factors

- ▶ Each of the conservation corridors and each of the development corridors share a geopolitical boundary and represent politically and economically marginalized development frontiers.
- ▶ All of the conservation and the development corridors are subject to macroeconomic development planning, such as road and energy development.
- ▶ All the development corridors represent contemporary routes for trade and human movement between countries.
- ▶ All of the development corridors share common development patterns, cattle pasture, small scale commercial and subsistence agriculture.
- ▶ All of the development corridors share a history and present of uncertain land tenure, but the nature of tenure varies greatly across the political landscape
- ▶ All of the development corridors have been the target of resettlement projects, and both legal and illegal immigration at one time or another.
- ▶ All the conservation and development corridors are affected by a recent past of armed conflict and a current hiatus in armed conflict that includes continued prospects for refugee resettlement and accelerated economic growth.
- ▶ All the development corridors include small but growing urbanizing areas that have become development nodes and catalysts for further population growth.
- ▶ Local peoples hold the keys to the conservation strategy in the conservation and development corridors, but are themselves subject to macroeconomic development decisions in which they often have little participation (e.g. energy, mass tourism).