PROCEEDINGS

The Chiquibul Stakeholders' Planning Workshop

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Sponsored by:
Friends for Conservation and Development
Critical Ecosystem Partnership Fund
Protected Areas Conservation Trust

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San Ignacio Town, Cayo District
Belize, Central America

TABLE OF CONTENTS

Abbreviations

BAS	Belize Audubon Society
BelNaRM	Belize Natural Resources Management Strategies
BFREE	Belize Foundation for Research and Environmental Education
BMC	Bladen Management Consortium
BNR	Bladen Nature Reserve
CBWS	Cockscomb Basin Wildlife Sanctuary
CEPF	Critical Ecosystems Partnership Fund
CI	Conservation International
CMMKBA	Chiquibul/Maya Mountains Key Biodiversity Area
CONAP	Comisión Nacional de Áreas Protegidas (Guatemala)
FCD	Friends for Conservation and Development
FD	Forest Department
MFE	Maya Forest Enterprises Limited
NPAS	National Protected Areas System
PACT	Protected Areas Conservation Trust
TIDE	Toledo Institute for Development and Environment

1. SUMMARY

This two-day conference, held November 4-5, 2005 at Cahal Pech Resort in San Ignacio Town, Cayo District, Belize, brought together representatives from non-governmental organizations, government departments, funding agencies and others interested in the establishment of a strategic and integrated management program for the Chiquibul/Maya Mountain Key Biodiversity Area **(Appendix IV, Figure 1)**. This conference is a follow-up to the Chiquibul Stakeholders' Workshop held in May 20-21, 2005. It was organized by Friends for Conservation and Development (FCD), funded by the Critical Ecosystems Partnership Fund (CEPF), and facilitated by Osmany Salas (BelNaRM Strategies). These proceedings include selected materials from conference presenters, ideas generated from discussions, and results of the logical framework planning session. The latter was used in defining project goal, purpose, objectives and major activities.

2. INTRODUCTION

2.1 Welcome Remarks

Welcome remarks were given by Lizandro Quiroz (FD), Yvette Alonzo (PACT), James Barborak (CI) and Rafael Manzanero (FCD). Mr. Quiroz stated that full support can be expected from FD in achieving sustainable management of the Chiquibul area. Ms. Alonzo informed on PACT's move towards mid and long term project funding and its commitment to matching any funds received from CI/CEPF. Mr. Barborak commented on the commitment of CI to the funding of projects in the Mesoamerican corridor through the CEPF. He also encouraged that the core conservation areas of the Chiquibul/Maya Mountains area be nominated as a World Heritage Site. Mr. Manzanero emphasized that in the formulation of a management plant for the Chiquibul area, the three key components must be considered – flora, fauna and the people of the area.

2.2 Presentation of Participants

Participants identified themselves and organizations they were representing, and commented briefly on their expectations of the conference. In general, participants expected to see the planning of an integrated and unified approach to the management of the Chiquibul/Maya Mountains Key Biodiversity Area (CMMKBA) and the start of an on-the-ground effort as soon as possible to curtail the present encroachments and cross-border incursions.

2.3 Overview of Agenda and Workshop Objectives

The workshop facilitator, Osmany Salas, gave an overview of the agenda **(Appendix I)** for the presentations and working sessions. He stated that the national and regional context must be kept in mind while addressing the key management challenges and needs of the CMMKBA. The main purpose of the workshop was to produce the key elements of the project proposal and seek ways to build alliances in the setting up of a management consortium for the area. A report from the recent xaté workshop was added to the agenda.

2.4 Overview of Proceedings of the 1st Chiquibul Stakeholders Workshop

Osmany Salas reviewed the Summary of Proceedings for the Chiquibul Stakeholders Workshop held on May 20-21, 2005. The results of this workshop were to be used in the working sessions when identifying objectives and activities. Rafael Manzanero (FCD) would do the analysis of this workshop's results. Mr. Salas noted that at the moment there was a window of opportunity on both the political and funding sides to implement a management plan for the CMMKBA.

3. NATIONAL AND REGIONAL CONTEXT

3.1 Critical Ecosystem Partnership Fund (CEPF) Strategic Directions and Investment Priorities: Northern Mesoamerican Ecosystem Profile – James Barborak

James Barborak identified CEPF partnership objectives were to include the following: 1) partnership between Conservation International, Global Environment Facility, Government of Japan, The MacArthur Foundation, and The World Bank; 2) conservation of earth's biologically richest and most threatened areas – biodiversity hotspots; 3) engaging civil society and fostering conservation alliances; 4) strategic investment; and 5) capturing and disseminating knowledge and information using www.cepf.net.

CEPF presently focuses on 13 active Hotspots **(Appendix IV, Figure 2)** in Northern Mesoamerica with $40.1 million in committed project grants. More than 275 projects are presently supported from some 1,300 applications. More than 150 partnerships have been formed in 33 countries with an average of $145,375 given as project grants. The Eligibility Criteria for CEPF Funding is as follows: 1) be in a Biodiversity hotspot, 2) a World Bank Borrowing Member Country, and 3) ratification of the Convention on Biological Diversity.

The Strategic focus of the Ecosystem Profile is to carry out an overview of biological importance of the hotspot, a rapid assessment biological significance, threats and opportunities, and current investments, and to articulate the role of CEPF in strategic funding directions and investment priorities.

The Northern Mesoamerican region – which consists of 24 KBAs identified in over 14.3 million hectares, including parts of Southern Mexico, Guatemala, and Belize – ranks among the most threatened hotspots globally. 407 species are threatened of which 106 are critically endangered. The Northern Mesoamerican Corridor is divided into the northern region (Mexico, Belize, Guatemala, El Salvador and Honduras) and the southern region (Rio Plata, Honduras down to Panama).

CEPF hopes to achieve its plan by fostering civil society participation in regional decision making on select policies and investments, collaborating with other donors to facilitate successful conservation activities in Northern Mesoamerica's eight most important KBAs, supporting priority conservation actions in three priority key biodiversity areas (CMMKBA included), and preventing the extinction of Northern Mesoamerica's 106 critically endangered species.

Mr. Barborak clarified that CI/CEPF does not fund government agencies but encourages governments to be part of the funding coalition. He noted that CEPF money has not been spent out in the northern region as it has been in the south hence funds are available for projects. He encouraged that inquiries be made into other sources of funding from CI.

During the discussion period, Jacob Marlin (BMC) pointed out that even though CI does not fund government agencies, the Forest Department presently benefits indirectly from CI funds. Chris Minty (MFE) questioned the sustainability of projects if on average only $145,000 was made available for projects. James Barborak clarified that CI should not be seen as a panacea for covering recurrent expenditures but that funds be sought from tourism, endowment funds and contributions from companies that benefit form the use of the environmental resources (e.g., BECOL)

3.2 The Importance and Significance of the CMMKBA within the Selva Maya Ecoregion and the National Protected Areas System: Key Biodiversity and Management Issues – Jan Meerman

The Maya Mountains region of Belize has an area of roughly 1,343,000 acres. Within this area the Chiquibul Forest Reserve and the Chiquibul National Park together total 411,800 acres. The Chiquibul reserves are connected with a number of other protected areas, forming one contiguous ecological unit. The Chiquibul – Maya Mountains are becoming an isolated block in the region.

Jan Meerman commented on the population pressures on the Guatemalan side and the increasing threat on the Belize side. He focused on agriculture-related fires in April 2005. **(Appendix IV, Figure 3)** Problems are compounded with the increased incursions by the xateros.

Mr. Meerman used the study by Victor Hugo Ramos, called "The Human Footprint and Last of the Wild" (2004) which identifies the "last" really wild areas within Mesoamerica, to highlight the importance of viewing the Maya Mountains area as a whole. For Belize, this study identifies two principal "blocks" – the largely isolated Maya Mountains/Chiquibul/Cockscomb block extending into the Golden Stream Corridor which is approximately 1,290,000 acres (520,000 ha) (protected area coverage) and the Rio Bravo/Gallon Jug/Yalbac block of 470,000 acres (190,000 ha), which connects through the Maya Biosphere Reserve in Guatemala's Northern Petén into Southern Mexico with a regional total of 7,700,000 acres (3,100,000 ha).

In total the Belizean "last wild" areas thus amount to 1,760,000 acres (710,000 ha). In the case of the Jaguar, these will probably become the last strongholds of the species within Belize. Jaguar survey data for three discrete areas in Belize (Gallon Jug, Chiquibul and Cockscomb Basin) show different populations densities between the three sites. **(Appendix IV, Figure 4)** Differences between habitat and resulting habitat suitability may be one explanation. Level of protection may be another very likely reason. The relatively low figures found in the Chiquibul area may be the result of a recent collapse of the prey-base as a result of heavy xatero activity in the area. If this is the case, densities may also be strongly dependent on management. When we consider the Jaguar density data and translate them to the entire region, the entire Maya Biosphere Reserve including the Rio Bravo/Gallon Jug/Yalbac block may provide habitat for up to 2,500 jaguars of which approximately 215 would find a home on the Belizean side. The whole "Maya Mountain Block" on the other hand might provide habitat for up to 400 adult jaguars. A recent study, concludes that for the long term survival (>200 years) of Jaguar populations, the minimum population size should not fall below 650 adult individuals. Base on this study, the last two potential strongholds for Jaguars in Belize are not large enough to maintain jaguar populations on the long term. Particularly the survival of the Belizean part of the population depends strongly on the continued connection with the Petén's Maya Biosphere Reserve and the Chiquibul-Montañas Maya Biosphere Reserve.

Meerman noted that key biodiversity information is available but scattered and that a major compilation of past research data is being carried out by the Natural History Museum and Las Cuevas Research Station. Data can be made accessible through the Biodiversity & Environmental Resource Data System of Belize (BERDS) and the Biodiversity Clearing House Mechanism.

The National Protected Areas System Plan calls for an amalgamation of many existing protected area units into single, multi-zoned, conservation management areas. This will immediately simplify the system and its administration and produce economies of scale. Such an amalgamation

immediately creates two terrestrial conservation management areas meeting World Heritage criteria: 1) the north-western forests as a Belizean extension of the Maya Biosphere Reserve with World Heritage core zones, and 2) the Maya Mountain–Mountain Pine Ridge Massif. These are potentially one of the prime conservation areas in Central America. Key Management Issues include maintaining the area as one ecological unit, maintaining corridors with Northern Belize where possible, stemming incursions and establishing a zoned management scheme according to its appropriate local attributes involving the logging industry, non-timber forest products, tourism, archaeology, mining, scientific research and other sustainable activities.

4. KEY MANAGEMENT CHALLENGES AND NEEDS OF THE CHIQUIBUL/MAYA MOUNTAIN AREA

4.1 Chiquibul Forest Status Report - Chris Minty

Chris Minty identified the location of the Las Cuevas Research Station in the Chiquibul forest. **(Appendix IV, Figure 5)** He identified the Las Cuevas Consortium to be comprised of Maya Forest Enterprises, Conservation Management Institute, Royal Botanic Garden Edinburgh and the Government of Belize. The mission of the research station is to document and make known the biodiversity of the Maya Forest and contribute practical knowledge to Belize's sustainable development and conservation under the Convention of Biological Diversity. Priorities include understanding the maintenance and structure of the forest, evaluating human and natural impacts on the forest and linking science with conservation policy.

Mr. Minty pointed out that the mosaic of vegetation in the Chiquibul is a result of the area lying at the border of the sedimentary rock and limestone substrata. Studies have focused on plant soil relationships and contributions have been made to publications such as the Reptiles of Belize Book.

The research station's policy on education has focused on bringing data back to Belize, the exchange of information, access to RBGE databases, field training of Belizean students, and creating research opportunities for Belizeans in Edinburgh.

Tourism presents a viable resource especially with Caracol Archaeological Reserve as the major attraction. The industry could be expanded to include adventure tourism.

Problems faced by the Chiquibul include BECOL's damming of rivers, timber extraction, xaté extraction, gold mining, and military training by the British Army (which are now up to battalion strength). Up to 1000 xateros have been estimated in the Chiquibul area. Mr. Barborak pointed out that these people are not 'international terrorists' but poor people and that there is a need on the Guatemalan side to provide an economic rationale for them. At the moment the BDF are limited in what they can do to curtail incursions by the xateros.

4.2 Xaté Workshop Report – Lizandro Quiroz

The Xaté Workshop held in October 2005 focused on income generation technology that needs to be implemented to create a balance to the uncontrolled extraction of xaté. Security issues were addressed. The idea of certifying xaté for export and issuing licenses and granting xaté harvesting concessions to Belizeans was discussed. Chris Minty pointed out that this might create more conflict by attracting more people to the area. It was made known that the xateros are also

responsible for minor looting in Caracol. Allen Genus (BAS) noted that there was increased illegal activity by xateros in the Cockscomb Basin Wildlife Sanctuary.

4.3 Vaca Plateau Status Report – Rafael Manzanero

Rafael Manzanero described the Vaca Forest Reserve as the Gateway to the Chiquibul. The Vaca Forest Reserve was established in 1991 and comprised a total of 21,269 hectares located on the northern border of the Chiquibul. Primary functions include wildlife protection, environmental protection, visitation, research, education and controlled extraction. The key purpose is to maintain adequate stock of renewable natural resources for sustainable use by local communities and to contribute to the national economy. The site contains exceptional natural features, constitutes linkages with the Chiquibul forest and links a major block to other biogeographical regions, and a high environmental protection value through retention of natural cover, of watersheds and steep slopes.

Incursions have been occurring for many years. Land speculation occurred for political leverage prior to the past national elections. 40% of the reserve was de-reserved in 2004 for agricultural purposes. Road construction will encourage more incursions and increased settlements in the reserve are imminent. Soil erosion resulting from infrastructural developments will lead to damage. The Mollejon Dam is located in Vaca. Presently environmental pollution is not being monitored. Unregulated development is likely to increase and the agricultural frontier likely to expand. Indiscriminate hunting and illegal logging continue to be problematic.

The following management recommendations must be considered: 1) affording special protection to the area to ensure representation within the NPAS, 2) a ground survey, 3) road construction reassessment, 4) land speculation must be stopped, 5) boundary demarcation is essential, 6) agriculture expansion must be contained and controlled, 7) patrols, 8) education of local authorities, and 9) a management plan is needed.

Jim Barborak emphasized that this is a Belizean national issue and the present situation in Vaca must be addressed or a similar situation to that of Laguna del Tigre, Guatemala, will occur. Lenny Gentle (FCD) pointed out that there were already increased sightings of jaguar and puma downstream from Mollejon. Jan Meerman added that the animals are refugees and that further road building will only break the corridor.

4.4 Cockscomb Basin Wildlife Sanctuary Status Report – Allen Genus and Nicasio Coc

Allen Genus gave an overview of CBWS' five-year plan (2005-2010). The goals of the plan are to maintain biodiversity, ecosystems, cultural resources and watershed areas within a functional conservation area, as an integral part of the NPAS, to provide an enabling environment for economic opportunities for local communities and society, towards sustainable development, to engender greater public support, public awareness and participation, to develop CBWS as a national and international known research site, to strive towards a greater level of economic sustainability through expansion and further development of tourism, compatible with biodiversity, and to contribute towards the environmental services provided by conservation areas – clean air, clean water, and climate change improvement.

Challenges faced by CBWS include: organizational human resource constraints (numbers, capacity & high staff turnover); the community's limited capacity to participate; the community's limited knowledge of GOB's role and co-managers role in protected areas management; linking conservation efforts to economic demonstration projects; community members moving to urban areas; communities social and economic realities; community conflicts; and networking constraints – limited capacity and resources of service providers to assist communities with basic needs and funding realities and limitations.

Achievements are as follows: implementation of alternative livelihood projects such as bee-keeping, and the building of a craft shop for the local women's group; environmental education including outreach to the local schools and the broader community; building capacity within the organization and networking with relevant service providers; making the connection between social and conservation issues; developing and testing a structure that would provide communities with the opportunity to feed into the management of CBWS; communities are seeing the benefits of working together; micro-enterprises funded through other service providers; communities supporting BAS in addressing serious management concerns (CBWS - boundary issue, jaguar reports, fishing issue); communities understanding the importance of the protected area (CBWS – Maya Mopan waterfall area); trainings led to a cadre of community leadership; communities view themselves as active stakeholders and take initiatives to tackle issues that affect the protected area as it indirectly affects their source of income.

It is important to: make a complete socio-economic assessment of communities; identify key stakeholders (users of the natural resources or those most affected); design a strong education program targeting key stakeholders as well as the broader community about conservation; identify along with key stakeholders alternative livelihood project/income generation; link income generating activities directly to conservation efforts and develop communication structure along with community; initiatives must come from the communities but require support from relevant organizations and agencies; be honest and open with communities (keep expectations low); network – all support agencies must arrive at the same time in order to effect tangible changes and maximize resources; and communities must be made to understand that they have a role and responsibility for their own development.

In the discussion period, James Barborak asked if the CBWS is the best case scenario and a similar plan be implemented for Chiquibul. Jan Meerman commented that it is too early to determine if CBWS should be used as a model since each area has different needs. Jacob Marlin noted that the needs of the areas are the same but they differ in priority. Chris Minty inquired about xaté problems. Although xateros have not been sighted within the CBWS, they are not far from the Maya Mountains Divide. Lenny Gentle asked about how the income generated was budgeted. Allen Genus' response was that at the moment the park is not sustainable and still depends primarily on grants. From the monies generated from within the park, 30% goes to administration, 10% to development of Maya Center Village, and the rest to help cover CBWS recurrent expenditures. Bruce Miller asked if jaguars are still being shot in the area. Nicasio Coc confirmed that they are being shot at the periphery of the park and this is due to conflict with cattle ranchers.

4.5 Bladen Nature Reserve Status Report – Jacob Marlin

Jacob Marlin identified the Bladen Nature Reserve as being located south of Chiquibul **(Figure 6)** and as being the last pristine tropical rain forest in the western hemisphere and perhaps the only

roadless protected area. The BNR was established as nature reserve in 1990; its 99,673 acres encompasses the Bladen Branch Watershed. The BNR is significant in conservation because of its extremely high ecological integrity and high biodiversity; it is a large contiguous area, it has 'soft boundaries', there is low or non-existent historical land use effects, compatible land use occurs in adjacent areas, there is a low human population in neighboring areas, there is a strong conservation ethic in Belize, there are ongoing scientific interests, a strong management interest (BMC) is present, it is protected (it already exists!), and it is a core area within the CMMKBA.

The Bladen Management Consortium (BMC) which includes BFREE, TIDE, YCT, BAS and the Forest Department was established in August 1996. BFREE lies at the Gateway to Bladen and serves as a functional and managed buffer zone. BFREE was formed in 1995 and granted non-profit status in 1997. Activities and accomplishments of the BMC include: annual over-flights since 1996; management plan drafted 1997; regular meetings since 2001; monthly ranger patrols since 2002; boundary demarcation in 2002; community awareness meetings; funding proposals; provisional co-management agreement signed in 2004; funding acquired in 2005 (PACT, CEPF, Spanish Government); full time rangers in 2005; management plan updated in 2005; and full time staff in 2005.

Future goals of the BMC include: strengthening of management systems; monitoring of biodiversity; increasing protection; promoting awareness and support; developing financial sustainability and permanent co-management. Some of the issues presently being faced by the BMC include: maintaining the strict category of protection; the increased pressure from agricultural development (Trio); local pressures from hunting, xateros, logging, mining, gravel extraction and tourism; low public awareness; extremely low levels of funding and staffing; and no strategic plan in place.

The conservation challenges of the BMC are to complement development needs of Belize, effectively link conservation of BNR with sustainable livelihoods and incentives due to strict legal status and to lobby for political will and support of BNR. To address these challenges the BMC needs: financial input and sustainability, increased protection; an aggressive comprehensive advocacy campaign (local, national and international); an aggressive educational campaign; benefits for local people in surrounding communities (increased staff, livelihood projects); enforcement of rules and regulations; ongoing monitoring and control of human activities; ecological inventories & monitoring programs; and an integrated, coordinated and focused collaboration between research and management.

During the discussion period, Chris Minty commented on the need for enforcement of regulations. Bruce Miller added that arrests have been made but the courts throw out cases because of political interference. Jacob Marlin pointed out that the rangers needed training and the authority to deal with incursions. James Barborak suggested that politicians need to be educated on long-term planning and getting the environmental priorities into the political plans.

4.6 Montañas Mayas-Chiquibul Biosphere Reserve: Machaquilá and Xutilhá Wildlife Sanctuaries Status Report – Francisco Castañeda Moya

The Montañas Mayas–Chiquibul Biosphere Reserve was created in 1995 and has an area of 123,685ha located in southeastern Petén. It includes the municipalities of Dolores, Poptún, San Luis and Melchor de Mencos. The reserve is divided into 5 zones. **(Figure 7)**

The main thereat to the reserve is the unsustainable human presence which has led to looting of the Mayan heritage and deforestation due to logging, agriculture and forest fires (see map). The rise in human presence began after the end of the civil war in Guatemala with the influx of Kekchis from the department of Alta Vera Paz. The Kekchis concept of land use caused much damage to the area. In 1990, 63% of the forest was left. In 2005, 40% remains of which 25% is primary forest **(Figure 8)**. The risk of further deforestation is high. The environmental degradation began before the area was declared a reserve as the humans were already present.

Challenges to the management of the reserve include: lack of finance, integration of stakeholders, government involvement and presence, improvement of livelihoods of the people, obtaining actualized information, curtailing extraction. Any approach must involve the people of the area and a socio-economic value must be added to the natural resources. The idea that conservation is an exotic concept must be erased.

Jacob Marlin warned that we are fifteen years behind what has occurred on the Guatemalan side and we must learn from their mistakes or suffer a similar fate. Jim Barborak pointed out that problems in Guatemala are compounded because local government officials support illegal activities 'behind the scenes'. Chris Minty added that the 'gringo trail' and the trafficking of serious illegal drugs are heavy in the area and the Guatemalan press goes out of its way to misrepresent facts about conservation.

5. THE MAIN ELEMENTS OF THE PROJECT PROPOSAL

5.1 Analysis of the Results of the First Chiquibul Stakeholders' Workshop – Rafael Manzanero

Rafael Manzanero identified the target site for the proposed CMMKBA. The Chiquibul Forest Reserve was re-defined in 1995 consisting of 147, 810 acres and the Chiquibul National Park consisting of 265,262 acres. The Caracol Archaeological Reserve is surrounded by the park limits. The park also includes Doyle's Delight, the highest point in Belize located on the Main Divide of the Maya Mountain Massif, and contains the longest and largest known network of caves in Central America – the Chiquibul Cave System.

The management vision, as defined at the May 2005 planning workshop, is as follows: *The Chiquibul Forest is a functional productive forest that has global recognition of its intrinsic ecological value; provides economic, recreational and environmental services nationally and regionally and is managed sustainably to contribute to national development, security and regional cooperation while enhancing and maintaining its ecological integrity. It employs adaptive management principles and is guided through an integrated management system based on national and regional agreements thereby maximizing the support of stakeholders, development of Belize and peace in the region.*

Management objectives include: maintaining the forest ecosystem; conserving biodiversity; stimulating economic possibilities; strengthening neighbor confidence and cooperation and promoting public outreach and awareness. The overarching objective is to maintain an intact, healthy and productive Chiquibul ecosystem.

Management responses are to include: continued scientific research and establishment of a database; promoting reforestation and minimizing threats to habitats and species; set up infrastructure with adequate access points, control center and support equipment; improve visitor use and facilities;

address security and border issues; generate income from environmental services; develop awareness program and promote awareness in border communities; improve management and administration by developing core group for proposal creation, establishing a multi-agency support mechanism; revisiting current concession agreements; identifying an appropriate management structure; dialoguing with Guatemalan counterparts; instituting interim management, and formulating and implementing an integrated management strategy for the Chiquibul.

The next steps in seeing fulfillment of the project are as follows: conducting site and management needs assessment; stakeholder workshops; data compilation; comprehensive proposal presented (within 30 days); strengthening of management units; implementation of a rapid management program; development of a management plan; and management implementation.

5.2 Dynamics of Group Work

Osmany Salas explained the process of using the logical framework planning methodology for the definition of the project goal and purpose, objectives and expected results, and major activities. Four working groups were formed and the work divided into three sessions. The first session focused on the project goal and purpose. The project goal was identified as the overall broader objective to which the project will contribute. It was noted that the project alone will not achieve the project goal. The project purpose was described as the action intended to be achieved by the project. The second session focused on defining the project objectives and expected results. Each group presented their ideas which were followed by discussions and recommendations. It was recommended that objectively verifiable indicators be kept realistic. In the third working session the groups identified key activities to be carried out in a logical sequence to produce the expected results.

At the end of each working session the groups presented their ideas. Each presentation was followed by discussion and recommendations were made. At first there was some confusion in differentiating between the project goal and purpose. Most of the discussion focused on the verifiable indicators in which realistic time frames and expectations were devised. It was noted that some of these indicators would require past information to use as reference points and in many cases the databases were either limited in resources or non-existent. It was recommended that indicator species need not be the endangered (scarlet macaw) but that proper species needed to be selected.

The issue of increasing visitors to Caracol was discussed. The upgrading of the road to Caracol would clearly make the site more accessible especially to cruise ship visitors. The effects of doubling visitors to the area from 20,000 to 40,000 per year were brought up. Francisco Moya noted that this increase should be welcomed because in comparison Tidal National Park receives up to 200,000 visitors per year. Accessibility to areas in the park had to be assessed in conjunction with the FD. Areas where trails were to be opened had to be identified. It was also noted that the present tour guiding certification classes are too expensive and that the experienced guides are snatched by tour companies.

In the enforcement of rules, Lt. Col. Black noted that resources by the BDF to carry out patrol were low and shrinking. Francisco Moya recommended that the management plan include food and fuel for the patrols (as has been done in Guatemala). In related military matters, it was noted that the increase of the British Army Training Support Unit (BATSUB) presence to battalion size is

contributing to the rapid degradation of the roads. It was recommended that GOB give a portion of the fees paid by the British to the management of the area.

The compiled results of the working sessions are presented in the logical framework below.

5.3 Results of the Logical Framework Planning Session

LOGICAL FRAMEWORK OF THE ACTION (DRAFT)		
	Intervention logic	**Objectively verifiable indicators of achievement**
Project Goal	The Chiquibul/Maya Mountains Key Biodiversity Area is globally recognized for its intrinsic natural and cultural values, and contributes to national development and regional cooperation while enhancing and maintaining its ecological integrity.	By the end of the project, current rate of forest cover loss in the CMM-KBA (----- ha per year) is reduced by 50%. By the end of the project, current rate of border incursions noticeably reduced. By the end of the project, an integrated and comprehensive management strategy is in place for the CMM-KBA in accordance with the National Protected Areas System Plan. By the end of the project, the core conservation areas of the Belizean component of the CMM-KBA are recognized by UNESCO as a World Heritage Site, and the bi-national CMM-KBA is endorsed by UNESCO as a bi-national Biosphere Reserve (Peace Park). By the end of the project, an active multi-faceted Belize-Guatemala bi-national alliance is established and operational.
Project Purpose	A comprehensive and integrated sustainable management strategy for the core conservation areas of the Chiquibul/Maya Mountains Key Biodiversity Area is developed and implemented.	By the end of Year 1, an on-the-ground management presence is instituted for the Chiquibul Forest, and continued for the Bladen Nature Reserve. This is enhanced and maintained throughout the project period. By the end of Year 1, a functional Management Consortium is in place for the CMM-KBA. By the end of Year 2, a comprehensive integrated management strategy for the CMM-KBA is developed and officially endorsed, and is based on the National Management Plan Framework defined under the NPAS Plan. By the end of Year 2, a Management Fund (Endowment Fund) for the CMM-KBA is secured and activated. By the end of the project, a Belize-Guatemala Memorandum of Understanding for cooperation in matters pertaining to protected areas management in the regional CMM-KBA is approved and operational.

Specific Objectives **1.**	Establish a viable and integrated sustainable management program and administrative structure for the CMM-KBA involving key stakeholders	By the end of Year 2, 80% of all key stakeholders of the CMM-KBA, including relevant government agencies and community representatives, are actively involved in the management of the CMM-KBA, guided by a comprehensive integrated management strategy. By the end of Year 1, an on-the-ground management presence is instituted for the Chiquibul Forest, and continued for the Bladen Nature Reserve. This is enhanced and maintained throughout the project period. By the end of Year 2, a program for socio-economic monitoring and for the measurement of management effectiveness within the CMM-KBA is in place, in accordance with the NPAS Plan. Endowment Fund created and activated by the end of Year 2; a comprehensive financial sustainability strategy and business plan formulated and under implementation, by the end of Year 2. By the end of Year 3, PACT and other local/ international donors support a financing scheme for the CMM-KBA. By the end of Year 2, a viable ecotourism strategy - incorporating marketing/promotion and product development components - for the Chiquibul Forest is formulated and under implementation, and ecotourism arrivals to the Chiquibul Forest (including Caracol) increased by 100%.
2.	Reduce illegal incursions in the CMM-KBA	Number of joint multi-agency patrols doubled by the end of Year 1, tripled by Year 2, and quadrupled by the end of the project - coupled with law enforcement/prosecution. By the end of the project, the number of illegal camps in the Chiquibul is reduced by 50% By the end of Year 1, a managed protected buffer created adjacent to BFREE lands and in the Vaca Forest Reserve.

3.	Enhance and maintain a viable research and biological monitoring program for the CMM-KBA	By the end of Year 2, a vibrant research program is in place at the Las Cuevas Research Station (LCRS), and the La Sierra Biological Station (LSBS) is re-activated. By the end of Year 2, FPMP, BFREE and LCRS research data collated and synthesized, and made available through the Biodiversity Clearing House Mechanism and the BERD. By the end of Year 5, the Scarlet Macaw population is increased by 50% (appropriate indicator species and/or globally, critically endangered species). By the end of Year 5, 60% of damaged xaté palms in Chiquibul Forest restored.
4.	Develop and institute a sustainable livelihoods, cooperation building and public awareness strategy focusing on the communities near to and within the CMM-KBA.	By the end of the project, 5 sustainable livelihoods demonstration programmes are established and under implementation within the CMM-KBA buffer zones - promote and reward land stewardship. By the end of the project, 50% of permanent and 75% of seasonal CMM-KBA staff members are from buffer zone communities. By the end of the project, joint/bi-national community projects are under implementation. Four exchange visits conducted per year (2 in Belize, 2 in Petén)
Activity #	**Activities**	**Means:**
Specific Objective 1. Establish a viable and integrated sustainable management program and administrative structure for the CMM-KBA involving key stakeholders		
1.1. Establish the Chiquibul/Maya Mountains Management Consortium (CMMMC), ensuring the participation and involvement of all key stakeholders.		Meetings/Consultations Exchange visits Legal registration Training and capacity building
1.2. Develop and implement a Memorandum of Understanding between the Forest Department and the CMMMC for the management of the Chiquibul/Maya Mountains KBA.		Meetings/Consultations Legal registration
1.3. Formulate and implement a comprehensive 5-year integrated management plan for the Chiquibul/Maya Mountains KBA		Management planning consultancy Stakeholder meetings and consultations Rapid ecological assessments Management needs assessments Satellite imagery Aerial photographs

1.4. Institute a full-time, fully-equipped, on-the-ground ranger presence in the Chiquibul Forest.	Personnel Vehicles and fuel Camping equipment and field gear Training and capacity building
1.5. Continue the full-time on-the-ground ranger presence at the Bladen Nature Reserve, and fully-equip same.	Personnel Vehicles and fuel Camping equipment and field gear Training and capacity building
1.6. Establish Ranger Stations in the Chiquibul Forest, Bladen Nature Reserve, and the Columbia River Forest Reserve (La Sierra).	Rangers' office quarters Camp sites Radio communications equipment Computers and accessories Satellite internet system Compound maintenance equipment
1.7. Establish a program for the measurement of management effectiveness based on the National protected Areas System Plan.	Personnel Measurement of management effectiveness manual
1.8. Formulate and implement a business plan (based on Payment for Environmental Services) in conjunction with the CMM-KBA management plan.	Consultancy - economic valuation of the environmental goods and services of the Chiquibul Forest Consultancy - development of financial sustainability strategy and business plan for the Chiquibul Forest Statutory Instrument - establishment and administration of fees and charges (unified fee system)
1.9. Design and implement an ecotourism development and marketing strategy, in line with the management plan and business plan for the CMM-KBA	Consultancy - design of ecotourism development and marketing strategy; feasibility studies Video/DVD documentary Promotional materials/website
1.10. Upgrade existing ecotourism infrastructure and trail systems	Contract(s) - trail building Contract(s) - infrastructure upgrade Construction materials Interpretive signs
1.11. Construct a visitors center in a centralized location within the Chiquibul Forest	Architectural design/blueprint Contract - visitor center construction Contract - educational/interpretive displays
1.12. Set up CMMMC headquarters office in San Ignacio Town/San Jose Succoth.	Radio communications equipment Computers (desktop and laptop) and accessories Satellite internet system Office equipment and supplies Vehicles and fuel
1.13. Conduct monthly meetings of the CMMMC	Meeting costs

Specific Objective 2. Reduce illegal incursions in the CMM-KBA	
2.1. Secure the official commitment of the Ministries of Home Affairs and Defense, the Belize Defense Force and the British Army Training Support Unit to provide training, security and law enforcement support to the CMM-KBA Ranger Force.	Meetings Field training
2.2. Establish and maintain a multi-agency security presence within the Chiquibul Forest.	Patrol supplies and rationsTransportation support/FuelAerial reconnaissanceSatellite imagery
2.3. Demarcate the boundaries at the encroachment pressure-points along the Bladen Nature Reserve, Maya Mountain North Forest Reserve, Chiquibul National Park, and Vaca Forest Reserve.	Surveyor(s) - contract(s) Boundary clearing equipment (machetes, axes, chainsaws, etc.) Signs and markers Casual labor
2.4. Assess and map illegal camps and trails within the Chiquibul/Maya Mountains KBA	Patrol supplies and rations Mapping and survey equipment Signage materials
Specific Objective 3. Enhance and maintain a viable research and biological monitoring program for the CMM-KBA	
3.1. Collate all research carried out in the CMM-KBA as part of a Biodiversity Information System and make available through the Biodiversity Clearing House Mechanism and the BERD.	Consultancy - setting up of a CMM-KBA Biodiversity Information System (CMM-KBA BIS) Training in operation of the CMM-KBA BIS Computer equipment
3.2. Identify baseline information gaps on nationally and regionally endangered plant and animal species	Consultancy - baseline information gaps assessment
3.3. Establish and maintain a biodiversity research and monitoring program based on NPAPSP priorities and linked to the National Biodiversity Strategy and Action Plan	Digitizing tablet and accessories - LCRS and LSBS Research and laboratory equipment - LCRS and LSBS
3.4. Market the biodiversity research and monitoring program in order to establish and/or build on collaborative ventures with local and international research and educational institutions, and with individual scientists	Local and international travel Consultancy - website development (linked to CMM-KBA BIS and CHM) Promotional materials - brochures, pamphlets
3.5. Upgrade the research infrastructure and facilities at the Las Cuevas Research Station - Chiquibul Forest Reserve	See 3.3. above Vehicles Computer equipment Satellite internet system

3.6. Upgrade the research infrastructure and facilities at the La Sierra Biological Station - Columbia River Forest Reserve-Eastern Block	See 3.3. above Personnel Vehicles Computer equipment Satellite internet system Staff office/quarters Radio communications equipment Compound maintenance equipment
Specific Objective 4. Develop and institute a sustainable livelihoods, cooperation building and public awareness strategy focusing on the communities near to and within the CMM-KBA.	
4.1. Plan and conduct an environmental education and public awareness campaign focusing on the core conservation areas of the Chiquibul/Maya Mountains KBA	Consultancy - development of public awareness strategy Training Promotional and educational materials (posters, brochures, educational kits, videos/DVD, etc.) Audiovisual equipment (LCD projector, laptop, screens, portable TV/VCR)
4.2. Encourage and support community-based forest product enterprises within and around the Chiquibul Forest	Consultancy - forest products market analysis Harvesting plans - xaté Xaté plantations - nurseries Wood products - value-added Ecotourism Training - tour guiding, small/medium enterprises management Personnel - extension officers
4.3. Encourage and support re-forestation programs within the CMM-KBA buffer zone areas	Nurseries Seed bank Training and technical support Personnel - extension officers
4.4. Establish and maintain a bi-national cultural and technical exchange visits program for CMM-KBA staff and community representatives	Transportation support Boarding and lodging

6. BUILDING ALLIANCES FOR THE CONSERVATION AND MANAGEMENT OF THE CHIQUIBUL/MAYA MOUNTAINS

6.1 Collaboration Examples from Southern Mesoamerica – James Barborak

James Barborak described examples of bi-national and national conservation management programs presently functioning in the Southern Mesoamerica corridor **(Figure 9)**. The examples presented fulfill CEPF's Partnership Objective 3, which is to engage civil society and foster conservation alliances.

The San Juan-La Selva Corridor links SE Nicaragua and the Central Cordillera Costa Rican Biosphere Reserves. The Great Green Macaw is a flagship species and its habitat needs are helping to define conservation corridors. A partnership exists between governments (central and municipal) and cross-border civil society organizations. RARE funded research and pride campaigns on macaws. A Green Macaw bi-national fair is held yearly and rotated from among the municipalities

on both sides of the border. Presently there are investments in creating new protected areas, incentives for private lands conservation, research, management planning, securing of titles to indigenous lands, and conserving critical corridor links threatened by development. The Tropical Science Center coordinates this coalition that presently receives very modest project funding. The area is not without its problems. One of the main issues is the migration of Nicaraguans into Costa Rica where the economic situation is better.

The Osa Campaign, Coalition, and Conservation Area was used as a national example. The Osa peninsula is one of 11 Conservation Areas in Costa Rica. It features a unique wet tropical lowland forest and diverse marine ecosystem. The area was threatened by miners, fragmentation, unsustainable land use, and timber extraction and poaching. The jaguar and its prey are used as indicator species. Lessons to be learnt from Osa include: decisive government action was needed to stop invasions; the conservation area is managed by a conglomerate of different management categories (core, multiple use, indigenous reserve, private nature reserves); conservation incentives are used to promote improved stewardship (natural regeneration, reforestation with native species, agroforestry, private reserves and eco-tourism lodges) on private lands; a campaign to buy additional lands for core conservation areas, get permanent conservation easements, create key links and endow area was implemented; there has been a great increase in protection personnel (ranger force from the community) and budget; and a decentralized management structure is in place.

6.2 Collaboration Example from Belize: the Bladen Management Consortium – Jacob Marlin

Jacob Marlin used the BMC as a local example of collaboration. The BMC consists of BAS, BFREE, TIDE, YCT and the FD. These organizations do not compete with each other but work together to manage the BNR. In setting up a management consortium for the CMMKBA, Jacob Marlin recommended that the FD, FCD and BMC be a part of it. He also focused on challenges and benefits of a consortium and made some recommendations.

Challenges faced by consortiums include: different objectives of stakeholders; unequal work input; slow moving process; competition for resources; conflict of interest; fuzzy area of accountability; personnel changes.

Benefits of having a consortium include: multiple skills/expertise are brought together; better communication and networking is established; more resources are available; there is a stronger lobbying base; multiple agencies attract more funding and there is strength in numbers.

Jacob Marlin recommended that the CMMKBA management consortium have a unified vision, focus on alliance creation, define responsibilities, come up with a memorandum of understanding; put commitments in writing, hold regular meetings, have joint activities, set a communications (radio) system, set up an advisory committee, have realistic expectations, conduct regular evaluations, have a clear indication of costs and coordinate with the FD.

6.3 Collaboration Example from Belize: the Las Cuevas Research Station – Chris Minty

Chris Minty focused on collaborative research examples such as: Harpy Eagle Release Programme (Belize Zoo & The Peregrine Fund), Darwin Initiative Sustainable Conservation of Xaté in Belize (Natural History Museum, BBG & NYBG); Jaguar Population Survey in CFRNP (Wildlife

Conservation Society); Genetic Studies with Reptiles (Peter Stafford); and Genetic Studies with Spiders (Memphis Zoo).

Other collaboration examples include: The Chalillo Dam Wildlife Survey (Fortis-Becol); Salvage wood (Maya Forest Enterprise); Adventure tourism (No Hoch Chen Sinkhole); and Live Webcasts (San Francisco Exploratorium).

The network of collaboration has resulted in: Joint fieldwork/teaching; Joint Research Projects with international partners and co-authorship of papers; Access to information; Capacity building; Joint funding; Training and education; Staff/student exchange; Live Webcasts linking Partners. So far, research has produced over 100 peer-reviewed publications; conservation has saved 0.75 million ha of rainforest; education has hosted more than 1000 students in training programmes and workshops; and exploration seen many high profile expeditions by National Geographic & Royal Geographic. Chris Minty concluded that conservation only works if it is economically viable.

6.4 Plenary Discussion – A Management Consortium for the Chiquibul/Maya Mountains Area

Rafael Manzanero recommended that the focus be expanded from just Chiquibul to include Bladen, Cockscomb, Mountain Pine Ridge, Vaca and other surrounding areas.

6.5 Plenary Discussion – Belize-Guatemala Alliance for Cooperation on Matters Pertaining to the Management of the CMMKBA

Francisco Moya recommended that a bi-national Memorandum of Understanding between Belize and Guatemala be worked on as already a bi-national MOU exists between Guatemala and Mexico. This was ratified in December 2005 and implemented in January 2006. This MOU has seen 3 joint patrols made already and seeks to establish joint research and monitoring (fire towers and common radio frequencies), information sharing, joint fundraising and increased public awareness. The Belize-Guatemala bi-national MOU would therefore be an extension to the recently signed tri-national protected areas MOU (Belize-Mexico-Guatemala).

7. CLOSING REMARKS

Domingo Ruiz (FD) congratulated and gave thanks to all for a job well done and for the sacrifices that were made to be present at the planning workshop. He gave special thanks to James Barborak, Francisco Moya and Jose Palacios for making their long journey to be present.

Jim Barborak (CI/CEPF) applauded the progress made and the movement in the right direction. He noted that CEPF's decision will not be his alone but that chances for approval of a proposal are good once the project proposal is supported by stakeholders and is consistent with the priorities of the regional (Northern Mesoamerican) strategy.

Yvette Alonzo (PACT) mentioned that the presentations have given a perspective on the challenges ahead. She added that PACT is interested in forming local and international partnerships and that PACT is committed to the CMMKBA project both financially and technically.

Rafael Manzanero (FCD) said that it was good to have key players present for the past two days as it has revealed the wider aspect of the needs of the CMMKBA area. He gave thanks to all present and stated that exchange visits to Bladen, Cuevas and Chiquibul/Maya Mountains are planned in the next two weeks. He projected that the first draft of the proposal will be available by December 2, 2005, and that the letter of intent to CI/CEPF will also be ready soon.

Francisco Moya (CONAP) gave thanks for the invitation and said that he would take back with him the reality that Belize and Guatemala must work closely together.

APPENDIX I

Chiquibul/Maya Mountains Stakeholder Workshop Agenda
Cahal Pech Village Resort, San Ignacio Town, Cayo District
November 4-5, 2005

Facilitator – Osmany Salas
Rapporteur – Gonzalo Castillo

1st Day – November 4, 2005

8:00 – 8:30 a.m.	Registration
8:30 – 8:40 a.m.	National Anthem
8:40 – 9:00 a.m.	Welcome Remarks - Lizandro Quiroz, Forest Department - Yvette Alonzo, PACT - James Barborak, CI - Rafael Manzanero, FCD Presentation of Participants
9:00 – 9:15 a.m.	Overview of Agenda and Workshop Objectives
9:15 – 9:30a.m.	Overview of the Proceedings of the 1st Chiquibul Stakeholders' Workshop

National and Regional Context

9:30 – 9:45 a.m.	Critical Ecosystem Partnership Fund (CEPF) Strategic Directions[1] and Investment Priorities[2] – Northern Mesoamerica Ecosystem Profile - James Barborak, CI
9:45 – 10:15 a.m.	The importance and significance of the Chiquibul/Maya Mountains Key Biodiversity Area within the Selva Maya Ecoregion and the National Protected Area System – key biodiversity and management issues - Jan Meerman Discussion

Key Management Challenges and Needs of the Chiquibul/Maya Mountains Area

10:15 – 10:30 a.m.	BREAK

[1] CEPF Strategic Direction #3 – Support priority conservation actions in three priority key biodiversity areas

[2] CEPF Investment Priority #3.3 – Strengthen management of Chiquibul/Montañas Mayas in areas such as xate harvesting and the protection of the Macal River valley

10:30 – 11:00 a.m.	Status report – Chiquibul Forest - Chris Minty, Las Cuevas Research Station Discussion
11:00 a.m. – 11:30 a.m.	Status report – Vaca Plateau - Rafael Manzanero, FCD Discussion
11:30 a.m. – 12:00 p.m.	Status report – Cockscomb Basin Wildlife Sanctuary - Allen Genus, Belize Audubon Society
12:00 – 12:30 p.m.	Status report – Bladen Nature Reserve - Jacob Marlin, BMC Discussion
12:30 – 1:00 p.m.	Guatemala profile - Montañas Mayas-Chiquibul Biosphere Reserve; Machaquilá and Xutilhá Wildlife Sanctuaries - Francisco Castañeda Moya –CONAP, Guatemala Discussion
1:00 – 2:00 p.m.	LUNCH

Group Work – The Main Elements of the Project Proposal

2:00 – 2:15 p.m.	Presentation of the Analysis of the Results of the 1st Chiquibul Stakeholders' Workshop – The Chiquibul Forest Ecosystem Management Pre-planning - Rafael Manzanero, FCD
2:15 – 2:30 p.m.	Dynamics of Group Work – the logical framework
2:30 – 3:15 p.m.	Group Work #1 – Defining Project Goal and Purpose
3:15 – 3:45 p.m.	Group presentations and discussion
3:45 – 4:00 p.m.	BREAK
4:00 – 4:45 p.m.	Group Work #2 – Defining Project Objectives and Expected Results
4:45 – 5:15 p.m.	Group presentations and discussion
7:00 p.m.	DINNER

2nd Day – November 5, 2005

7:30 – 8:30 a.m.	BREAKFAST
8:30 – 8:45 a.m.	Overview of 1st Day – Project Goal, Purpose, Objectives and Expected Results
8:45 – 9:30 a.m.	Group Work #3 – Defining the Major Project Activities.
9:30 – 10:00 a.m.	Group presentations and discussion

Building Alliances for the Conservation and Management of the Chiquibul/Maya Mountains

10:00 – 10:45 a.m.	Collaboration Examples from Belize and the Region - Southern Mesoamerica – James Barborak - The Bladen Management Consortium – Jacob Marlin - Las Cuevas Research Station – Chris Minty
10:45 – 11:00 a.m.	BREAK
11:00 – 11:30 a.m.	Plenary Discussion and Resolutions – A Management Consortium for the Chiquibul/Maya Mountains Area
11:30 a.m. – 12:00 p.m.	Plenary Discussion and Resolutions – Belize-Guatemala Alliance for Cooperation on Matters Pertaining to the Management of the Chiquibul/Maya Mountains Key Biodiversity Area
12:00 – 12:15 p.m.	Next Steps
12:15 – 12:30 p.m.	Closing Remarks - Domingo Ruiz, Forest Department - Yvette Alonzo, PACT - James Barborak, CI - Rafael Manzanero, FCD
12:30 p.m.	LUNCH AND DEPARTURES

APPENDIX II

List of Participants

Names	Organization	Email
Allen Genus	BAS	comanagedparks@belizeaudubon.org
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APPENDIX III

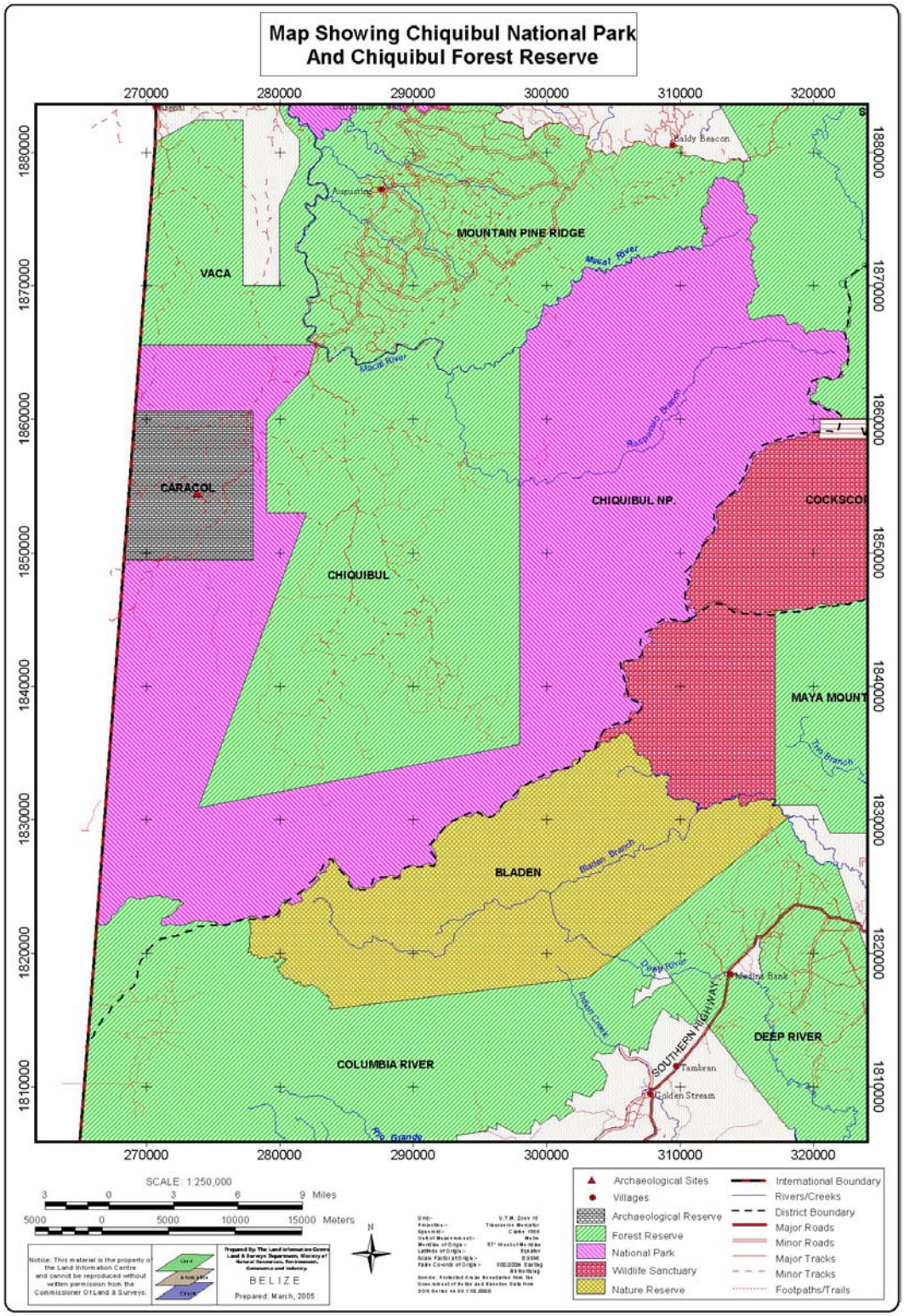

Figure 1: Chiquibul/Maya Mountains Key Biodiversity Area

Figure 2: Biological Hotspots in Northern Mesoamerican Corridor

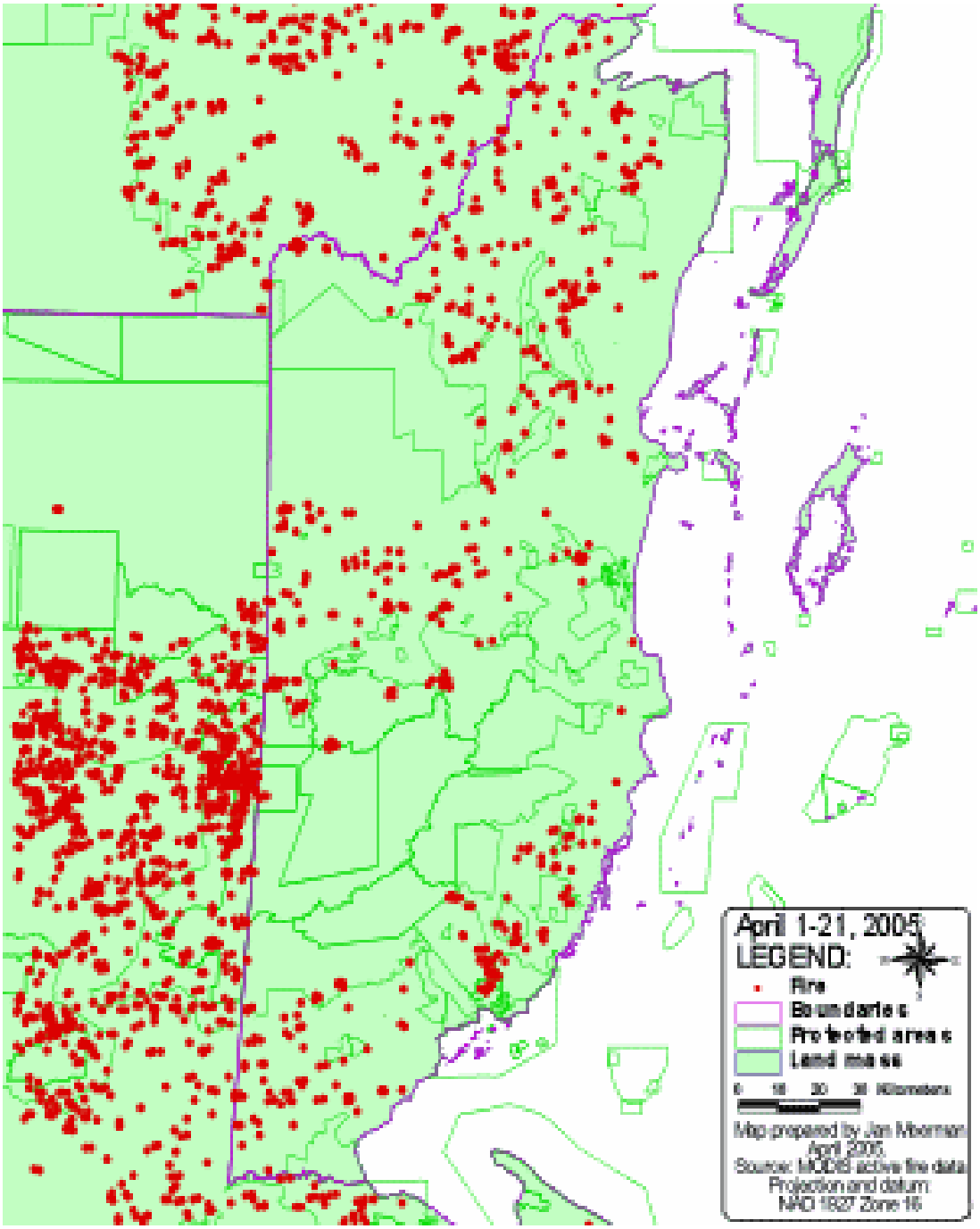

Figure 3: Agriculture Related Fires April 2005

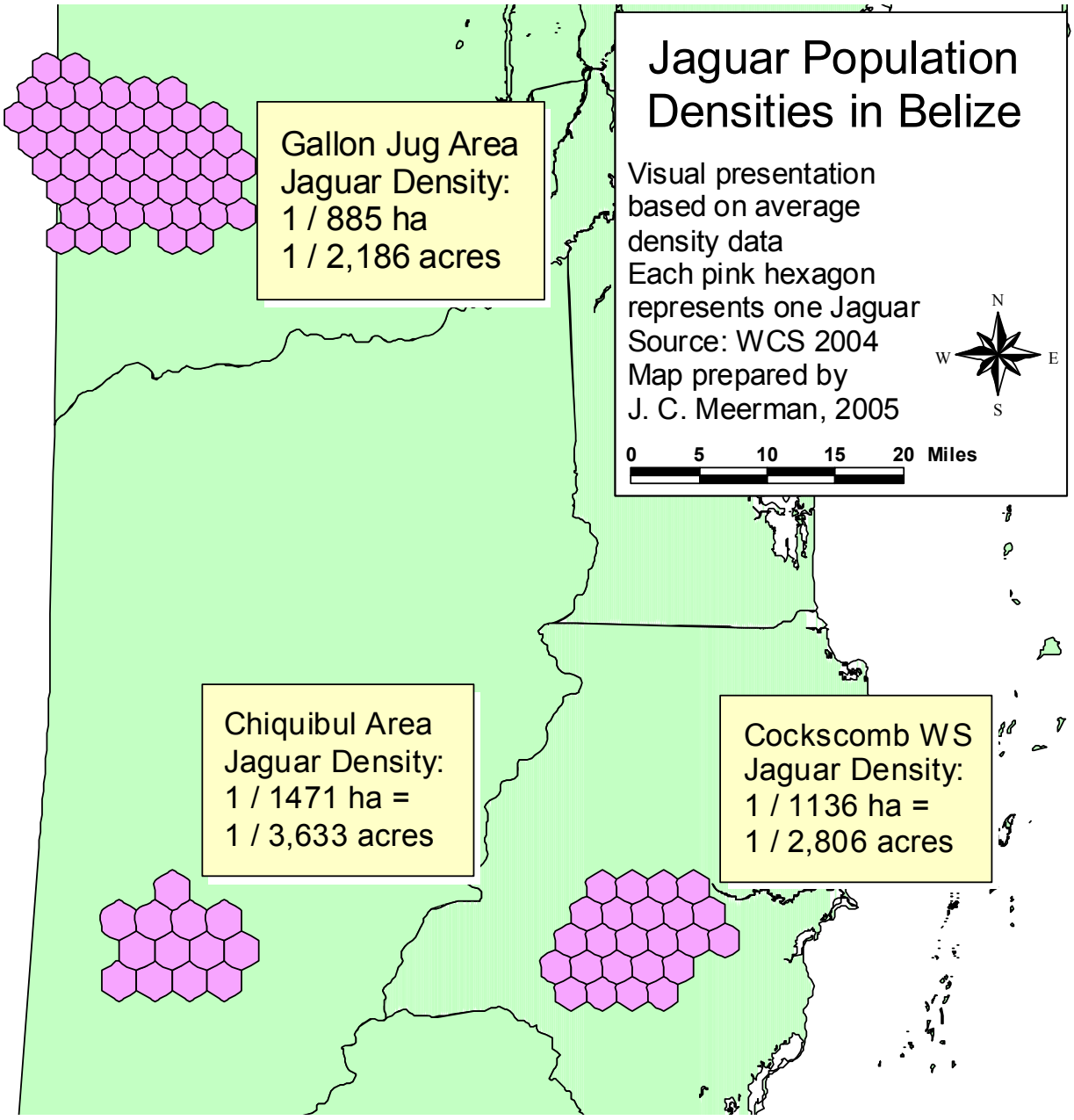

Figure 4: Jaguar Population Densities in Belize in 2004

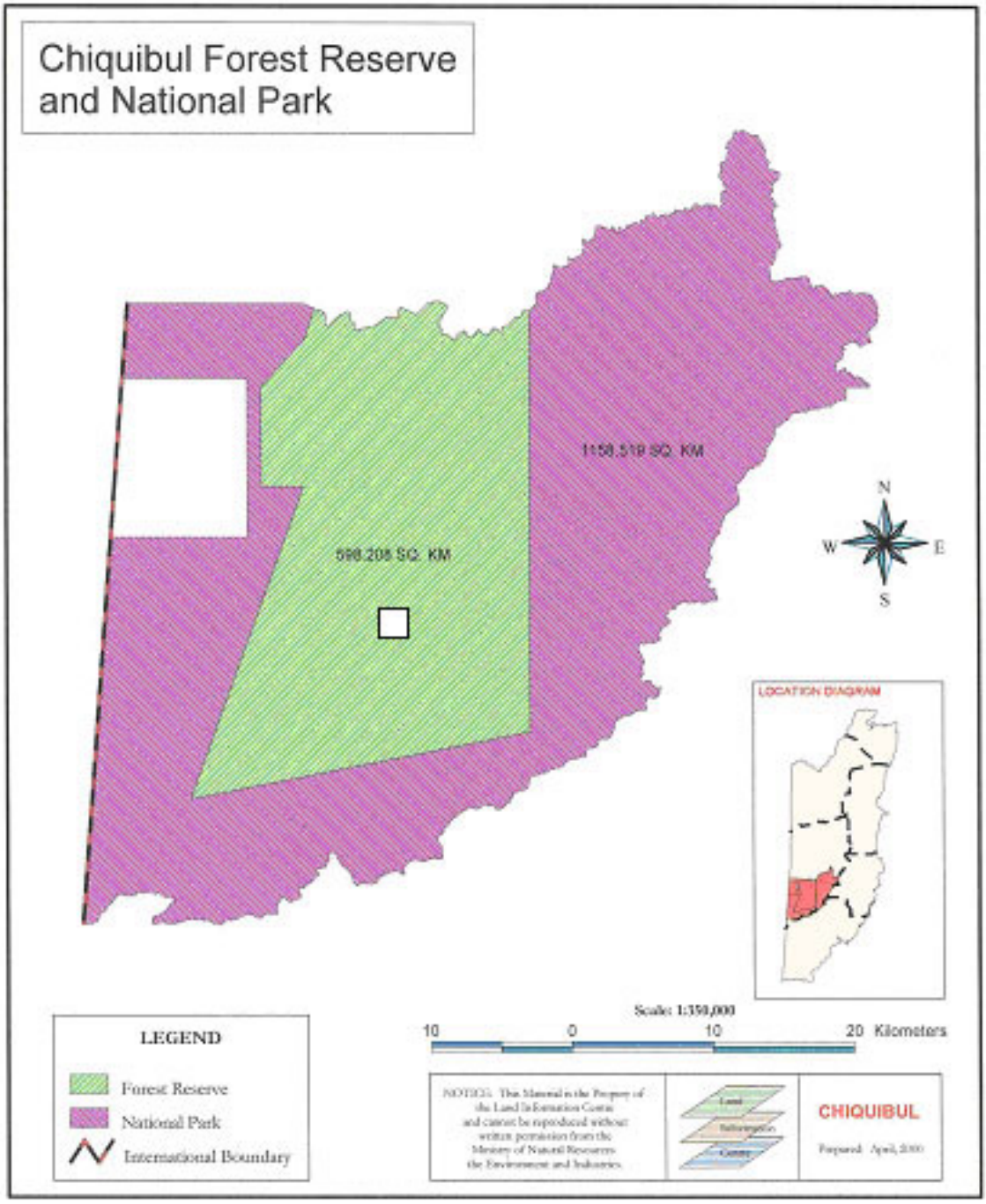

Figure 5: Location of Cuevas Research Station in Chiquibul Forest

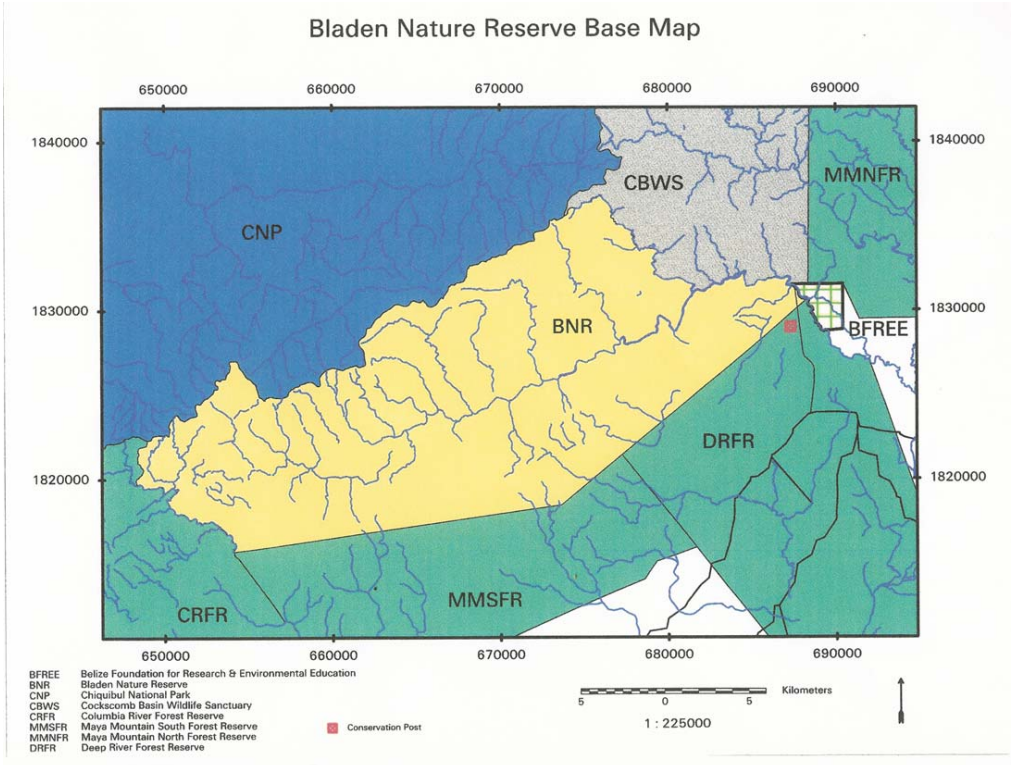

Figure 6: Location of Bladen Nature Reserve with respect to Chiquibul

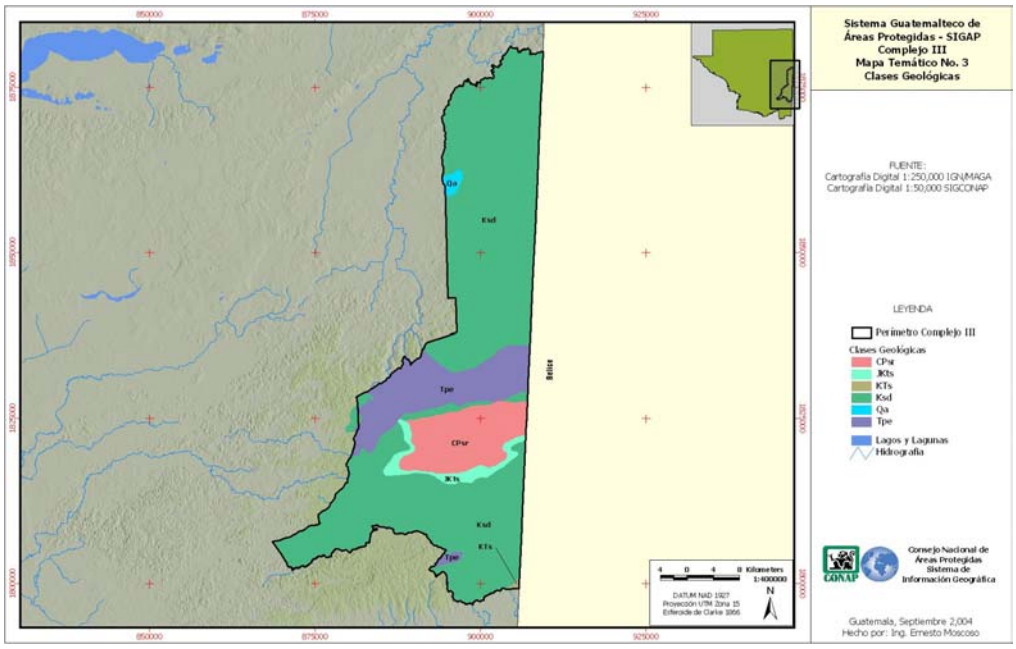

Figure 7: Montañas Mayas – Chiquibul Biosphere Reserve

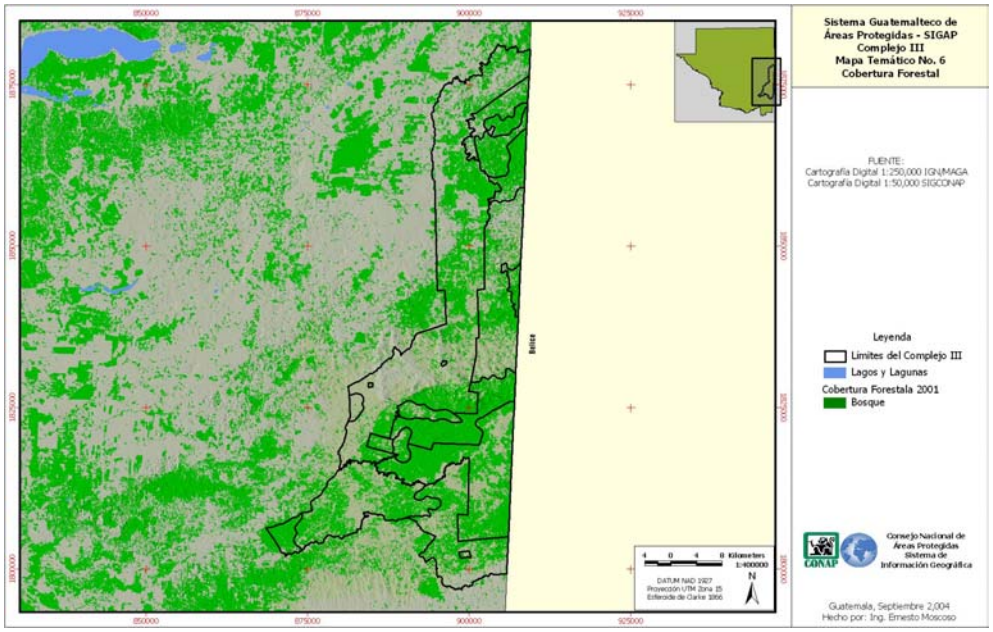

Figure 8: Vegetation in the Montañas Mayas - Chiquibul Biosphere Reserve

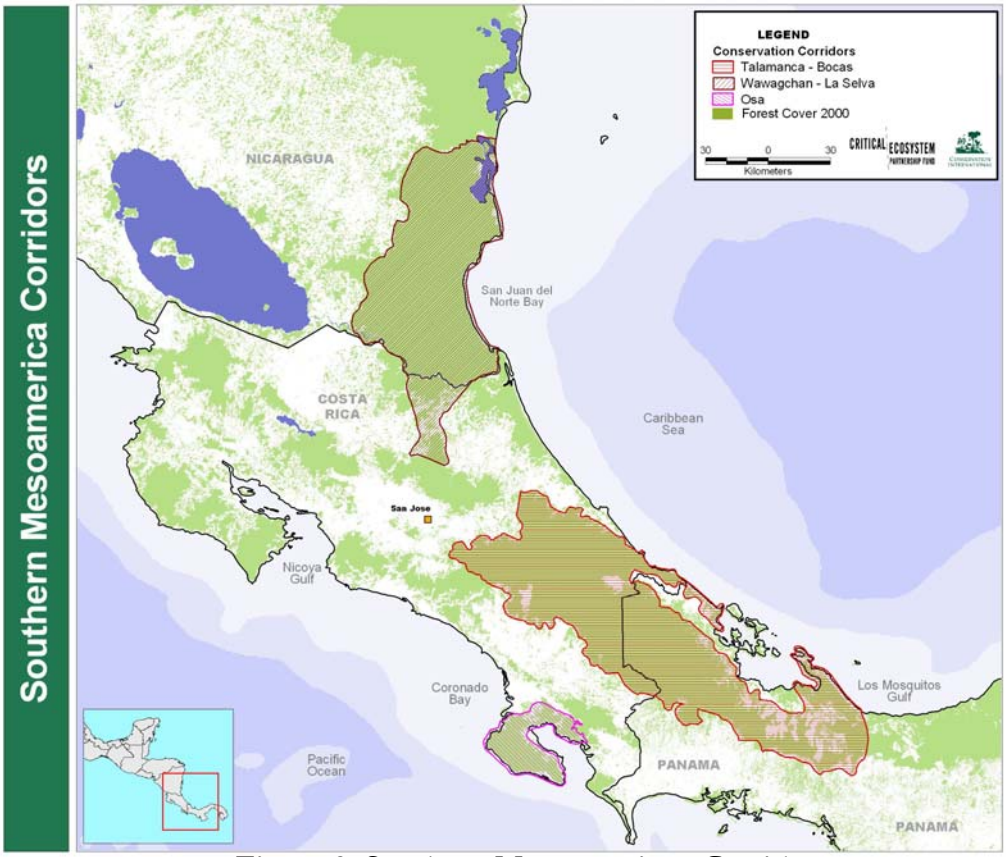

Figure 9: Southern Mesoamerican Corridor