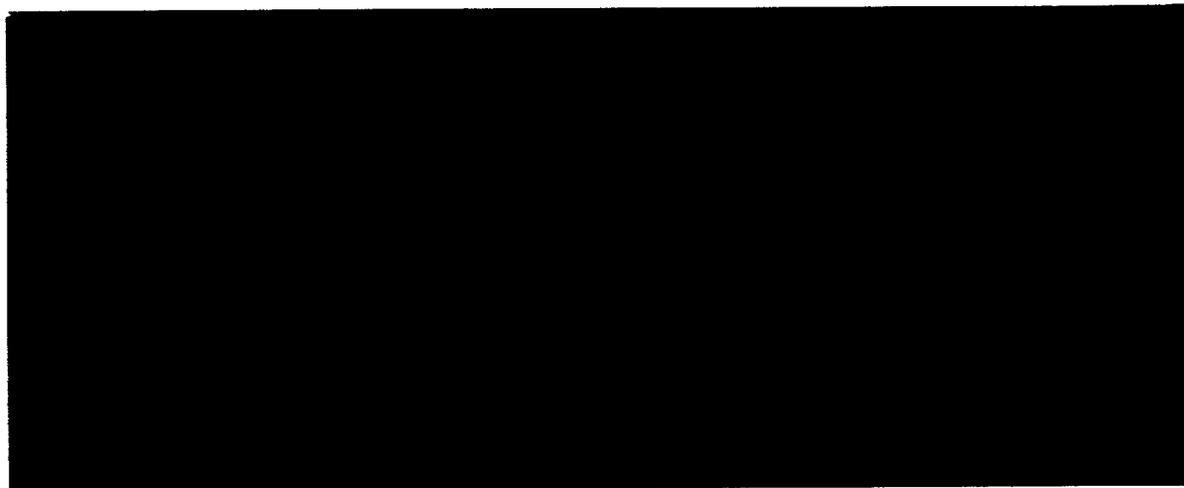


PN-AC6-227
102950



El Pilar Management Plan
El Pilar Landscape: Gateway Between Two Nations

Sponsored by
PROARCA/CAPAS
BRASS/El Pilar Program
Ford Foundation

Rum Point
Belize, May, 1998

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ACERCA DE ESTA PUBLICACION

Los fondos para realizar la presente publicacion y el trabajo descrito en ella fueron proporcionados por la Agencia Internacional para el Desarrollo (USAID) Sin embargo, laas ponencias e ideas presentadas no son necesariamente las de USAID, ni representan sus políticas oficiales

ABOUT THIS REPORT

This report and the work described in it were funded by the U S Agency for International Development (USAID) However, the views and ideas presented here are not necessarily endorsed by USAID, nor do they represent USAID's official policies

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Paisaje El Pilar Puerta Entre Dos Naciones***

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I. EL PILAR MANAGEMENT PLAN

El Pilar Landscape Gateway Between Two Nations Paisaje El Pilar· Puerta Entre Dos Naciones

INTRODUCTION – EL PILAR ARCHAEOLOGICAL RESERVE

Signatures Across the Landscape

The El Pilar Program has attracted an international, multidisciplinary team with the momentum to evolve a unique plan. This plan incorporates local community understanding, a government conservation and development agenda, and international environmental concerns through an integrated research program that informs a model development plan centered around the ancient Maya center of El Pilar.

The first Mesa Redonda (1997) identified the research and development issues, the international strategies to promote the studies, and the collaborative institutional framework that would secure the reserve area for the research and development program. Since this landmark event, there have been great strides towards implementing aspects of the program. The Mesa Redonda II brought together the growing team to further the unique program of research and development at El Pilar in both Belize and Guatemala. We are now in an excellent position to bring those broad plans into a design for concrete action.

The Past Informs the Future

The core of the El Pilar vision comes from archaeological research on the evolution of the ancient Maya landscape. The essence of this program acknowledges that clues to sustaining the complex habitats of today's Maya forest environment are embedded in Maya prehistory. Ancient Maya settlement and local community patterns provide material evidence for the evolution of sustainable economies in one of the planet's last frontiers: the tropics.

The goals of the multidisciplinary research and development program are to demonstrate the critical relevance of basic research to promotion of conservation and development around the world today. The outcome will influence the application of a reserve management plan that will conserve environmental diversity and preserve the irreplaceable cultural heritage of both the ancient and contemporary populations in the region.

The Forest as a Garden

The ecological structure of the Maya forest is a relic of the dynamic relationship in which humans have played an integral part. This relationship extends back more than four millennia to the agricultural pioneers of the Maya forest region and the ancestors of the ancient Maya civilization – the heritage of contemporary farmers. The large contiguous stands of forest are a testimony to the efficacy of ancient Maya practices. While the Classic Maya collapse affected the human populations, plants and animals survived only to be threatened with extinction today. Therein lies the ecological lesson that must be perceived to build a sound basis for conservation in the future.

Traditional agricultural systems in the tropics world-wide are as complex as the environment within which they developed. Mimicking the forest structure, a poly-cultivation system evolved to minimize instability, prevent degradation and integrate both intensive and extensive labor techniques that maximize production. Heterogeneous and bio-diverse, the forest gardens constituted the strength of the Maya community in the past, as they do today, by relying on the traditional knowledge of local farming households.

Combining research designs of agronomists with those of traditional farmers from the area, this forest garden can form a model of ancient Maya land use that will provide an ongoing source of innovation for the community. Such a design that uses ancient Maya settlement patterns and

agricultural knowledge can foster resource conservation that aligns with, rather than opposes, the natural regenerative processes of the tropical forest

Community Links

To accomplish the goal of improving living standards and self-sufficiency of the regional communities, the immediate and short-term needs of families must be incorporated into the long-term agenda of sustainability. No reserve exists within a vacuum and to thrive the local population must assume an active role in conservation or the cultural aims may not be achieved.

A cooperative association has been established with Amigos de El Pilar. Their goal is to develop community enterprises in tourism and agriculture that increase villagers' economic stake in the reserve. Through education and participation, the links between the community and the reserve will strengthen local investments in conservation and develop administrative responsibility. The leadership role villagers are assuming and the self-determination they are gaining in the process is the foundation upon which the future success of the El Pilar model depends.

Discovering El Pilar

The El Pilar Program has set the stage for ecotourism where the visitor can explore and discover the beautiful Maya architecture beneath the luxuriant forest canopy.

The program has promoted education and training workshops, given lectures and tours, and encouraged participation in the archaeological research. Further, the program has hosted events, such as the Fiesta El Pilar, that has elevated the visibility of El Pilar on the global front, that provide a springboard for tourism development.

Taking the Challenge

Park management is fundamental to the long-term research and development plan as well as to the reserve's future. Informed designs are based on cultural and ecological research. Further, identification of stakeholders, incorporation of public interests, articulation of the mission, and a clear set of objectives for the sustainable management of the reserve is essential. Finally, the extent of conservation goals, issues of access and education, and the long-term funding needs must be developed.

The El Pilar vision must include the concerns and desires for both resource conservation and economic development. Short-term strategies for community involvement and long-term concerns for conservation of the ancient architecture and the environment are vital. Educational and interpretive strategy for the park and surrounding landscape are also important. These facets are all dependent upon the results of integrated, collaborative, and multidisciplinary research program and are crucial to establishing the reserve on a lasting base.

The management plan also takes into account the location of El Pilar between Cayo, Belize, and El Peten, Guatemala. This unusual setting impacts every aspect of research activities at El Pilar. The research projects and resource management designs for El Pilar must consider the contiguous sections of Belize and Guatemala as a whole, as resources shared between two countries. The natural environment, cultural resources, adjacent contemporary peoples, and access for tourism all figure prominently in the master research and development plan as well the ultimate product. The El Pilar Archaeological Reserve for Maya Flora and Fauna. The reward will be an understanding of the ancient and contemporary dimensions of the Maya forest.

I BACKGROUND – NATURAL AND CULTURAL HISTORY

A National and Regional Context – Maya Forest/Politics/Culture/Ecology

B Description– Cultural, Natural, Community Issues, Security

C Legal Context (SI/Acta, current available information)

D Management Plan Design

- Law and Policy
 - Administration
 - Legal Framework
- Community
 - Economic Development
 - Social Welfare
- Science
 - Cultural Resources
 - Natural Resources

II MANAGEMENT CONSIDERATIONS/CONSIDERATIÓNS DE MANEJO

A Vision Statement

El Pilar Maya Landscape Gateway Between Two Nations

El Pilar Archaeological Reserve represents an innovative example of cultural resource conservation in relationship to the natural environment and to contemporary peoples

As the largest Maya archaeological site in the Belize River area, El Pilar is unique in its presentation of ancient daily life through household structures and forest gardens, located in the shadows of monumental Maya architecture

This shared resource serves as a symbol of cooperation between Belize and Guatemala, and as a model of collaboration between the reserve and local communities and between the cultural and natural resource researchers and conservators

Involvement in reserve planning and management links the communities to their cultural heritage, encourages their social and economic development

Documentation and evaluation of this holistic approach to resource conservation will allow El Pilar to serve as a model for other important sites of world heritage

Paisaje El Pilar Puerta Entre Dos Naciones

El parque arqueológico El Pilar representa una nueva estrategia de conservación del patrimonio cultural y natural y su relación con la población

El sitio arqueológico más grande en el área del Río Belice, El Pilar es único en su presentación de la antigua vida cotidiana a través de estructuras domésticas y la huerta agro-forestal, bajo la sombra de la arquitectura Maya monumental

Este patrimonio compartido sirve como símbolo de cooperación entre Belice y Guatemala y como ejemplo de colaboración entre el parque y las comunidades locales y los investigadores y conservadores del patrimonio cultural y natural

El involucramiento de la comunidad en el planeamiento y manejo del reserva lo relacionara con su herencia cultural y estimulara el desarrollo socio-económico actual

La documentación y evaluación de este acercamiento a la conservación del patrimonio permitira que El Pilar sirva como modelo para otros sitios de importancia del herencia mundial

B Goals

- 1 Overall Reserve Goals
 - (a) To preserve in perpetuity the EP reserve to maintain cultural and natural setting
 - (b) To conserve and maintain the integrity of the EP reserve in a manner that benefits local communities through tourism and education
 - (c) To promote sustainable models for using the Maya forest at the EP reserve
 - (d) To provide visitor access, research and education opportunities for national and international visitors in a manner compatible with the cultural/natural environment
- 2 El Pilar International Management Goals
 - (a) To develop the reserve in a regional context
 - (b) To establish a Technical Advisory Team (TAT)
 - (c) To promote joint cooperation between TATs
 - (d) Periodic monitoring of joint efforts
 - (e) Foster Interagency management possibilities within and between countries

C Significant Management Issues

- 1 Administration
 - (a) Cross-border issues
 - (b) Lands resolutions
 - (c) Extraction activities
 - (d) Boundary management
- 2 Infrastructure
 - (a) External access roads
 - (b) Internal concessions
- 3 Management Guidelines
 - (a) Community participation
 - (i) institutional capacity building
 - (ii) Consolidation of adjacent areas into reserve (Chorro site, Yaloch, Manantial, wetlands)
 - (b) Presentation of Maya landscape past, present and future
 - (c) Carrying capacity for visitors at reserve
 - (d) Adoption and evaluation of management plan process
- 4 Funding
 - (a) Funding mechanisms
 - (i) develop finance program
 - (ii) seed monies
 - (iii) departmental commitments
 - (iv) others - innovative
 - (b) National sources (e g PACT in Belize)
 - (c) External sources
 - (i) donor from private sector (e g Ford, Getty, MacArthur)
 - (ii) international agencies (e g USAID, EU, GTZ, UK, UNESCO, UNDP/GEF, WB, IDB)
 - (d) Government revenues generated through visitation

D Communication Plan for El Pilar Archaeological Reserve for Maya Flora & Fauna

- 1 Definitions
 - (a) "Communications" is
 - (i) Public/community relations
 - (ii) Site identity materials (e g design elements, consistency of information content, etc)
 - (iii) Interaction with news media (especially with respect to responsiveness to inquiries)
 - (iv) Interaction with professional communities

(b) "Public Relations" is communicating your story as you want it to be communicated

2 Objectives

To develop, implement, evaluate and maintain an effective communication plan which will

- (a) Achieve a uniform identity in all communications products to market the EP reserve as a unique eco-tourist destination and research
- (b) Maintenance of positive relations with educational outreach, government, media, the tourist industry, local communities and external organizations
- (c) Ensure continuity of public/community relations

3 Activities

(a) Short Term

(i) Design a communications plan

- determine overall message desired to be sent
- identify key audiences locally, regionally and internationally
 - local communities and schools
 - government administrators
 - tourism officials
 - visitors to site
 - interested scientists and academia
 - news media
- identify supplemental audience(s)
- tailor messages to the needs, interests and knowledge-level of audience(s)
- determine methods to be used to communicate messages
 - brochures
 - posters
 - signs
 - corporate identity materials (logos, etc)
 - newsletter
 - video
 - world-wide web
 - fact sheets
 - open houses
 - events (fiestas, fundraisers, Mesa Redonda)
 - publications library
 - internet list-serves
 - reports and research summaries (perhaps an annual report of site activities, aimed at the interested public)
 - media and trade tours
 - speakers' bureau
 - press releases, newspaper articles
- identify key internal communicators/spokespeople for specific topics and external community leaders, government officials, tourism professionals, etc through whom messages and information may be disseminated or reinforced
- develop an action plan for crises and conflict management
 - accommodate news media in times of adverse events (natural disasters, thefts, cultural resources, international tensions, crime, funding emergencies)
 - determine spokespersons (the EP reserve administration, EP Program, tourism industry)
- determine methods of receiving or eliciting information from targeted audiences (evaluation methods, surveys, informal elicitation of comment)
- evaluate feedback and determine how that information will be analyzed and incorporated (or responded to)
- amend communication plan as appropriate/necessary

(ii) Implement the communications plan

(b) Medium Term

- (i) Maintain the communications plan
 - (ii) Further evaluate the communications plan
 - (iii) Determine further/future potential audiences
 - (iv) Amend plan as appropriate/necessary
- (c) Long Term
- (i) Maintain the communications plan
 - (ii) Further evaluate the communications plan
 - (iii) Determine further/future potential markets
 - (iv) Amend plan as appropriate/necessary

III MANAGEMENT PROGRAM

A Resource Management and Protection, Maintenance and Sustainability (re-evaluation based on updated research)

- 1 Benchmark indicators for monitoring
 - (a) Identify key features for monitoring
 - (b) Design plan for information loop

- 2 Conflict management strategy
 - (a) Determine communication needs
 - (b) Design action plan for crises

- 3 Cultural
 - (a) Objectives
 - To present a unique view of ancient Maya daily life
 - (b) Activities
 - (i) Short Term
 - establish inventory of all archaeological remains
 - develop feature house and forest garden at Tzunu'un
 - (ii) Medium Term
 - excavate houses in other environmental zones
 - develop feature houses in other environmental zones
 - initiate maintenance regime for cultural resources
 - (iii) Long Term
 - complete feature house sites in key environmental zones
 - establish maintenance strategy for managing the houses and forest garden in key environmental zone

- 4 Natural
 - (a) Objectives
 - To establish actual situation of natural resources
 - To determine management and sustainable use models of flora and fauna according to contemporary/comparative knowledge of the Maya forest
 - (b) Activities
 - (i) Short Term
 - establish a monitoring program
 - examine the dynamics of the natural resources at EP
 - initiate studies to establish standards to manage uses of natural resources at EP
 - (ii) Medium Term
 - establish a program for the management of human uses of wildlife at EP
 - establish different forest gardens along interpretative trails which incorporate wildlife management at EP
 - establish a program for habitat recuperation/restoration at EP
 - Strengthen /extend the biological corridors with mutual reliance with EP
 - (iii) Long Term
 - promote a standard monitoring program for EP
 - maintain data control standards for EP

- promote a sustainable wildlife management program in conjunction with the forest garden
- periodic evaluations of habitat program and corridor connections

B Human Use Program

1 Education

(a) Objectives

- (i) School Programs and Curriculum Development
 - take local children on field trips to EP
 - create a teaching program between children and BRASS/ EP researchers (mentoring possibilities)
 - develop school curriculum to increase knowledge and awareness of cultural and natural resources
 - increase knowledge and awareness of values within the community (important objects or areas to protect, maintain agricultural character, protect the river)
- (ii) Building Capacity of Local Community
 - courses/workshops for guides (archaeology, natural resources, environment and contemporary culture)
 - workshop for small enterprise initiation and management (restaurants, arts and handicrafts, guest houses)
 - workshop on grant writing/fundraising
 - evaluate and prioritize land use areas/zones (control access along main road, consider commercial and civic zones, determine housing densities, promote historic, environmental, and public areas, establish waste management policy)
- (iii) Inform area residents of proposed management plan for El Pilar
 - organize committee meetings
 - design informational posters about the EP reserve

2 Community Participation in El Pilar
Belize/AdEP

<u>Community</u>	<u>NGO</u>	<u>Promotion</u>	<u>Government</u>
Bullet Tree Falls	National	Tourism Marketing	DOA
Santa Familia	HfP, BEST, PACT	Conservation	MTE
Calla Creek	International	Education	VC
Cayo	UNDP		Others

Guatemala – Counterpart AdEP

<u>Community</u>	<u>NGO</u>	<u>Promotion</u>	<u>Government</u>
Melchor	National	Evaluation of	CONAP
Santa Teresa La Zarca	FS, NPV	Municipal Potentials	IDAHEH
Santa Rosa	International	Conservation	Municipalidad
Suchitan		Education	
		Tourism Marketing	

(a) Objectives

- (i) To promote participation of government and non-governmental organizations in the EP reserve
- (ii) To create a symbol of cooperation between the EP reserve and local communities
- (iii) To document and evaluate methods of community participation

(b) Activities

- (i) Short Term
 - expand community-based organization participation in Belize and Guatemala

- forge communication channels between community and the EP reserve
 - develop methods for community conflict management through education and alternatives
 - Documentation of the process of community participation
 - begin to collect interpretative material from the community (traditional stories, poems, dances, photographs)
- (ii) Medium Term
- establish memorandum of agreement between the EP reserve and communities
 - local participation in TAT and other pertinent groups
 - assemble community interpretative material for exhibition
- (iii) Long Term
- continue to strengthen community based organization CBO membership
 - participate in conflict management
 - maintain communication between CBO and communities
 - document education strategies in cultural/natural resources
 - publish community interpretative material
- (3) Interpretation
- (a) Objectives
- (i) to develop interpretive materials to orient visitors to the cultural and natural qualities of the reserve and the local communities
- (ii) to underscore the importance of the reserve's resources and their protection
- (iii) to emphasize the need to support the reserve goals to conserve cultural/natural resources
- (b) Activities
- (i) Short Term
- design a brochure/web site
 - build a visitors' center at the EP reserve
 - organize target features for local tours
 - maintain and upgrade self-interpretative trail system
 - design and maintain appropriate signage for features at the EP reserve
- (ii) Medium Term
- create interpretative scenes of visitors' center
- (iii) Long Term
- maintain trail system
 - update visitors' center materials
- 4 Tourism
- (a) Objectives
- (i) To conserve cultural and environmental integrity of the local area
- (ii) To develop positive and negative impacts tourism
- (iii) To promote eco-archaeology tourism for the community
- (iv) To encourage sustainable business activities through maintaining the community character
- (iv) To give priority to local community in the granting of concessions in the reserve
- (b) Activities
- (i) Short Term
- promote craft, food and beverage sales in the community
 - form committee to address rules for tourism impacts within the community and within the reserve
 - formulate a community committee to address concession policy in the EP reserve
- (ii) Medium Term
- contact travel wholesalers and travel writers
 - develop guest rooms, excursions (horses, canoes, hiking, forest garden walks), and concessions at the EP reserve

- design field trips and exchange programs to other community-based tourism sites to evaluate the pros and cons
- (iii) Long Term
- maintain tourism infrastructure between communities and reserve
 - promote established community tourism sites

5 Community Development

(a) Objectives

- (i) to encourage comprehensive planning of growth related to the reserve (goods, services, waste management, preservation)
- (ii) to support the economic activities of community in nearby communities to improve the quality of life and achieve a sustainable use of cultural and natural resources
- (iii) to give priority to local community, wherever possible, in the creation of permanent/temporary jobs related to the EP reserve
- (iv) to plan economic development in manner consistent with the cultural and environmental qualities

(b) Activities

(i) Short Term

- promote seminars/workshops by the EP reserve staff in the local communities on sustainable development
- identify economic resources and opportunities to help local community groups

(ii) Medium Term

- collaboration of the EP reserve administration to develop proposals for community development
- Encourage education on sustainable uses of renewable resources

(iii) Long Term

- the EP reserve administration ensures profits from concessions in the reserve include the community
- the EP reserve administration encourages the development of artisanry from natural resources found at the EP reserve (e g Corozo)

C Research and Monitoring Program

1 General Objectives Research, Education, Protection

(a) to focus on nexus of culture and nature

- (i) promote sustainable extraction strategies for plants/animals (e g Corozo)
- (ii) education of community to participation in long term management of El Pilar
- (iii) encourage dissemination and publication of preliminary results

(b) To promote solicited science and independent science

- (i) standardized data collection methods to facilitate comparisons
- (ii) UTM grid location of data sites
- (iii) comparable recording techniques

(c) To develop a comprehensive Geographic Information System (GIS) (include all scientific data within the reserve boundaries)

(d) To organize a research committee made up of research scientists working in the area

- (i) to establish peer review process to evaluate research
- (ii) to develop "handbook" for systematic and vicarious information gathered within the reserve and to encourage dissemination to the community
- (iii) to promote centralized database of information (all information available, preliminary field reports of research/observations)
- (iv) to track and coordinate access to preliminary reports and other grey literature
- (v) to promote and facilitate research and permit process at El Pilar
- (vi) to facilitate scientific enterprise and communications between scientists and between the committee and governments
- (vii) to promote periodic scientific roundtables
- (viii) to attract more research projects

- 2 General Activities
- (a) Short Term
- (i) develop teachers packages (audio/visual kits) for schools
 - (ii) contribute illustrative information to the Be Pukte and other community repositories
 - (iii) incorporate new data into the trail guide for the EP reserve
 - (iv) document the EP reserve research and development process
 - (v) issues to address
 - permit-processing
 - areas of investigation
 - research advisory committee
- (b) Medium Term
- (i) the Visitor Center and associated educational presentations on research programs
- (c) Long Term
- (i) promote model for interdisciplinary research
- 3 Cultural Resources Objectives
- (a) To understand the prehistory, history, and contemporary development of El Pilar (archaeological, survey, excavation, archives, library)
 - (b) To promote a coherent archaeological conservation program for all of El Pilar
 - (c) To develop a conservation monitoring program to maintain El Pilar
 - (d) To adopt the theme of Travel Through Time and View Everyday Life
- 4 Cultural Resources Activities
- (a) Short Term
- (i) inventory of cultural remains to establish a research and monitoring baseline
 - (ii) investigate the construction sequence of Nohol and Xaman Pilar using the tunneling method focused at Copal (EP7) and the H'mena (EP20)
 - (iii) continue development of the Forest Garden to show aspects of everyday life
 - (iv) complete the excavation, exposition, and consolidation at 1) Tzunu'un, 2) EP7 stairs of Copal, 3) EP25 of Plaza Lec
 - (v) initiate monitoring system for consolidation program and institute improvements
 - (vi) develop cultural conservation program
- (b) Medium Term
- (i) include Pilar Poniente in trail system
 - (ii) complete the excavation, exposition, and consolidation at key locations of
 - Copal
 - Gumbolimbo
 - Ixim
 - Subin
 - (iii) expand the Forest Garden developments at El Pilar to include the mosaic of land use areas, particularly in the western Guatemala section of the reserve where a swamp zones are reported
 - (iv) continue to monitor conservation strategies for revisions and improvements
- (c) Long Term
- (i) analyze, publish results of research and conservation programs
 - (ii) promote conservation program
 - (iii) establish the varied aspects of the model mosaic of ancient Maya life ways in the different identified natural life zone systems within the reserve
- 5 Natural Resources Objectives
- (a) To understand the natural history of El Pilar
 - (b) To promote an appreciation of the human interface with the natural environment at El Pilar, past and present
 - (c) To focus on the dynamics of the forest through research on succession, edge effects, and examination of equilibrium
 - (d) To determine indicator species for monitoring program

- (e) To demonstrate the necessity of wildlife corridors in the viability of small reserves like El Pilar and document the contribution of small reserves like El Pilar to the maintenance of bio-diversity and refuges for plants and animals

6 **Natural Resources Activities**

- (a) **Short Term**
 - (i) inventory of species and communities of plants and animals for baseline
 - (ii) establish permanent monitoring plots and transects for research and monitoring programs
 - (iii) determine baseline soils, species, light for milpas and other stages of forest within the reserve
 - (iv) determine protocol for monitoring within the reserve boundaries
 - (v) establish air photography base and groundproofing
- (b) **Medium Term**
 - (i) periodic monitoring of permanent plots and transects (as needed, at least every 5 yrs)
 - (ii) measure dynamics of forest
- (c) **Long Term**
 - (i) analyze, publish results of research and conservation programs
 - (ii) promote conservation program
 - (iii) continue periodic monitoring of permanent plots and transects (as needed, at least every 5 yrs)
 - (iv) continue to measure dynamics of forest

D Zoning, Land Use, Access

1 **Objectives** The El Pilar Archaeological Reserve for Maya Flora and Fauna

To protect the cultural and natural resources present in the Reserve and determine proper usage All extractive processes (looting, hunting, timber , etc) should be prohibited within the Reserve boundaries to facilitate and monitor the recuperation in the Reserve while gathering scientific info on succession and reforestation A one kilometer zone surrounding the entirety of the Reserve should be created for the purposes of limited and sustainable extraction and education

- (a) To create a comprehensive plan for research, education, protection of resources at the EP reserve
 - (i) based on available research data
 - (ii) consider impact on culture & nature
- (b) To develop environment to benefit visitors and community
 - (i) facilities
 - (ii) concessions
 - (iii) trails
 - (iv) roads
- (c) To manage relationship inside/outside the EP reserve
 - (i) promote a conservation zone of influence around the EP reserve
 - (ii) develop camping facilities outside the EP reserve
 - (iii) manage road access (close to through traffic in phases)
 - (iv) encourage alternative agricultural practices based of the forest garden model
- (d) to create zones which protect the cultural and natural resources of the Reserve while involving and considering the local communities and their needs

2 **Activities**

- (a) **Culture/Nature Zone**
 - (i) research – inform management/capacity in the EP reserve
 - (ii) protection – establish a continuum of access based on recuperation and succession, research projects, and interpretation exhibits (from tourist trails to forbidden zones)

- (iii) interpretation – use research data for interpretative trails and information
- (iv) extraction – develop data base to serve a model of sustainable extractive uses and education that would include a buffer zone of influence around the reserve
- (b) Development Zone
 - (i) concessions – involve community participation
 - (ii) infrastructure – develop funding priorities
 - construct facilities related to the reserve (Caretakers base, visitors centers for exhibits, control points to inhibit through traffic, research base to assist in field work)
 - develop roads in reserve to facilitate access and monitoring with control access points developed in 2 phases
 - expand trail system for interpretive exhibits on culture and nature (demonstrate diversity of culture and nature, minimize impact on resources, unified and well- designed system including all aspects of the EP reserve)
 - (iv) maintenance of park developments
- (c) Zone of Influence surrounding the EP reserve (Belize – SDA, Guatemala – ZUM)
 - (i) access
 - improve roads to reserve to allow community access beyond reserve and control within reserve with diversions around culture core developed over 2 phases that includes improving visual approaches
 - trails from communities to reserve for hiking and horseback
 - (ii) communities
 - promote camping facilities in zone of influence for visitors
 - create 40 meter forested buffer along access road to limit views of agriculture/pasture zones
- (d) Resources or areas of special interest (Culture/Nature)
 - (i) identify within the EP reserve for research, protection, education
 - (ii) recognize outside the EP reserve for research, protection, education

IV ADMINISTRATION – FORMAL/INTERNATIONAL RELATIONS

A General

1 Objectives

- (a) To establish an administrative/management presence at the EP reserve
 - (i) to establish an administrative framework for implementation of the Management Plan in Belize and Guatemala
 - (ii) to establish a coordination mechanism between Belize and Guatemala to implement the Management Plan

2 Options for Management Entity

<u>Belize</u> Department of Archaeology NGO (ID) Consortium	<u>Guatemala</u> CONAP ? delegates by Policy NGO (ID)
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3 Delegation of Authority

<u>Belize</u> By agreement (BAS Model)	<u>Guatemala</u> By Law RBM A contract with NGO establish a comite consultivo convene MR III (?)
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4 Non-Delegable Authority

<u>Belize and Guatemala</u>
(a) Enforcement
(b) Research Approvals
(c) Review and Application of Master Plan and Amendments

5 Duration

<u>Belize</u>	<u>Guatemala</u>
(a) 5 years	(a) 5 years
(b) 2-1/2 year review (BAS Agreement)	(b) Annual Operating Plan
(c) Annual Operating Plan	

6 Procedure for Plan Approval

<u>Belize</u> (BAS Model)	<u>Guatemala</u> (RBM)
NGO Drafts	NGO Drafts
Dept of Archaeology	CONAP
(may require SI)	IDAEH

7 Technical Advisory Team
Description of TAT

Knowledge of the resources of the EP reserve
Commitment to resource management and conservation
Liaison between management and community

<u>Belize</u>	<u>Guatemala</u>
Advisory Team	Advisory Committee
(a) Composition	(a) Composition
Village Council member	Municipality member
AdEP member	Community member
EP Program member	NGO member
DOA member	IDAEH member
BTB/BTIA member	CONAP member
EPAR member	the EP reserve member
Required TAT Meetings	Required TAT Meetings
Ad hoc Informal Liaisons	Ad hoc Informal Liaisons

8 Management Entity

<u>Belize and Guatemala</u>
Must consult with the Advisory Team BUT the recommendations of the Advisory Team are not binding

9 International Coordination (2 levels)

<u>Belize and Guatemala</u>	
(a) High	
(i) Formal Agreement for cultural exchange	
• UNESCO as a facilitator	
OR	
• Embassies as a facilitator	
(b) Low	
(i) La Carta de Intencion	
<u>Belize</u>	<u>Guatemala</u>
Forestry	CONAP
Depart of Archaeology	IDAEH

- 10 Responsibilities of Joint Technical Advisory Team(a) Review Progress of the Management and Operating Plan
 (b) Develop and implement common standards for management (e.g. research, administration, tourism, community, etc.)
- 11 General Administration Issues for the EP reserve
 (a) Create annual operation plan
 (b) Create annual budget
 (c) Register visitors and maintain visitor data
 (d) Request/acquire necessary material/equipment
 (e) Produce list of training needs and implement training program
 (f) Manage reserve accounts
 (g) Plan/regulate personnel requirements
 (h) Explore legal/financial opportunities for long term sustainability of reserve
- 12 Issues of Concern
 (a) Resolution of outstanding land issues (Belize /Guatemala)
 (b) Develop education programs for Belize/Guatemala in management of resources at the EP reserve
 (c) Utilization of the Reserve as a contiguous park
 (d) Identify funding sources and alternative combinations
 (i) external sources
 (ii) internal sources

B International Coordination

- 1 Objectives
 To develop appropriate mechanisms to coordinate, manage, research and other activities at El Pilar between Belize and Guatemala
- 2 Activities
 (a) Short Term
 (i) informal technical exchange as basis for TAT – plan Mesa Redonda III and other exchanges
 (ii) secure a Carta de Intencion for general cooperation between the relevant government agencies
 CONAP – Department of Forestry
 Department of Archaeology – IDAEH
 (b) Medium Term
 (i) pursuant the Carta de Intencion, establish a joint Technical Advisory Team under the jurisdiction of each management entity
 (ii) develop and implement joint management strategy
 (c) Long Term
 (i) formal agreement for cultural exchange (UNESCO, Embassies)
 (ii) prepare appropriate delegation agreement and, if necessary, statutory instrument
 (iii) promote standing joint Technical Advisory Team for cooperative management at EP

C Financial

- 1 Objectives
 To develop a sustainable funding basis for the EP reserve (Belize/Guatemala)
- 2 Activities
 (a) Short Term
 (i) develop the EP reserve as a eco-tourist destination for immediate community benefits in marketing
 (b) Medium Term

- (i) accounts for direct economic development, social benefits and environmental conservation
 - longer stays in Cayo
 - concessions in the EP reserve
 - visitor receipts at the EP reserve
 - access to community facilities (Be Pukte, stores, restaurants, etc)
 - conservation at the EP reserve
 - education in cultural/natural resources
- (c) Long Term
 - (i) evaluate economic and conservation benefits at the local, regional and global levels

D Facilities Maintenance

- 1 Objectives
 - To develop and maintain physical infrastructure within the reserve
- 2 Activities
 - (a) Short Term
 - (i) develop and implement a regular maintenance program for basic trails, informal facilities, improve restrooms
 - (b) Medium Term
 - (i) develop and maintain visitor way stations along trails and basic visitor center
 - (c) Long Term
 - (i) develop and maintain appropriate developed tourist facilities, bathrooms, visitors' centers with appropriate materials

E Conflict Management

- 1 Objective
 - To be able to manage conflicts within the reserve administration between the reserve and the communities and between the two nations
- 2 Activity
 - Create a protocol for conflict resolution

F Community participation

Formally part of administrative structure for short, medium and long term activities

G Co-Management issues

Joint Belize/Guatemala or Government/NGO

V IMPLEMENTATION SCHEDULE

A Objectives

- 1 To follow a schedule and sequence for implementing a management plan
- 2 To stage and prioritize plan for maximum management flexibility
- 3 To jointly implement the development, monitoring and communication channels for the EP reserve in Belize and Guatemala
- 4 To develop the EP reserve within the regional context of the Mundo Maya
 - (a) the EP reserve cultural destination in Belize
 - (b) the EP reserve natural destination in Guatemala

B Activities

- 1 Short Term
 - (a) Establish schedule
 - (i) Short Term years 1 to 2, urgent requisites

- (ii) Medium Term years 3-4, necessary requisites
- (iii) Long Term years 5+, feasible activities
- (b) Implement schedule for protection, resource management, education, tourism, interpretation, community participation, research, monitoring, administration, maintenance
- (c) Maintain trails in culture destination
- (d) Evaluate trail system for nature destination

2 Medium Term

- (a) Maintain schedule
- (a) Establish trail for nature destination
- (b) Maintain trail system to culture/nature areas

3 Long Term

- (a) Re-evaluate schedule
- (a) Evaluate trail systems
- (b) Maintain trail systems to culture/nature areas

C Monitoring Issues

Objectives

To jointly establish periodic monitoring strategies

Activities

Short Term

- Coordinate the Joint TAT
- Establish joint efforts (boundary maintenance, cross-border visitation, international research)

Medium Term

- Establish a periodic schedule of joint monitoring efforts
- Promote cooperative TAT meetings

Long Term

- Continue to coordinate joint TAT meetings
- Enforce periodic joint monitoring tasks

VI BUDGET

- 1 protection (patrols, guards, signs, caretakers' base)
- 2 resource management (access zones, extraction zones)
- 3 education (school visits, curriculum development, rules and regulations)
- 4 tourism (information dissemination, visitors' center, visitor way stations)
- 5 interpretation (trails, signage, exhibits)
- 6 community participation (labor, AdEP, concessions, projects)
- 7 research (inventory, protocol)
- 8 monitoring (wildlife transects, review of monuments, assessment of conservation)
- 9 administration (annual operating plan and budget, visitor data, materials and equipment, training, accounts, personnel)
- 10 maintenance (develop program, solid waste management program, equipment inventory)

This is a big MR III priority!!

APPENDICES

APPENDIX A
Basic History of Archaeology at El Pilar

- 1972 Site of El Pilar reported to the Belize Dept of Archaeology
- 1973 Belize Department of Archaeology visits El Pilar with Dr Anabel Ford, The Belize River Archaeological Survey (BRASS) begins
- 1974 A preliminary map was made of the major architecture at El Pilar by BRASS
- 1986 Excavation and rescue work at El Pilar, Alta Vista, Yaxox, Bacab Na conducted by BRASS
- 1987 BRASS conducts site testing in the area
- 1988 Detailed mapping begins at El Pilar
- 1989 Pilar Poniente mapped with IDIAH and CONAP
 First trail system constructed
 First Fiesta de El Pilar
- 1990 Construction of a permanent caretaker's house at El Pilar
 Boundaries of El Pilar Archaeological Reserve established by Belize Dept of Lands and Survey
 Publication of *Teo's Way*
- 1991 Forest Garden Project at Tzunu'un begins
- 1992 Belize Reserve declared
 First El Pilar Mesa Redonda
 Consolidation work in Plazas Jobo and Lec
- 1993 Guatemalan Reserve declared under CONAP
 Statutory Instrument signed, Ministry of Tourism and Environment
 Second El Pilar Mesa Redonda
 Rapid Ecological Assessment of Belizean and Guatemalan Reserves
 Consolidation work at Tzunu'un

Historia Básica de La Arqueología de El Pilar

- 1972 Sitio reportado en Belice por el Departamento de Arqueología
- 1983 Departamento de Arqueología de Belice visita el sitio con la Dra Anabel Ford
 El Proyecto BRASS se inicia
- 1984 Realización del mapa preliminar de El Pilar por el Proyecto BRASS
- 1986 Excavaciones y rescate en El Pilar por el Proyecto BRASS
- 1987 Se efectúan pozos de saneamiento en El Pilar por el Proyecto BRASS
- 1993 El Proyecto BRASS El Pilar se inicia
 Se efectúa el mapeo detallado del sitio
- 1994 Mapeo de Pilar Poniente con la colaboración de IDIAH y CONAP
 Se construye el primer sistema de veredas en el sitio
 Primer fiesta de El Pilar
- 1995 Se establecen los límites de la Reserva Arqueológica El Pilar, con la colaboración de el Departamento de Tierras de Belice
 Publicación de *Teo's Way*
- 1996 Se inicia la Huerta Agroforestal en el Grupo Tzunu'un
- 1997 Declaración de la reserva en Belice
 Mesa Redonda El Pilar en México
 Empiezan los trabajos de consolidación de Jobo y Lec
- 1998 Declaración del Monumento Cultural El Pilar por CONAP
 Firma de SI de la Reserva Arqueológica El Pilar para Flora y Fauna Mayas en el Ministerio de Turismo y Medio Ambiente
 Segunda Mesa Redonda
 Empiezan los trabajos de consolidación en el Grupo Tzunu'un

APPENDIX B
Chronology of Amigos de El Pilar

- 1992 May/June Daniel Silva, Area Representative, supports community clearing at the plazas of El Pilar
- 1993 Anabel Ford holds two meetings with the community members presenting idea for community based organization related to plans at El Pilar
June 30, 1993 the name AdEP was decided, members joined, and first officers were elected (President Angel Teck, Vice president Abel Manzanero, Secretary Sandra Manzanero, Treasurer Fred Prost)
- 1994 Nine general meetings of membership, one executive meeting and one event were held
Participated in the Fiesta El Pilar (5 May 94)
Received registration certificate as a non-profit organization on 7 Sept 94
Registration number 2566
- 1995 Fifteen general meetings of membership and six events were held
The group elected a new President, Marcos Garcia (26 Feb)
Events included
Presentation of *Teo's Way* (19 Mar)
Participation of President Marcos in Mobile TNC workshops (May/June)
BTF Agricultural Fair (27 May)
Fiesta El Pilar (10 June)
Global Roots project (July)
University of West Indies Workshops (Aug/Sept)
Bicycle Race (17 Sept)
- 1996 Sixteen general meetings of membership and four events were held
The group elected Prisilla Canchan as Secretary (17 Mar)
Events included
Presentation of funds to Leukemia victim
President Marcos Garcia Reviews El Pilar Archaeological Reserve from Helicopter, courtesy of 25 Flight, APC
Landscape workshop at Duplooy's
Fiesta El Pilar (8 June)
Global Roots project (July)
- 1997 Twenty two general meetings of membership and seven events were held
June elections of secretary Janet Manzanero
AdEP site maintenance eighteen times per year
Events included
1st Mesa Redonda (20-24 Jan)
Meeting w/Inpulsores Suchitoecos, Melchor, G U (Mar)
Landscape workshop (Apr-May)
Ford Fnd -Mexico Site visit (Apr)
Fiesta El Pilar (31 May)
Four capacity building workshops with Casteñeda of Envic (Aug-Sept)
Independence Day celebration (21 Sept)
Ford Fnd -New York Site visit (Oct)
Two community participatory workshops with Veach of U Florida (Oct/Dec)

APPENDIX C

Community Participation (Interests and Survey)

In the fall of 1997 the University of Florida signed an agreement with the BRASS/El Pilar project to coordinate the community participation component with a focus on two goals. Those goals are to facilitate local participation in 1) undertaking plans and activities for community development related to El Pilar, and 2) creating a management plan for the El Pilar Archaeological Reserve. During the first visit of the University of Florida to the community of Bullet Tree Falls, various participatory activities were carried out to guide the work with the community, including a stakeholder analysis, focus groups and a public meeting. The work included identification of the groups of Bullet Tree Falls, the desires with respect to the El Pilar program, and the needs in order to achieve those desires.

The groups of Bullet Tree Falls identified by the community were

- teachers and children
- parents and teachers association (PTA)
- the village council
- Amigos de El Pilar
- sports groups
- churches (approx 7)
- the corn mill (women's group)
- the group raising and processing chickens (women s group)
- the Bullet Tree Falls cultural group
- workers at El Pilar who are local to BTF
- farmers
- resort owners
- BRASS/El Pilar
- taxi drivers
- tourist guides
- the unemployed and those who do not want to work (the last two were added during the meeting)
- youth group (this last was created since October)

The benefits desired with respect to the El Pilar Project

- development of opportunities related to ecotourism
- development of artisanry sales
- development of restaurants and food sales for tourists
- development of lodging for tourists

“What is it that we need to do to achieve what desire?” According to the participants in the public meeting the answers were

- sharing of ideas
- having more workshops
- better consultants
- promotion of projects
- cultural and environmental education
- attractions that can bring more attention to the community
- artists who can teach others
- exportation of artisanry
- finances
- a good road so tourists can visit El Pilar

- resolution to the lands conflict
- support of government and the blessing of God
- responsible hardworking people
- creative workers
- work with care and attention in whatever field we choose
- cooperation and communication
- work united and respect each other
- participation of members or groups

It can be noted that the needs may be divided into three categories - projects and ideas, resources, and qualities of personal character. The team facilitating the participatory process (BRASS/El Pilar, Anselmo Castañeda, Help for Progress, Maria Gamero, and the University of Florida) is working with these three aspects via participatory planning, capacity building and building personal and institutional linkages, help in undertaking projects, and help in creating proposals for project funding.

AMIGOS DE EL PILAR

BULLET TREE VILLAGE, CAYO DISTRICT - Hora comienza _____

Buenas tardes (días), mi nombre es _____ y represento a Amigos de el Pilar. Estamos conduciendo una encuesta en esta comunidad para averiguar si la gente quiere o no participar en actividades relacionadas con El Pilar. Su respuesta nos ayudara a entender mejor el trabajo que debemos llevar a cabo para que este proyecto tenga éxito y así sea de beneficio a toda la comunidad. Su respuesta sera muy confidencial.

1 Nombre _____ EDAD _____ SEXO _____ Mas ___ Fem ___

2 Grupo Ethnico Maya ___ Latino ___ Criollo ___ Otro ___

3 Lengua que hablo español ___ ingles ___ maya (cual?) ___

4 Originario de _____ Tiempo de vivir aqui _____
¿Piensa continuar viviendo aqui? Si ___ No ___

5 ¿Cuántos viven en su casa ___ Adultos (Mayores de 15 años) ___ Niños ___

6 ¿Pertence a algun grupo especial? ___ ¿cual? _____
Si no, ¿porque no? _____

Por ejemplo a) Inglesias ___ b) Mujeres ___
c) Jazenes ___ d) Otros _____

7 ¿Le gustaria participar en uno? Si ___ No ___ Explique _____

8 ¿Conoce los grupos y organizaciones que existen y trabajan en la comunidad? Si ___ No ___

¿Como quienes? (lista) _____

¿Cuántos son activos? ___ ¿No Activos? ___

9 ¿Que piensa sobre grupos de
a) Mujeres _____
b) Jovenes _____
c) Adep _____
d) Otros _____

10 ¿Conoce algo sobre el proyecto de el Pilar? Si ___ No ___

11 ¿Que opina de este proyecto? Explique

a) Arqueologico _____

b) participacion comunitaria _____

12 ¿Quien cree que debe ser al encargada del manejo de la participación comunitaria del proyecto?

a) El Concilio ___ b) La Comunidad ___ c) grupos politicos ___

d) El Gobierno ___ e) Un Grupo Determinado ___ f) No se ___

g) Otros _____

13 ¿Porque cree que la gente no le gusta participar en proyectos de comunidad?

a) falta de interes? ___ b) poca comunicacion? ___

c) por religion? ___ d) divisiones (explique) _____

e) Liderazgo es pobre? ___ f) otros _____

14 A su parecer, ¿como piensa la gente sobre Amigos de el Pilar?

15 ¿Le gustaria participar y ser parte de Amigos de el Pilar?

Si ___ No ___ Explique _____

16 Si conoce un poco los problemas existentes de participacion de la comunidad ¿que aconsejaria que se hiciera para que la gente participara?

17 Que son tres cosas que se necesitan hacer para que el beneficio de el Pilar llegue a su familia

1 _____

2 _____

3 _____

18 ¿En cual le gustaria participar? (del no 17) _____

Termina entrevista (hora) _____

APPENDIX D
Preliminary Park Plans

1

A Novel Discovery of Culture and Nature

The El Pilar Archaeological Reserve for Maya Flora and Fauna

Visit the Be Pukte Cultural Center of the Amigos de El Pilar on the way to the reserve to see the El Pilar Model and the distinct arts and crafts of the villagers



Enjoy an early morning bird-watching walk along the winding Chorro Trail to a beautiful set of small waterfalls or the El Pilar Creek Trail where numerous animals go for a drink

Catch a glimpse of Maya life at the ancient house and forest-garden of Tzunu'un where archaeologists are exposing residential buildings and naturalists are recreating the economic landscape of the Maya forest



Plan a picnic at the site and wander through the archaeological ruins discovering small houses and the magnificent plazas beneath the jungle canopy to end your day quietly watching the sunset from El Pilar's power center

Familiarize yourself with the variety of Cayo's archaeological sites beginning with small valley centers of Xunantunich and Cahal Pech to complete the day at the major center of El Pilar

Arrange to chat with the archaeologists and biologists working at El Pilar from February to June to find out the latest discoveries



APPENDIX E
Plants and animal list

FAMILY	GENUS	SPECIES	MAYA	SPANISH	ENGLISH	CREOLE
Agavaceae	Agava	fourcroydes	sak kij	henequen	agave	
Agavaceae	Agava	silvestris	ch elem ki	henequen		
Agavaceae	Agava	sisaltana	kij ya ax kij	henequen	agave	
Anacardiaceae	Anacardium	occidentalis		maranyon	cashew	
Anacardiaceae	Astronium	graveolens	k ulin che	jobillo	jobiyo	
Anacardiaceae	Mangifera	indica		mango	mango	
Anacardiaceae	Metopium	brownei	box chechem			
Anacardiaceae	Sapindias	radlkoferi or purpurea	ium	jobo	hog plum	
Annonaceae	Annona	muricata	ix k an tak oop p opox	guanabana	spiny custard apple sour sap	
Annonaceae	Annona	reticulata	ix chak, op oop	annona	custard apple	
Annonaceae	Annona	squamosa	tzulmuy kulumuy tz imul ix ya ax	cherimoya		
Annonaceae	Malmea	depressa		annonillo	wild coffee	
Apocynaceae	Aspidosperma	stegomeris	sa yuk	malerio		
Apocynaceae	Plumeria	acutifolia	ix sak, nukte sak nukte	flor de mayo	mayflower	
Apocynaceae	Plumeria	obtusa	nukte ix ch om	flor de mayo	mayflower	
Apocynaceae	Plumeria	pudica	xt uhuy ix suuy	flor de mayo	mayflower	
Apocynaceae	Plumeria	rubra	nukte	flor de mayo	mayflower	
Apocynaceae	Thevetia	spp	ix akitz, ankitz	huevo de chuco cojon de miko	yellow oliander	
Araceae	Alocasia	macrorhiza		coco	macal	
Araceae	Anthurium	schlechtendali	xiv yak tun ich	cola de faisán	pheasant tail	
Arecaceae	Cocos	nucifera		coco	coconut	
Aristolochiaceae	Aristolochia	odoratissima	guaco	guaco		
Aristolochiaceae	Aristolochia	trilobata		contribo flor de pato	duck flower	
Asreraceae	Eupatorium	critonia, morifolium	xa ax como che	palo verde	green stick	
Asteraceae	Helianthus	annuus			sunflower	
Asteraceae	Helianthus	tuberosus			sunroot, jereseleum	
Asteraceae	Neurolaena	lobata	kayabim	mano de lagarto	jackass bitters	
Asteraceae	Tagetes	erecta	ix ti pu	flor de muerto	marigold	
Bignoniaceae	?				wild bignonia	
Bignoniaceae	Crescentia	cujete	luch	jicara	calabash, tree gourd	
Bixaceae	Bixa	orellana		achiote		
Bombacaceae	Bombax	elliptium	zac kuy che	mapola		
Bombacaceae	Ceiba	pentandra	ya ax che	ceiba	ceiba	
Bombacaceae	Pachira	aquatica	xk'uyche cuyche		provision tree	
Boraginaceae	Cordia	dodecandria	kopte	cercote		
Boraginaceae	Ehretia	tunifolia		roble	beek	
Bromeliaceae	?		tschu			
Bromeliaceae	Ananas	comosus		piña		
Bromeliaceae	Bromelia	karatas	chak chom	piñuela	cham wild pineapple	
Bromeliaceae	Bromelia	pinguin	ch am tz albay	piñuela	wild pineapple	
Burseraceae	Castilla	elastica	kikche uule ya	hule	rubber tree	
Burseraceae	Protium	copal	sak pom	copal		
Cactaceae	Epiphyllum	crenatum	pita aya vo	tuna		
Cactaceae	Optunia	spp	(ix) pak lam, pakam	nopal		
Caesalpiniaceae	Caesalpinia	pulcherrima			bird of paradise	
Caesalpiniaceae	Cassia	grandis	b ukut	bucut	stinking toe	
Caesalpiniaceae	Dralium	guianese	wach wapak	guapaque	wild tamarind, ironwood	
Caesalpiniaceae	Pachyrhizus	erosus	chi'kam	jicama	jicama	
Caesalpiniaceae	Swartia	cubensis	katal ox, b ulu	llora sangre	bastard	

Caesalpiniaceae	Tamarindus	indica	che wata, pach uhuh put, ch ich put (wild)	tamarindo	rosewood tamarind	
Caricaceae	Carica	papaya		papaya	papaya	paw paw
Cecropiaceae	Cecropia	peltata	sco otsch, xko che (ix) k o och che k o och	guaramo	trumpet tree cecropia	
Chenopodiaceae	Chenopodium	ambrosides		epazote		
Combretaceae	Bucida	buceras	puk'te	cacho de toro	bullet tree	
Combretaceae	Terminalia	catappa		almendra	almond	
Cucurbitaceae	Citrullis	vulgaris		sandia	watermelon	
Cucurbitaceae	Cucurbita	mixta	tzool	wikoy	squash	
Cucurbitaceae	Cucurbita	moschata	kuum, chum	ayote		
Cucurbitaceae	Cucurbita	pepo	sikil zicil kuum	pepitorta	pumpkin	
Cucurbitaceae	Sechium	edule	ix wiskil huisquil	chayote		
Dioscoreaceae	Dioscorea	belizensis			wild yam	
Euphorbiaceae	Cnidoscylus	acontifolius	chay	chaya		
Euphorbiaceae	Croton	guatemalensis	chal-che	pito sico	santa maria croton	
Euphorbiaceae	manihot	esculenta	tzin, tzim	yuca	manioc	
Fabaceae	Gliricidia	sepium	k ante sayab sakyab	madre de cacao		
Fabaceae	Phaseolus	occineus			scarlet runner bean	
Fabaceae	Phaseolus	lunatus	ib box, pichek buul	frijol	lima beans	
Fabaceae	Phaseolus	vulgaris	ix wolok, bul buul	frijol	bean	
Fabaceae	Piscidia	piscipula		palo de gusano	dogwood, jabin	
Fabaceae	Vicia	faba			broad bean	
Heliconiaceae	Heliconia	spp			heliconia	
Lauraceae	Persea	americana	un, on	aguacate	avocado	
Leguminosae	Mucuna	deeringiana		frijol abono	tropical velvet bean	
Leguminosae			sue			
Liliaceae	Allium	cepa	kukut, seb ooya	cebolla	onion	
Liliaceae	Allium	sativa	axux	ajo	garlic	
Liliaceae	Aloe	vera	saab ila	sabila	aloe	
Liliaceae	Yucca	elephantipes	isote	izote	yucca	
Malpigiaceae	Byrsonna	crassifolia	ix k an ximich chi	nance		
Malvaceae	Gossypium	barbadense		algodon	cotton	
Malvaceae	Hibiscus	esculentas			hibiscus	
Malvaceae	Hibiscus	spp	hol			
Meliaceae	Swietenia	macrophylla	cha cal te puna punab	caoba	mahogany	
Meliaceae	Trichila	havanensis		palo de cuchara		
Mimosaceae	Acacia	cornigera		subun	acacia	
Mimosaceae	Enteroobium	cyclocarpus	pich	guanacaste		
Moraceae	Artocarpus	altilis		castana	breadfruit	
Moraceae	Brosimum	alicastrum	ahx, oox, ox	ramon	breadnut	
Moraceae	Ficus	involuta	ix kopo	amate	fig	
Moraceae	Ficus	radula	chimum	higo	amate	
Moraceae	Pseudolmedia	oxyphyllaria	manax		mountain (wild) cherry	
Musaceae	Musa	spp			apple banana	
Musaceae	Musa	spp			jamaican purple banana	
Musaceae	Musa	spp		platano	dwarf banana	
Myrtaceae	Eugenia	tikalana	ch ilo on che pichi che	guyabillo escobillo	plantain guayabillo escobillo	
Myrtaceae	Pimenta	diocia	naba cuc cab akuk	pimienta gorda	allspice	
Myrtaceae	Psidium	guajava	pichi	guayaba	guava tree	
Orchidiaceae	Vanilla	planifolia		vainilla	vanilla	
Palmae	Acrocomua	belizensis		cocoyol		
Palmae	Cryosophula	argentea	kum	escoba		give n take

Palmae	Orbignia	cohune			corrozo		
Palmae	Roysonea	oleraceae				cabbage palm, royal palm bay leaf	
Palmae	Sabal	morrissiana	botan		guano		
Papilionaceae	Coriandrum	sativum	jon k ix, (ix) kulanthro		cilantro	coriander	
Papilionaceae	Lonchocarpus	castillioi	manchuch		manchuch	black cabbage bark	
Papilionaceae	Piscida	piscipula	aj b ox, ha bin		jabin		
Passifloraceae	Passiflora	?				passion fruit	
Pinaceae	Pinus	caribensis	huhub			honduran pine	
Piperaceae	Piper	auritum	shma culan		santa maria, obel	cowfoot	
Piperaceae	Piper	spp	xibilin kuk				
Piperaceae	Piper	spp	xkuk tzub		cordoncillo piper		
Poaceae*	Cymbopogon	citratu				lemon grass	
Poaceae*	Oryza	sativa			arroz	rice	
Poaceae*	Sacharum	officinatum			azucar	sugar cane	
Poaceae*	Zea	mays	ixin		maize	corn	
Polypodiaceae	Adiantum	tenerum	ok pich, ek chu chan	helecho	palo negro	maiden hair fern	black stick
Polypodiaceae	Adiantum	tricholepis			culantrillo	tiger grass brackenfern	
Polypodiaceae	Phlebodium	decumanum			callawalla	bearpaw fern	
Punicaceae	Punica	granatum	p uk tzub		granada	pomegranate	
Quinoaceae	Chenopodium	quinoa			quinoa		
Quinoaceae	Quina	schipii	(aj) chaksab ak che			pigeon plum	
Rosaceae	Licania	platypus	tzok otz, tzocotz		sunza	monkey apple	
Rubiaceae	chicococca	alba	pay che		zorillo	skunk root	
Rubiaceae	Coffea	arabica			cafe	coffee	
Rubiaceae	Guettarda	combsii	tes tab		testab		
Rubiaceae	Hamelia	patens	ax kanan, ix canan			polly red head	
Rubiaceae	Psychotria	tenuifolia	x anal				
Rubiaceae	Sickinga	salvadorensis	chakte much		saltemuch		john crow redwood
Rutaceae	Citrus	limonia			limon	lime	
Rutaceae	Citrus	paradisi			toronja	grapefruit	
Rutaceae	Citrus	sinesis			naranja	orange	
Rutaceae	Citrus	spp			cidra		
Rutaceae	Citrus	spp				jamaican lime	
Rutaceae	Ruta	graveolens	sinkin		ruda	rue	
Sapindaceae	Cupania	belizensis	chac pom			grande betty	
Sapindaceae	Talisia	olivaformis	kenep guaya, kinep				
Sapotaceae	Chrysophyllu m	mexicanum	sikulva, chi ceh, chike		caimato		
Sapotaceae	Manilkara	?	yak	chico sapote	chicle		
Sapotaceae	Pouteria	sapota	tulul		mamey		
Sapotaceae	Pouteria	spp			tempishte		
Simarubaceae	Bursera	simaruba	cha cah		undio desnudo		gumbolimbo
Solanaceae	Capsicum	fructens			chile piquin		
Solanaceae	Lycopersum	esculentum			tomate	tomato	
Solanaceae	Nicotiana	tabacum	cuctz k utz			tobacco	
Sterculiaceae	Guazuma	ulmifolia	pixoy		tapaculo	bay cedar	
Strychnaceae	Strychnos	panamensis			chicoloro		
Verbenaceae	Lantana	camara				wild sage	
Verbenaceae	Lippia	graveolens				oregano	
Verbenaceae	vitex	gaumer	yak nuk				
Zingibraceae	Zingiber	officinale				ginger	
Zygophyllaceae	Guaiacum	sanctum			guacima, guacimo		

Rapid Ecological Assessment El Pilar Archaeological Reserve FAUNA Species list

1 = El Pilar Site 2 = High Forest
3 = El Chorro 4 = El Pilar Road
5 = Water Trail
T = Tracks

	DRY S		RAINY SEASON			
	18 Apr-98	13 Aug-97	22 Aug 97	23 Aug 97	3 Sep-97	19 Dec 97
FISHES - POECILIIDAE LIVE BEARERS						
<i>Hetaerandia bimaculata</i>				5		
AMPHIBIANS BUFONIDAE TOADS						
<i>Bufo valiceps</i> Gulf Coast Toad		2				
AMPHIBIA RANIDAE FROGS						
<i>Rana vaillanti</i> Rainforest Frog				5		
AMPHIBIANS HYLIDAE TREE FROGS						
<i>Agalychnis callidryas</i> Red-eyed Tree Frog				5		
<i>Hyla loquax</i> Red footed Tree Frog				5		
<i>Smilisca baudini</i> Mexican Tree Frog		3	5			
REPTILES EUBLEPHARIDAE BANDED GECKOS						
<i>Coleonyx elegans</i> Banded Gecko				5		
REPTILES - GEKKONIDAE - GECKOS						
<i>Sphaerodactylus glaucus</i> Escorpion				5		
REPTILES CORYTOPHANIDAE BASILISKS						
<i>Basiliscus vittatus</i> Banded basilisk Maklakka Cock lizard	3	2				
<i>Corytophanes cnstatus</i> Old Man Lizard				5		
REPTILES PHRYNOSOMATIDAE SPINY LIZARDS						
<i>Sceloporus taepensis</i>	3	3		5		
REPTILES - POLYCHROTIDAE ANOLES						
<i>Anolis lemunnus</i>	2	2				
<i>Anolis limifrons</i> Slender anole		2				
<i>Anolis uniformis</i> Ground anole		2				
REPTILES TEIIDAE TEIDS						
<i>Ameiva undulata</i> Barred whiptail Salamandra	2	2				2
REPTILES XANTUSIIDAE - NIGHT LIZARDS						
<i>Lepidophyma flavimaculatum</i> Night lizard		4			1	
REPTILES - COLUBRIDAE - COLUBRID SNAKES						
<i>Drymobius margantiferus</i> Speckled Racer				1		
<i>Sibon nebulata</i> Snail-eating Snake				5		
<i>Sibon sarton</i> Snail-eating Snake						Miller (1998)
REPTILES VIPERIDAE VIPERS AND PITVIPERS						
<i>Bothrops asper</i> Barba amarilla	2					

Rapid Ecological Assessment El Pilar Archaeological Reserve FAUNA Species list

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	DRY S		RAINY SEASON			
	18 Apr-98	13 Aug 97	22 Aug 97	23-Aug 97	3-Sep-97	19-Dec 97
MAMMALS DASYPODIDAE ARMANDILLOS						
<i>Dasyopus novemcinctus</i>						
Nine-banded Armandillo Ouetch						
						3 (T)
MAMMALS EMBALLONURIDAE SHEATH TAILED BATS						
<i>Saccopteryx bilineata</i>						Miller (1998)
White lined Sac winged Bat						Miller (1998)
<i>? Diclidurus alba</i>						Miller (1998)
? Northern Ghost Bat						
MAMMALS MORMOOPIDAE LEAF CHINNED, MUSTACHED AND NAKED BACKED BATS						
<i>Pteronotus davyi fulvus</i>						Miller (1998)
Davy's Naked backed Bat						Miller (1998)
<i>Pteronotus parnellii</i>						Miller (1998)
Parnell s Mustached Bat						Miller (1998)
<i>Pteronotus personatus psilots</i>						Miller (1998)
Wagner's Mustached Bat						
MAMMALS PHYLLOSTOMIDAE - LEAF NOSED BATS						
<i>Carollia perspicillata azteca</i>						Miller (1998)
Short tailed Fruit Bat						
MAMMALS - VESPERTILIONIDAE VESPERTILIONID BATS						
<i>Myotis elegans</i>						Miller (1998)
Little Brown Bat						Miller (1998)
<i>Eptesicus fernalis gaumen</i>						Miller (1998)
Argentine Brown Bat						Miller (1998)
<i>Rhogeessa aeneus</i>						Miller (1998)
Central American Yellow Bat						Miller (1998)
<i>Lasiurus ega</i>						Miller (1998)
Southern Yellow Bat						
MAMMALS MOLOSSIDAE FREE TAILED OR MASTIFF BATS						
<i>Nyctinomops laticaudata</i>						Miller (1998)
Mastiff Bat						Miller (1998)
<i>Molossus ater</i>						Miller (1998)
Mastiff Bat						Miller (1998)
<i>Molossus molossus</i>						Miller (1998)
Mastiff Bat						
MAMMALS CEBIDAE MONKEYS						
<i>Alouatta pigra</i>						Mexican Black Howler Monkey Baboon Sarguate
						2 3
MAMMALS - CANIDAE - DOG FAMILY						
<i>Urocyon cinereoargenteus</i>						Gray Fox Gato del monte
						4
MAMMALS PROCYONIDAE RACCOON FAMILY						
<i>Nasua nasua</i>						White nosed Coati Pisote
						4
<i>Potos flavus</i>						Kinkajou Nightwalker Mico de noche Martucha
						1 5
MAMMALS MUSTELIDAE WEASEL FAMILY						
<i>Galictis vittata</i>						Tayra Bushdog
						2
MAMMALS FELIDAE CAT FAMILY						
<i>Panthera onca</i>						Jaguar Tigre
						Reported
<i>Felis pardalis</i>						Ocelot Tigrillo
						2 3 (T)
MAMMALS TAPIRIDAE TAPIRS						
<i>Tapirus bairdi</i>						Baird s Tapir Danto
						Reported rare
MAMMALS - CERVIDAE DEER						
<i>Mazama americana</i>						Red Brocket Deer Antelope Cabrto
						2
<i>Odocoileus virginianus</i>						White tailed Deer Venado
						Reported rare
MAMMALS SCIURIDAE SQUIRRELS						
<i>Sciurus yucatanensis</i>						Yucatan Squirrel Ardilla
						3
MAMMALS GEOMYIDAE POCKET GOPHERS						
<i>Orthogeomys hispidus</i>						Hispid pocket Gopher Ground mole Taltusa
						3
MAMMALS MURIDAE - MURID RODENTS						
<i>Ototylomys phyllotis</i>						Big-eared Climbing rat
						1
MAMMALS DASYPROCTIDAE PACAS						
<i>Agouti paca</i>						Paca Gibnut Tepesquintle
						2 (T)

APPENDIX F
Administration and Governmental Structures

BELIZE

STATUTORY INSTRUMENT

No 54 of 1998

ORDER made by the Minister responsible for ancient monuments and antiquities in exercise of the powers conferred upon him by section 28 of the Ancient Monuments and Antiquities Act, Chapter 259 of the Laws of Belize, Revised Edition 1980-1990, and all other powers thereunto him enabling

(Gazetted 23rd May, 1998)

1 This Order may be cited as the

Short title

ANCIENT MONUMENTS AND ANTIQUITIES (EL PILAR ARCHAEOLOGICAL RESERVE FOR MAYA FLORA AND FAUNA) ORDER, 1998

2 The area of unalienated National Land situate in the Cayo District which is described in the Schedule hereto and known as El Pilar is hereby declared to be an Archaeological Reserve

Declaration of Reserve Schedule

MADE by the Minister responsible for ancient monuments and antiquities this 12th day of May, 1998

(HENRY V YOUNG)

Minister of Tourism and the Environment,
Minister responsible for Ancient Monuments and Antiquities

Printed in Belize by the Government Printer

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APPENDIX H

Organization Acronyms

AdEP Amigos de El Pilar
AERI Asoc para el Estudio de las Relaciones Internacionales
BAS Belize Audubon Society
BRASS Belize River Archaeological Settlement Survey
BEST Belize Enterprise for Sustainable Technology
BTB Belize Tourist Board
BTIA Belize Tourism Industry Association
CBO Community Based Organization
CCAD Comision Centroamericana de Ambiente y Dearrollo
CCT Consejo de Consultores Tecnicos
CE/UNAM Centro de Ecologia, Universidad Nacional Autonoma de Mexico
CEM/UNAM Centro Estudios Mayas Universidad Nacional Autonoma de México
CONAP Consejo Nacional de Areas Protegidas, Guatemala
CORI Community and Organization Research Institute, UCSB
DOA Department of Archaeology, Belize
EP El Pilar
EPAR EL Pilar Archaeological Reserve for Maya Flora and Fauna
HC /DC Herpin Carfer-Diseño Concepto / Consultores, Mexico
IDAEH Instituto de Antropologia e Historia, Guatemala
IDEADS Instituto de Derecho Ambiental y Desarrollo Sustentable
INAH Instituto Nacional de Antropologia e Historia, Mexico
NGO Non-Governmental Organization
ONG Organizacion No-Gubernamental
PACT Protected Areas Conservation Trust
RBM Reserva de la Biosfera Maya, Peten- Guatemala
SDA Special Development Area, Belize
SI Statutory Instrument, Belize
SIGAP Sistema de Areas Protegidas, Guatemala
TAT Technical Advisory Committee
UCSB University of California, Santa Barbara
UNAM Universidad Nacional Autonoma de Mexico
UNDP United Nations Development Program
USAID United States Agency for International Development
WB World Bank
WCS Wildlife Conservation Society
WMF World Monument Fund