

Emerging Participatory Monitoring and Evaluation Programs in Two Ecotourism Projects in Petén, Guatemala

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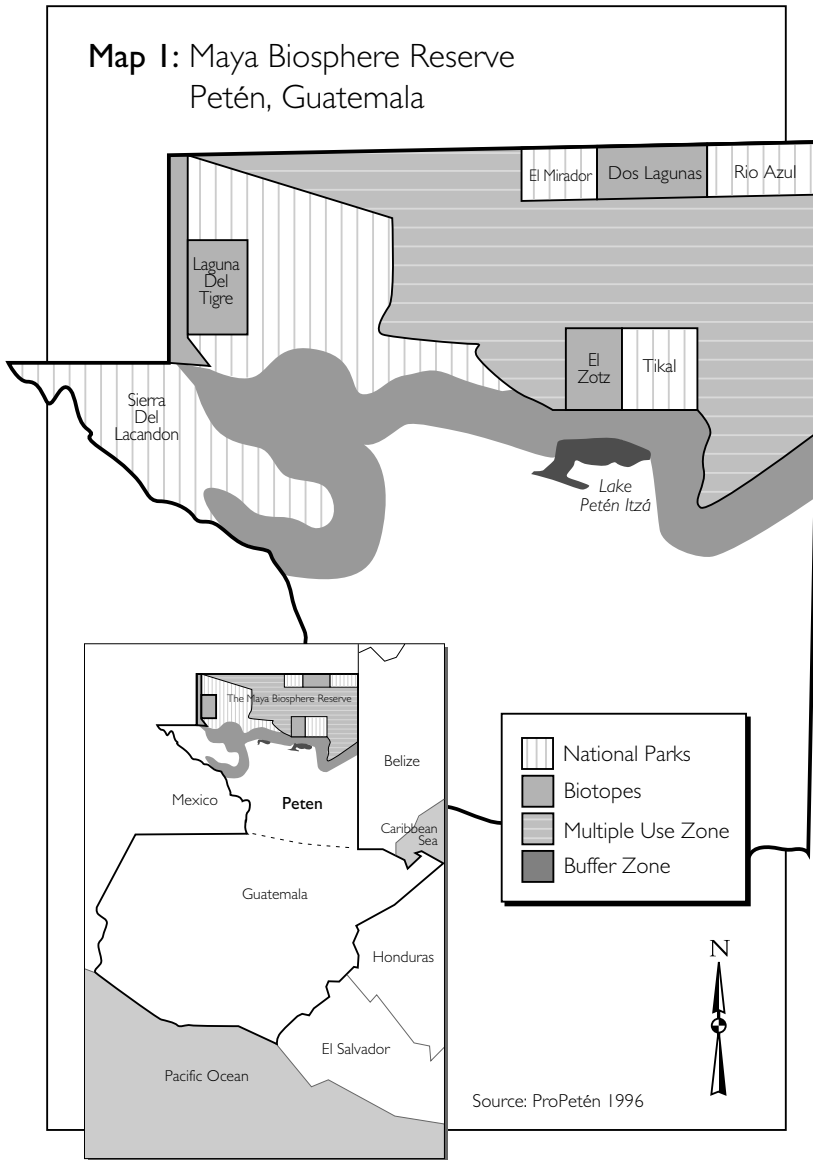
ABSTRACT

In the Maya Biosphere Reserve of Petén, Guatemala, several rural communities are implementing local ecotourism projects with the assistance of ProPetén/Conservation International. These projects are designed to provide sustainable economic alternatives to participants who would otherwise be engaged in slash and burn agriculture or other ecologically unsustainable activities. To help document the ecological changes associated with the tourism routes, a participatory monitoring and evaluation program is being designed and tested with the help of ProPetén staff, community-based tour guides, and tourists. Although the monitoring program is still in its early stages, a few lessons have emerged which could be useful to other ecotourism projects: 1) Participatory monitoring that includes tourists not only provides valuable information, but also can be used as a selling point for tourism routes, and 2) The monitoring program should be low cost, involve local guides, and require a minimum of time, equipment, and technical support.

PROPETÉN/CONSERVATION INTERNATIONAL

Since 1991, Conservation International (CI) has been working in the northern department of Petén, Guatemala to help conserve one of Central America's largest remaining tracts of tropical forest, the Maya Biosphere Reserve (MBR) (See Map 1). Through its *Proyecto Petenéro por un Bosque Sostenible* (ProPetén) project, CI has implemented an integrated conservation and community development initiative which includes community organization and training, environmental education, natural forest management, scientific investigations, eco-enterprises, and policy formulation. ProPetén/CI's primary focus is to create economically and ecologically sustainable alternatives for people living in rural communities within the MBR. Ecotourism is one of the most promising of these alternatives because the MBR has such a wealth of archeological ruins and tropical forests.

The tourism routes, which are being developed by several rural communities and by ProPetén/CI, pass through core zones of the MBR. Although core zones are designated as untouchable wilderness areas within the MBR, the reality is that small-scale farmers, cattle ranchers, and contraband loggers are causing significant impacts throughout these areas. ProPetén/CI is in the process of implementing a participatory monitoring program to document the ecological changes that are taking place along these routes. Eventually, the



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monitoring program will also document socio-economic changes in communities along the routes, and both the ecological and socio-economic impacts of the tourists themselves. Before the specifics of the monitoring program are explored, a brief introduction to Petén and to the current state of tourism in the region is provided.

PETÉN: GUATEMALA’S LAST FRONTIER

The majority of people living in Petén are not original inhabitants, but rather have migrated to Petén from other regions of Guatemala and neighboring countries. Many immigrants from southern Guatemala came to Petén searching for farmland or fleeing the

violence of the civil war. In 1964, the population of Petén was a mere 26,000 people occupying over 36,000 square kilometers of 90 per cent forested land. In contrast, 30 years later, over 360,000 people now reside in Petén, and only 50 per cent of the land remains forested (Conservation International/ProPetén 1996).

As it has been for centuries, small scale agriculture remains the primary subsistence activity in Petén. However, the area's thin tropical soils do not support the intensive farming to which the *milperos* (subsistence farmers) have grown accustomed in other regions of the country. Newly cleared lands yield just a few years of productivity before soils become nutrient depleted, forcing the *milpero* to clear a new patch of forest for cultivation.

In addition to subsistence farming, some Peteneros also engage in the collection and processing of non-timber forest products (NTFPs). "Chicle," a tree resin which forms the base for natural chewing gum, "Xate," a decorative palm frond, and "Pimienta Gorda," (allspice) are the principal NTFPs from the region. Collectively, export revenues of these NTFPs total between \$4-7 million, and provide full-time employment for approximately 7,000 people (Nations et al. 1988). Conservationists have attempted to create other products which, like NTFPs, make use of the forest without destroying it. Tourism is one of the alternatives which conservation and development organizations are promoting as an ecologically and economically sustainable alternative to subsistence agriculture.

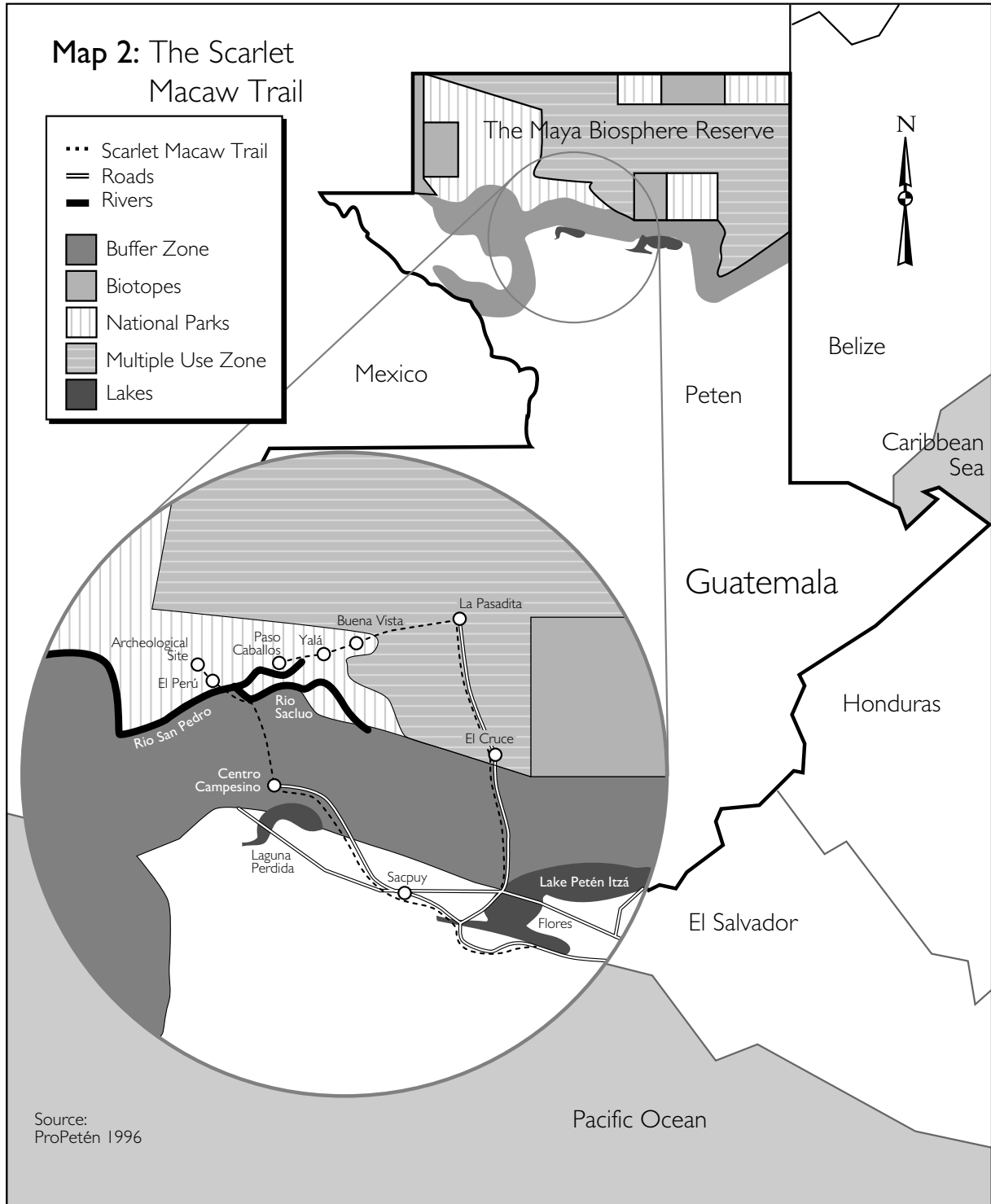
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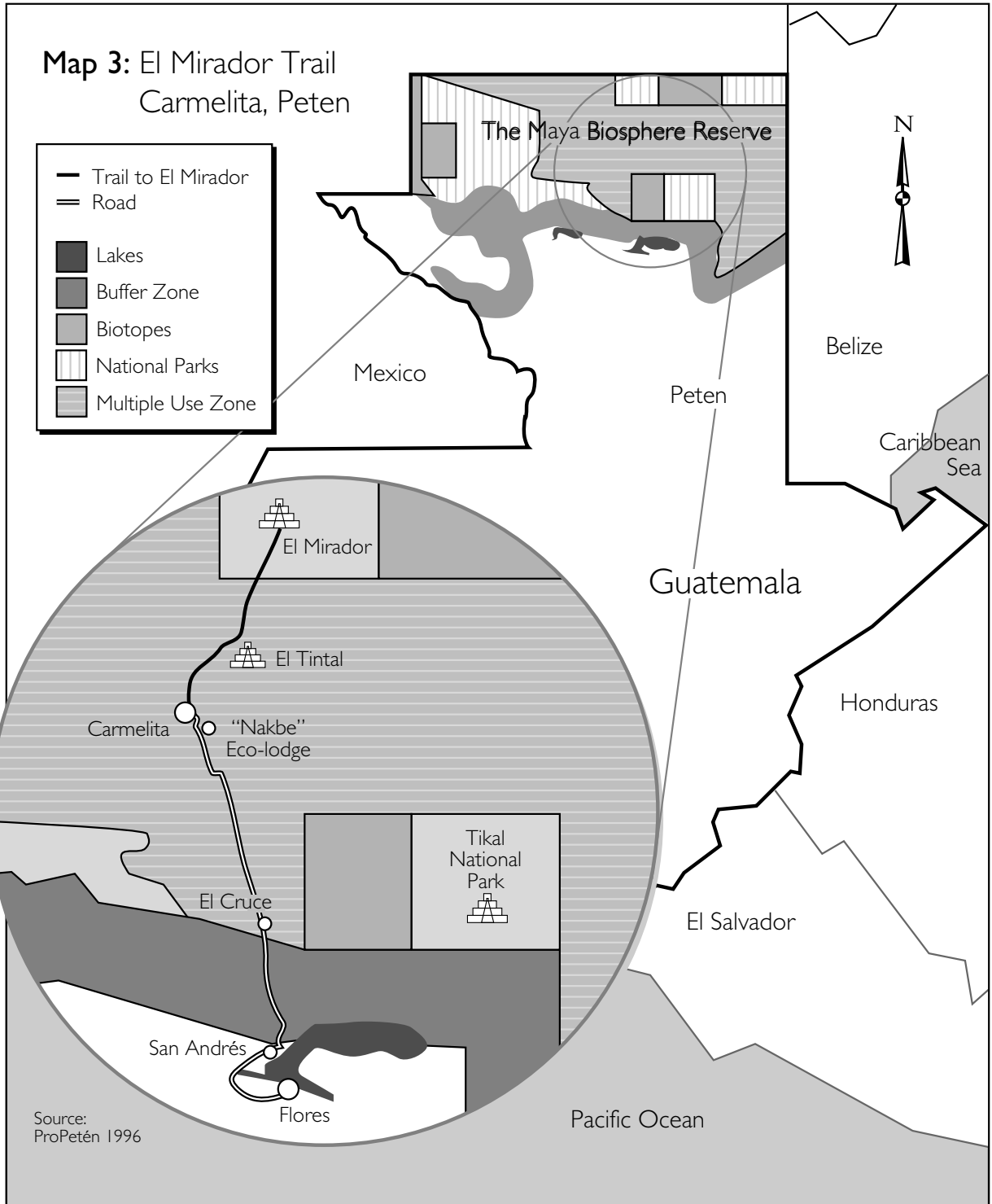
TOURISM IN PETÉN

Petén is well-suited for low impact tourism because it holds a wealth of attractions for adventurous travelers. Petén is far and away the fastest growing nature tourism destination in Guatemala (INGUAT 1995a). The region receives a steady flow of tourism, mainly attributable to the impressive ruins of Tikal National Park. In 1981, only 14,500 tourists visited Tikal, while in 1995, there were over 120,000—an increase of over 800 per cent (INGUAT 1995b). Although Petén boasts many other beautiful archeological sites such as Ceibal, Uaxactún, and Yaxilan, these sites draw only a minimum number of tourists compared to Tikal. Unfortunately for the people of Petén, few benefits of tourism are captured at the local level. National and international tour companies compete vigorously for market share, and retain the majority of the profits derived from tourism to Tikal.

PROPÉTÉN'S ECOTOURISM PROGRAM

ProPetén/CI is currently working toward the development of community-based ecotourism projects in five communities including Centro Campesino, El Cruce Dos Aguadas, Carmelita, San





Andrés, and San José (See Maps 2 and 3, pages 98-99). Currently, efforts are being focused primarily on the development of two major tourism routes. The communities of Centro Campesino and El Cruce Dos Aguadas are jointly managing the development of the Scarlet Macaw Trail, while the community of Carmelita oversees the Route to El Mirador (See Maps 2 and 3). The Route to El Mirador is a five day jungle hike where the ecotourist explores the highest known Mayan temples. The Scarlet Macaw Trail provides a chance to visit remote areas of Central America's largest national park, *Laguna Del Tigre*, and to view tropical wildlife including the highly endangered scarlet macaw.

Both routes are integral components of regional conservation programs. The Route to El Mirador is just one part of the Carmelita Community Forestry Concession which will also include managed extraction of timber and non-timber forest products. Similarly, the Scarlet Macaw Trail is one element in the management plan of 82,400 hectares within the *Laguna del Tigre* National Park. Tourism alone will not guarantee the conservation of a wilderness area, but it can be an important ingredient of an integrated conservation program.

The two routes are in different stages of growth. The Route to El Mirador is still in the product development phase. Tourism committee members are being trained for tourism management and the last of the necessary infrastructure is being built. The Scarlet Macaw Trail, on the other hand, is now being marketed to national and international tour operators in hopes of securing a steady, yet manageable, flow of ecotourists to the route.

DEVELOPING THE SCARLET MACAW TRAIL IN CENTRO CAMPESINO

The development of the ecotourism program in Centro Campesino provides an example of the method that ProPetén/CI is using to start up tourism programs in other communities. Initially, meetings were held between the ProPetén/CI tourism department and the Centro Campesino community in order to determine whether there was local interest in creating a tourism program. After Centro Campesino showed interest in tourism, a community tourism committee was formed. The committee's first challenge was to collaborate with ProPetén's personnel to define a likely route. The ProPetén/CI team, accompanied by a few members of the community, explored the areas with greatest tourist potential, including the archeological ruins of El Perú and a series of cliffs which are home to a flock of scarlet macaws. The team decided that the route could be best explored by mule or on foot and began designing the neces-

sary tourist facilities to make the five day hike both memorable and comfortable. Whenever possible, existing infrastructure—such as pre-existing trails and buildings—were converted to tourist facilities. Local materials and resources were employed in all construction projects along the route.

During the two years that the route was being developed, ProPetén/CI began arranging training sessions to teach community members the basics of tourism including guiding, food preparation, and human relations. After this first phase of route development, ProPetén/CI arranged familiarization trips for national and international tour operators to explore the route and assess its potential for marketing it to their clientele.

The operators responded enthusiastically and are currently advertising the route to their customers. The guides of Centro Campesino are optimistic that in the coming year the number of ecotourists on the Scarlet Macaw Trail will dramatically increase. Each year community members are asked both to contribute more of their resources to the tourism activities and to participate in training courses. ProPetén plans to pass control of the routes to the communities by the end of 1997 while still providing technical and marketing support.

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THE NEED FOR MONITORING AND EVALUATION

A ProPetén/CI task force was established in the fall of 1995 to formulate a monitoring and evaluation plan for the tourism routes. The task force was composed of ProPetén's ecotourism director, the technicians for the two routes, and a staff biologist. Although none of the community guides were included in the task force, the technicians spent extended periods in the field and were therefore able to express the views of the guides in these planning sessions.

The task force's first challenge was to decide whether a monitoring program was even necessary. In the case of the route to El Mirador and the Scarlet Macaw Trail, visitation levels are still relatively low (250 tourists/year). However, the routes are used extensively by hunters, subsistence farmers, and collectors of NTFPs. In fact, at this stage, tourist impacts would be extremely difficult to isolate in the context of trail use by the other groups. The task force concluded that there is a need to monitor the changing condition of the routes caused by the hunters, collectors, and farmers. Monitoring the condition of the routes, the task force believes, could help the guides decide which areas are in need of improvement or intervention. The task force also reasoned that monitoring the condition of the routes will provide excellent baseline data for future monitoring efforts as tourism increases over time. Finally, the guides will be

able to use the monitoring data to establish carrying capacities for the routes based upon community goals and ecological considerations.

An additional motivation for the development of a monitoring program was the opportunity to test the hypothesis upon which many ProPetén/CI activities are founded: Local sustainable economic development and biodiversity conservation are highly compatible, and rural communities that gain economic benefit from forest products (or in this case, ecotourism) will be more inclined to protect the forest and the biodiversity within it (Thomsen and Ortiz 1996).

Having justified the need for this new program, task force members next set out to define the priorities and methodologies to be used. The decision was made to focus solely on the ecological impacts of tourism during the monitoring program's initial phase. An anthropologist with 30 years of experience in Petén will be contracted on a short-term basis in 1996 to develop a framework and methodology for socio-economic monitoring and evaluation. This framework will then be implemented by the tourism committee and community members, with the technical assistance of ProPetén staff.

PRIORITIES AND METHODOLOGIES FOR MONITORING AND EVALUATION

Topics for monitoring were chosen to reflect both the interests of ecotourists and key conservation priorities. Task force members decided early on that a successful ecotourism monitoring and evaluation program should meet a number of criteria:

- low cost
- minimal time requirement
- local level participation and management
- minimal technical, training, and supervision requirements

The following is a compilation of the priority areas and methodologies determined by task force members for the initial phase of ecological monitoring and evaluation.

MACROFAUNA

Task force members felt that monitoring large vertebrates along the routes is of primary importance because wildlife viewing has consistently been ranked as one of the highest attractions for visitors. During the days on the trail, the guides and tourists identify all kinds of wildlife by sight, sound, and spore. When the group gets together in the evening to discuss plans and tell stories, the guide brings out the monitoring worksheets and all animals encountered during the day are recorded. The species name, the location of the sighting, the time and the quantity of animals are all recorded on the

worksheet. This simple activity often leads to interesting discussions of the natural history and legends associated with the various animals.

It is hoped that collection of data on the presence of macro-fauna along the routes will yield significant clues in determining the distribution and natural history of certain animals. Species deemed of primary importance to monitor include the scarlet macaw (*Ara macao*), howler monkey (*Alouatta pigra*), spider monkey (*Ateles geoffroyi*), white lipped peccary (*Tayassu pecari*), collared peccary (*Tayassu tajacu*), white tailed deer (*Odocoileus virginianus*), red brocket deer (*Mazama americana*), tapir (*Tapirus bairdii*), puma (*Felis concolor*), jaguar (*Panthera onca*), and agouti (*Dasyprocta sp.*) (Emmons 1990). More species of birds will eventually be added to the monitoring list. Since the Scarlet Macaw Trail passes through the territory of a new biological station established by ProPetén/CI, it is likely that the baseline data collected by tourists and guides will be used by biologists to make more detailed studies of fauna.

VISITATION LEVELS

As mentioned previously, the ecotourism routes are utilized extensively by NTFP collectors, subsistence farmers, and hunters. These individuals impact the ecological integrity of the routes. A monitoring team, composed of guides and ProPetén/CI technicians, will use informal interviews and simple observations to estimate the number of people living along the route. This information will help the guides predict where the route will most likely deteriorate and will assist them in forming strategies for intervention.

MEASURING HUMAN IMPACTS

Along with wildlife and archeological sites, the greatest selling point for the tourism routes is the forest itself. The integrity of the forest is also the highest priority for conservation. The task force has proposed that a team of community members and ProPetén staff survey the routes and map all deforested areas and areas of secondary growth less than ten years of age. The team will use a Global Positioning System (GPS) to determine the locations of these areas. ProPetén staff will create the maps showing the human impact data along the routes in the context of regional patterns of deforestation shown in recent satellite images. Each year after the base maps are created, the monitoring team will add new GPS points to the maps corresponding to any newly deforested areas along the routes. ProPetén will provide salaries for the guides who assist with the mapping work. ProPetén technicians will attempt to involve as many community participants as possible in order to maximize the educational impact of the monitoring activity.

The guides will be able to use the monitoring data to establish carrying capacities for the routes based upon community goals and ecological considerations.

TOURIST REGISTRATION

In the past, local guides have conducted tourist excursions of El Mirador in a rather informal manner and no data were ever captured about the visitors. To remedy this, task force members have designed a formal system for registering tourists. Meetings were held to determine the level of visitation that tourism committee and community members could effectively manage. Registration books were developed where visitors' personal and demographic data can be recorded, including name, address, occupation, nationality, age, sex, length of stay in region or country, and the means by which they learned of the ecotourism activities.

EXIT SURVEYS

Visitor surveys have been developed to measure quality of service and experience. Although surveys are often written in English, the tourists frequently talk over their answers with the guides.

ARCHEOLOGICAL RUINS

One of the principal attractions along the routes are the archeological remains of ancient Maya civilization. These ruins are constantly threatened by looters seeking valuable artifacts to sell on the black market and, as a result, very few sites remain that have not been disturbed. However, for various reasons the task force rejected the idea of monitoring the Mirador and Perú archeological sites. One objection was that the Mirador site is just too vast to monitor effectively with sporadic groups of tourists. A second objection was that the Guatemalan Institute of Anthropology and History (IDAEH) is formally responsible for monitoring these sites. Finally, task force members were uncomfortable with even the remote possibility of offending looters who live in the same communities as the guides. However, it was agreed that ProPetén/CI technicians could provide support to IDAEH to process data that has been collected on the changing conditions of the Perú and Mirador sites.

The participatory nature of the monitoring program is one of its greatest strengths. Although not formally trained as such, the guides are superb naturalists due to their dependence on the forest. They are especially good observers of the fauna because they know the habits and habitats of the animals.

STATUS OF MONITORING PROGRAM

Approximately eight months has been required to build consensus around the priorities and methodologies of this project. Training and testing of methodologies have progressed hand-in-hand as ProPetén staff work with local guides and community members to implement strategies which can be replicated and managed over time. To date, these efforts have been focused in three areas: visitor registration and tourist surveys on both routes, and macrofauna monitoring on the Scarlet Macaw Trail. The macrofauna monitoring has already begun to reveal the hot spots for sighting monkeys,

scarlet macaws, and tapirs (tracks). The other monitoring activities have been approved by the task force but have not yet been presented to the guides.

STRENGTHS AND WEAKNESSES OF THE MONITORING PROGRAM

Although the ecotourism monitoring and evaluation program is still in its initial stages, preliminary feedback has been encouraging. Exit interviews indicate that tourists who have participated in the monitoring of macrofauna have a sense that they have made a contribution to the conservation of Petén's forests. The collaboration between guides and tourists to fill out the macro-fauna work sheets has also helped to improve communications between guides and tourists. Increased communication is especially important because there is usually a partial language/cultural barrier between guides and their tour groups. Ultimately, the chance to participate in conservation monitoring while exploring the forests of Petén will become a selling point for both the Scarlet Macaw Trail and the Route to El Mirador.

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This emerging monitoring and evaluation program has had no shortage of challenges. Within ProPetén/CI, the monitoring program has required an integration process because monitoring was added as an extra responsibility on top of full workloads. In the field, it has been a challenge to explain the reasons for conducting monitoring. Tourism is a foreign idea that has taken several years to teach in the rural communities. It will take still more time for monitoring to become an integrated part of the community tourism program. Despite these obstacles, there is a commitment at ProPetén to implement the monitoring program.

The monitoring of human impacts has some additional challenges associated with it. The extended field time required to com-

plete the human impact monitoring will undoubtedly require the guides to do some monitoring work when no tourists are present. Guides will be compensated for this extra work by ProPetén/CI. A second weakness of the human impacts mapping is that it will require high technology and trained technicians. Nevertheless, ProPetén/CI believes that these maps can play an important part in bringing home the reality of deforestation to ecotourism guides and to their communities.

Ideally, socio-economic monitoring would have been planned and implemented in parallel with ecological monitoring. Because of the lack of trained personnel, the decision was made to implement socio-economic monitoring as a second phase. The following is a list of questions which have been proposed as the core of the socio-economic monitoring program: What percentage of a community tour guides' income comes from tourism and what are his/her other sources of income? Where do the tour guides invest the profits that they earn from their tourism activities?, for example, medical supplies, food, alcohol, chainsaws, education, land, etc. How do the community participants make the cultural transition from subsistence farmer to tour guide, and how do their values change with regard to conservation? How are guides viewed by non-participants within the community and from other communities? (Schwartz 1996). Based on an analysis of these questions, a report will be produced describing the socio-economic effects of the tourism activities on the community members and their environment.

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IMPLICATIONS FOR THE FUTURE

It is still too early to predict how these monitoring programs and plans will affect future ecotourism policies. Lessons learned from the monitoring of the Scarlet Macaw Trail and the Route to El Mirador could be multiplied through a recently formed *Gremial de Ecoturismo* (Ecotourism Council). This council consists of community representatives from seven ecotourism projects within Petén. The group was initially formed by The Nature Conservancy in order to help the various groups pull scant resources together to mount a collaborative marketing and publicity campaign. However, new monitoring and evaluation techniques and seed money to initiate them could also be coordinated through this council.

ProPetén/CI is also working closely with Guatemala's governmental tourism agency, INGUAT, in the formulation of policy guidelines for national ecotourism development. An effective monitoring and evaluation program tested and proven at the local level could be integrated into this national policy. International ecotourism operators are increasingly searching for reputable

projects which can meet high standards of ecological sustainability. If Guatemalan ecotourism ventures adopt monitoring programs, there will be added incentive for international operators to develop their programs preferentially in Guatemala.

REFERENCES

- Conservation International/ProPetén. 1996. *La Ruta Mirador: Informacion Turistica*. Guatemala.
- Emmons, L.H. and F. Feer. 1990. *Neotropical Rainforest Mammals, A Field Guide*. University of Chicago Press. Chicago. 281pp.
- Instituto Guatemalteco de Turismo (INGUAT). 1995. *Desarrollo Turistico Sustentable Hacia el Año 2005*. Guatemala.
- Instituto Guatemalteco de Turismo (INGUAT). 1995. *Estadísticas de Turismo*. 1994. Boletín No. 23. Guatemala.
- Nations, J., B. Houseal, I. Ponciano, S. Billy, J.C. Godoy, F. Castro, G. Miller, D. Rose, M. R. Rosa, C. Azurdia. 1988. *Biodiversity in Guatemala: Biological Diversity and Tropical Forest Assessment*. Washington, D.C.: World Resources Institute.
- Schwartz, N. 1996. Personal communication. Norman Schwartz is author of *A Forest Society*, the definitive reference on the anthropology of the Petén.
- Thomsen, J. and E. Ortiz. 1996. Internal CI memo entitled, "Task Force on Monitoring and Evaluation."

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