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ECOTOURISM IN JAMAICA:

an economic and environmental assessment of selected sites

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EXECUTIVE SUMMARY

This study was initiated by the DEMO Project (Development of Environmental Management Organisations) a joint effort of the Government of Jamaica (GOJ) and the United States Agency for International Development (USAID), to promote environmentally and socially sound, long-term economic growth in Jamaica The objectives were to determine to what extent tourism is providing sustainable economic benefits to local communities and contributing to natural resource conservation at selected sites utilised as nature tourism attractions in Jamaica, and to investigate the factors promoting success in ecotourism enterprises

Eight sites were investigated between May and August 1998, with findings from established nature tourism attractions at five sites forming the core of the results For the purposes of this study, ecotourism is defined as nature tourism that contributes to conservation and economic development While the attractions differ in terms of their natural resources community setting, and the level of economic and community benefits that they provide almost all of them fulfil the criteria for successful ecotourism attractions

All of the attractions are providing employment to local residents and offer wages at least as good as the available alternatives While the indirect economic benefits or spin-offs are less than expected for communities near the attractions, ecotourism has provided a number of community benefits that are not easily quantifiable, such as increased environmental awareness and improved stewardship of agricultural lands Only two types of attractions – YS Falls and the Black River safari tours – are providing significant profits for the operators and enjoying high rates of visitation Low visitation at the other attractions – Valley Hikes, Cockpit Country Adventure Tours and Cranbrook Flower Forest – is a significant constraint that needs to be addressed by further product development and resolution of licensing problems in some instances, and improved marketing in all cases Viability remains a concern even for the profitable attractions which are approaching their environmental and social carrying capacities while facing increasing operating costs in an unstable national economy

External environmental threats are an immediate concern to some of the attractions investigated, and threaten the potential for all ecotourism development in Jamaica While the privately owned sites are protecting the resources within their boundaries, the ecotourism entities developed and operated by non-governmental organisations are playing a particularly important role in dealing with resource degradation at the community level through environmental education and technical assistance with conservation practices However, it is unlikely that long-term natural resource protection will be accomplished in Jamaica without a concerted effort at the national level through improved legislation, monitoring, enforcement and the establishment of protected natural areas

The potential for Jamaica to take advantage of the predicted growth in ecotourism worldwide depends on the image of Jamaica compared to alternative ecotourism destinations The image of Jamaica in the world tourism market in turn depends on how the destination is marketed as well as the feedback from visitors about their experiences The incidence of violent crime and the unprecedented problem of tourist harassment have tarnished Jamaica's image as a tourism destination Unless improvements are seen in the island's overall social and economic conditions, crime and social unrest could be detrimental to the growth of tourism of any kind

Although we identified some common factors and principles, the conditions required for viability, economic benefits for local people, and long-term protection of natural resources are complex and in many instances beyond the immediate control of the management of attractions Among the success factors identified for ecotourism attractions in Jamaica are diverse and/or spectacular natural resources,

environment-friendly operations (including a carrying capacity policy), a harmonious relationship with the local community, accessibility, and extensive marketing through a variety of media

Recommendations coming out of this study include the need for ecotourism entities to minimise their own environmental impacts and get involved in dealing with external environmental problems Improved market research and collection of visitor statistics at the site and national level are seen as prerequisites for effective product development to provide for both local and foreign visitor preferences Attractions should provide more information about the natural and cultural resources of their attractions and use innovative merchandising to sell their product – ecotourism – as well as generate revenue from sales of goods

The private sector and government agencies are urged to work together on policy development and plans for ecotourism development in Jamaica Increased communication and collaboration will also be needed to resolve the complex transportation issues in the travel industry We recommend that government tourism agencies be more flexible in licensing to accommodate innovative, community-based approaches to ecotourism development While basic environmental standards should be required for all tourism operations, those being marketed as ecotourism attractions should also demonstrate a contribution to resource conservation The implementation of a system of parks and protected areas is regarded as essential for sustaining the resource base for ecotourism

INTRODUCTION

Ecotourism is a concept that has evolved in the last decade in response to a boom in nature tourism globally and the realisation that the conservation community and the travel industry have mutual interests Ecotourism emerged as a means to establish partnerships between conservationists and tourism companies while allowing them to further their individual goals

Ecotourism defined

The numerous definitions of ecotourism put forward by travel companies and conservationists elaborate to varying degrees on the same basic theme ***ecotourism is nature tourism that contributes to conservation and economic development*** This simple definition emphasises the importance of natural resource protection and benefits for local communities as the main features of ecotourism The potential contributions of ecotourism include

1 Generating funds for managing protected and other natural areas
2 Creating employment for residents of surrounding communities
3 Advancing environmental education for visitors and residents
4 Helping to provide justification and support for declaring areas protected

Definitions of Ecotourism

Ecotourism is

- responsible travel to natural areas that conserves the environment and sustains the well-being of local people – *The Ecotourism Society*

- environmentally responsible travel and visitation to natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features, both past and present) that promote conservation have a low visitor impact and provide for beneficially active socio-economic involvement of local peoples – *International Union for the Conservation of Nature*

  travelling to relatively undisturbed natural areas with the specific objective of admiring, studying and enjoying the scenery and its wild plants and animals as well as any existing cultural features ' – *Caribbean Tourism Organisation*

  purposeful travel to natural habitats designed to create an understanding of cultural and natural history while safeguarding the integrity of the ecosystem and producing economic benefits that encourage conservation – *International Expeditions*

- " using tourism to protect nature – *Interamerican Institute for Tourism*

The Evolution of Ecotourism

Discussions about ecotourism began at a time when conservationists and tourism companies were both confronting challenges in their professional arenas Many countries have experienced rapid population growth and deteriorating economic conditions within the last 20 years, particularly in the tropics, resulting in increasing competition for land use and pressure to exploit natural resources At the same time, there has been a tremendous growth in the tourism industry, including an exponential increase in the number of tourists visiting parks and protected areas For conservationists, ecotourism was seen as a means of reaping economic benefits from visitors while managing their impacts For the tourism industry, ecotourism offered the emerging breed of environment-conscious travellers an opportunity to contribute to conservation while experiencing nature at first hand

The changing world of conservation

Increased pressures on natural resources have taken many forms Logging, mining, oil exploration, the clearing of land for agriculture, industry and housing, and the harvesting of wild species have resulted in deforestation decreased soil fertility, loss of biological diversity and other environmental impacts In many places, whole landscapes have changed In countries where protected areas have been established there is increasing economic pressure to develop those lands and exploit their intact natural resources

- Ecuador, with an annual deforestation rate of 2 3%, loses over 800,000 acres of forest each year
- Jamaica's deforestation rate has been estimated at 5% more than double the alarming rate in Ecuador

For years, conservationists had been establishing and managing protected areas with very little interaction with local residents Faced with threats of development protected area managers began to redefine their approach to protected area management They realised that people who live among and depend on valuable natural resources had to be incorporated into conservation strategies and allowed to share in the benefits of resource protection

Current conservation strategies include providing new employment opportunities based on natural resource conservation and finding ways for residents of buffer zones around parks to use farmland for longer periods, replacing destructive slash-and-burn agriculture For local residents to become partners in protecting natural resources they usually need financial incentives for conserving flora and fauna

Apart from pressures on natural resources, another problem faced by conservationists globally is a lack of funding for protected area management Fewer financial resources are available from national governments and outside donors at a time when staffing and equipment needs are rising To address these urgent problems, conservationists are exploring many creative options Nature tourism in parks and reserves is viewed as one avenue for bringing money into protected areas directly as well as providing job opportunities for local residents It is theorised that once small tourism businesses such as guide services or lodges have been established by local people, they will be eager to preserve the resources on which their businesses depend The dramatic increase in the number of nature tourists worldwide has helped to focus attention on ecotourism as a funding mechanism for protected areas

The worldwide growth in nature tourism

Tourism is now the largest and fastest growing industry worldwide According to the World Tourism and Trade Council (WTTC, 1996), tourism has grown by nearly 300% over the past 20 years and is expected to increase by another 50% by the end of the century It employs roughly one in every 15 workers and generates about 13% of consumer spending worldwide Within the industry, the ecotourism sector is

reckoned to be growing at a rate of 10 to 15% annually (Positive Impact, 1997) A survey in 1994 estimated that 40 to 60% of all international tourists are nature tourists and that wildlife is a prime attraction of 20 to 40% of them (Fillion, 1994) Examples of the growth indicators of tourism are included in the following box

Growth Indicators of Tourism

The number of US-based outbound ecotour operators grew by 820% between 1970 and 1994, or an average of 34% a year The global destinations of their ecotour clients were

- Central America – 39%
- South America – 25%
- North America – 18%
- Mexico and the Caribbean – 5%
- Other destinations 13%

(Higgins 1995)

Many countries whose primary attractions are natural resources are experiencing huge spurts in visitor arrivals From 1986 to 1996, the following increases in arrivals were recorded

- Costa Rica – from 246,737 to 767,903 (+ 211%)
- Zimbabwe – from 331,417 to 1,149,845 (+ 247%)
- Tanzania – from 54 484 to 188,021 (+ 245%)
- Belize – from 51,740 in 1986 to 334,699 (+ 547%)

(WTO 1997)

Visitors to the four major national parks in Belize reached 13,161 in 1997, representing a 15% increase from 1996

(Belize Tourism Board 1998)

Between June 1995 and May 1996 the Florida Keys had over six million visitors Of these, 4 7 million came on vacation There were 1 5 million snorkelers and scuba divers, 1 million recreational fishers and 1 5 million came to view wildlife Almost all of the visitors (94 4%) said they were concerned about the environment

(Keys 1996)

The changing demands of tourists

The big attraction to nature destinations has most likely followed the global interest in the environment over the last two decades As people hear about the fragility of the environment, their awareness of conservation issues increases At home, they are choosing 'green' products and services and taking specific conservation actions, such as recycling For pleasure, they want to go off the beaten path, to the heart of the jungle They want to learn about endangered species and threatened habitats, and see rainforests before they disappear

As travellers visit a threatened wilderness area and hear about its plight, they want to help Nature tourists are willing to pay entrance fees at park gates, especially if the money will help to save the attraction They are eager to buy authentic local

Who are Ecotourists?

'Ecotourists are highly sophisticated shoppers are well educated, have a sense of adventure and are focused on experiencing the world's natural wonders They are concerned about the conservation of our Earth's natural and cultural heritage They are willing to endure, to varying degrees inconvenience and hardship to pacify their curiosity regarding a chosen destination They posses a thorough capacity to compare and evaluate different travel programs, determine the quality of a given travel program and accurately assess its value on the world market Demographically, the key prospects for ecotourism are men and women 45 to 65 years of age (Grasse 1991)

products and services that strengthen the local economy Overall, they are an ideal audience for addressing the conservation challenges of these areas, and some may even become activists for conservation

With these changing interests, consumers have placed new demands on the tourism industry They are requesting new destinations, new ways of doing business, and the chance to assist in natural resource management Some travel companies are responding by offering fewer beach vacations and more wilderness treks Others are trying to incorporate a few nature day trips into their beach itineraries New companies devoted solely to nature travel are springing up and finding the business profitable

Ecotourism has evolved as the intersection between a small but growing group of travellers seeking to conserve natural attractions, and conservationists looking for assistance to protect ecologically important natural areas In some cases tourism dollars can mean the difference between protection and destruction of these areas

Negative impacts of ecotourism

While the conservation benefits of ecotourism can be substantial, there can also be unwanted side effects Environmental degradation, economic imbalances, and social and cultural conflicts may result from the introduction of tourism to remote, sensitive areas

Environmental degradation typically comes in the form of visitor impacts such as litter, water pollution, trail erosion and occasionally changes in the behaviour or populations of wildlife Damage may be caused by developers involved with building tourism infrastructure or creating tourism products

Economic problems may occur when local and foreign investors target areas for resort development, resulting in inflated land values and increased housing costs for locals Tourism may also cause price increases in the local economy In a recent survey of communities located near nature attractions in Belize inflation was reported as a problem by 75% of the respondents in San Pedro and 58% of those surveved in Caye Caulker (Lindberg, 1994) Economic imbalances may result from competition between local and international entrepreneurs for the nature tourism market While there is a growing number of consumers who want authentic local products and services, this market is still very tentative and many big tourism companies do not take the time to develop relationships with the local populations

Another pitfall of ecotourism is its potential to induce negative social and cultural impacts Tourism may cause jealousies and strain relations among community members if benefits are not seen to be divided equitably Success in the ecotourism industry for just a few members may divide a community Sometimes residents are not interested in becoming involved with ecotourism, but feel they have no choice Local people may feel overwhelmed with visitors in their area, not only in their neighbourhoods but also at the local natural areas they use for recreation In some cases, residents' expectations of economic benefits from tourism may far exceed the real potential of the attraction, leading to problems with tourist harassment

A controversial concept

From the beginning, the concept of ecotourism has been controversial, generating both enthusiasm and skepticism While ecotourism is intended as an 'enlightened form' of travel, it may be difficult to avoid some negative impacts in the process of realising economic and environmental benefits Most conservationists agree it may work in some areas, but quickly note that it is not ideal for every natural site In cases where the costs of ecotourism outweigh the conservation and economic development

benefits, ecotourism is not recommended Also, it should not be seen as the answer to all conservation woes, but only as one possible strategy to help protect natural areas From the perspective of the tourism industry, working with communities and incorporating conservation measures may be what consumers want, but the added costs of these efforts may call into question the financial worth of ecotourism

Despite concerns on both sides, most people are pragmatic about ecotourism Given the desperate needs of natural areas and the eagerness of visitors to help, the theory of ecotourism presents a compelling case It deserves consideration as both a conservation method and a business

Protected areas are perhaps the ideal context for optimising the potential of ecotourism Within an established legal framework, it is easier to collect fees and to limit the costs and visitor impacts of tourism Protected areas have the added advantage that many nature travellers are particularly oriented to parks and reserves, with their official mandate to protect valuable resources However, the theory of ecotourism is also applicable in countries with few legally protected areas, such as Jamaica As a result, the principles of ecotourism are being applied to nature sites everywhere

TEN ESSENTIAL ELEMENTS FOR ECOTOURISM DESTINATIONS

Ecotourism is a multi-dimensional activity involving many stakeholders and factors As the principles of ecotourism are applied to natural attractions around the world, many attraction managers are discovering that ecotourism is not an easy concept to apply However, several factors that contribute to the success of ecotourism are becoming evident These can be called the Ten Essential Elements for Ecotourism Destinations

The relative importance of each element differs from site to site but each is necessary to some degree in order for ecotourism to flourish Of course, many ecotourism sites can get off the ground without being able to completely incorporate all of these elements, but this is a comprehensive list that provides useful guidelines for determining what may be missing or what will help augment the benefits of ecotourism

Ten Essential Elements for Ecotourism Destinations

1 A clear understanding of the meaning and goals of ecotourism
2 A desirable product
3 Viable ecotourism plans
4 Policies, regulations, and guidelines
5 Education and training
6 Environment-friendly infrastructure
7 Mechanisms to solicit income
8 Effective marketing and promotion
9 Strong partnerships
10 A favourable destination image

It is important to note that the Essential Elements for Ecotourism Destinations are not always determined at the site level Some of them, such as training, may take place entirely at the site, but others such as policies may be established at the national level Still others, such as promotion, occur at the site national and international levels Sometimes the decisions and actions required to fulfil the required element may be outside the control of managers and residents In some cases, outstanding efforts at the site level to create an ecotourism attraction may be blocked because government officials do not address the necessary policy issues When this happens managers and residents can begin with those elements that are within their capacity to direct while trying to influence the decision-makers responsible for other elements to take appropriate actions

1 A clear understanding of the meaning and goals of ecotourism

As mentioned earlier the concept of ecotourism generates a great deal of controversy Two key issues seem to be at the centre of discussions (a) What distinguishes ecotourism from related tourism terms? and (b) What qualifies as ecotourism? Regarding the first issue, in the box below we attempt to clarify the meaning of various travel terms linked to the environment Some are interchangeable with ecotourism but with others the differences are significant Regarding the second question, we provide examples of indicators for recognising ecotourism in the field and evaluating its success

Sustainable tourism is the term most often confused with ecotourism, yet the two are quite distinct While ecotourism is site-specific, often focusing on protected areas, sustainable or green tourism is helping to conserve resources at all levels in the tourism industry Sustainable tourism has evolved in response to the worldwide consumer call for more environment-friendly products and services The tourism industry is realising that becoming 'green can be profitable, and this has led to increased energy efficiency in the airline industry cruise lines recycling waste, and the introduction of environmental guidelines and procedures in large hotel chains, to name a few examples of the 'greening' of tourism

TRAVEL TERMS AND THEIR RELATIONSHIPS TO ECOTOURISM

Nature tourism is simply tourism based on the attraction of natural resources	This term is clearly related to ecotourism, but does not necessarily involve conservation
Sustainable nature tourism is essentially ecotourism	Some people prefer this phrase because they feel it is more straightforward and carries less baggage than 'ecotourism'
Low-impact tourism refers to tourism, often small-scale with minimal negative impact on the environment	This description can be used for any type of tourism site, whereas ecotourism attractions are natural areas
Scientific or research tourism focuses on particular science and research projects often in natural areas	Many – though not all – of these trips would qualify as ecotourism, for example, those organised by Earthwatch
Cultural tourism or cultural heritage tourism features culture as the main attraction	In ecotourism there is clearly a focus on nature, communities and cultural artefacts need not be present The two types overlap when visitors want to see a mixture of natural and cultural features
Sustainable or green tourism is tourism that uses natural resources judiciously	This is a broad concept of environment-friendly tourism that encompasses ecotourism, but can be applied to the entire tourism industry

Recognising and evaluating ecotourism in the field

While there is more and more agreement on how to define ecotourism on paper, the mechanisms for applying the principles of ecotourism in the field are still unclear There is a certain amount of subjectivity involved in deciding what qualifies as an ecotourism destination, and the task of evaluating ecotourism enterprises remains confusing

One aspect of the evaluation process is to investigate how much income is generated for the attraction itself and for local residents Jobs may be directly or indirectly created An important parameter is the extent to which revenue earned from tourism is used to help conserve natural resources The value of environmental education for both residents and visitors is also significant Perhaps the attraction is successful in persuading residents to leave wildlife unharmed, or motivating visitors to volunteer for the park Tourism may also provide justification for the legal protection of natural resources Finally, a wide range of possible negative impacts must be assessed to determine which ones need to be mitigated and by how much

Judgements about ecotourism for a particular site are easier to make within the context of its conservation and economic development objectives Tourism impacts, both positive and negative, must be appraised against the background of the goals of park managers and residents In some cases negative impacts, such as trail erosion, must be accepted in order to gain conservation benefits, such as increased revenue to hire

more park guards In each case, if tourism is advancing the conservation and economic development agenda of the area it is likely to qualify as ecotourism

To address the confusion about how to define ecotourism and put it into practice, standards of performance are being created for tour operators, lodges, and destinations in general Most of these standards are still in the experimental stages, but they help to provide criteria for recognising and evaluating ecotourism in the field

Standards of performance

In 1993 The Ecotourism Society published Ecotourism Guidelines for Nature Tour Operators This book offers criteria for top performance for tour operators and ideas for achieving these criteria The Ecotourism Society then initiated the *Green Evaluations Programme* to test how tour operators are meeting these guidelines As part of the program, a pilot survey was recently completed in which consumers evaluated tour operators in Ecuador (TES, 1997) The survey results revealed several promising traits among ecotourism operators For example, over 80% provided environmental education Over 60% of travellers said their tour operators were making contributions to conservation, and more than 70% said they were using local products and services The *Green Evaluations Program* is an important addition to the process of educating consumers about ecotourism tour operators

In 1994 the *Green Globe Programme* was established by the World Travel and Tourism Council to set standards for the tourism industry and encourage commitment to environmental principles The programme now has members in over 100 countries

Accreditation programmes

Accreditation programmes are the next step in promoting universal understanding of ecotourism The Australian government recently launched the *National Ecotourism Accreditation Programme (NEAP)* to acknowledge industries that are following ecotourism guidelines The *Green Globe Programme* is a UK-based accreditation programme for sustainable tourism The *Green Globe Certificate* is given to companies that comply with a specific set of environmental standards Verification of compliance is co-ordinated by the Societe Generale de Surveillance SA (SGS), the largest testing, inspection and verification organisation in the world

The *Green Globe Programme* is launching a pilot project in Jamaica through the EAST (Environmental Audits for Sustainable Tourism) Programme, funded by the United States Agency for International Development (USAID) and implemented in collaboration with the Jamaica Hotel and Tourist Association (JHTA) Under the EAST programme environmental audits are being conducted in the tourism and hospitality sector within the context of a corporate Environmental Management System (EMS) The process is intended to increase awareness and understanding of the benefits of environmental management systems and audits To date, at least ten Jamaican hotels have applied for *Green Globe Certification*, and two have been certified [1]

As more standards and accreditation programmes are developed for both ecotourism and sustainable tourism, the benefits of improved environmental practices for all tourism operations are becoming more apparent The ultimate goal is for every type of tourism facility and programme to incorporate environmentally sound methods and principles into every stage of its development

Consensus about the meaning and goals of ecotourism will bring many advantages First, confusion among consumers will diminish, and travellers who want to experience ecotourism will know where to

[1] Negril Cabins in Negril and Hotel Mockingbird Hill in Port Antonio

find the right sites and what to expect Second, there will be fewer cases of abuse of the ecotourism label Those who use the term loosely will have a harder time getting away with it Third, a clear understanding of the concept of ecotourism will allow site managers and residents to more successfully apply ecotourism principles to the activities, operations and goals of their sites

DEMO Activities and Products

In August of 1998 the DEMO Project sponsored an Ecotourism Planning and Management Study Tour to Costa Rica The study tour was designed to offer NRCA staff representatives from the Ministry of Tourism Jamaica Tourist Board Tourism Product Development Co Environmental NGOs and attraction managers an opportunity to learn about developing integrated management strategies for promoting environmentally responsible economically viable tourism The tour group was exposed to examples of collaboration among the private public and civil sectors of society in which profitable ecotourism attractions worked to protect the environment

2 A desirable product

This is a deceptive element of ecotourism to describe because it either sounds too simple or too subjective While it is obvious that the nature product needs to draw visitors in order to exist as a tourist attraction the question remains, to whom must the nature product be desirable? In our opinion, a desirable product simply means that ecotourists will want to visit the site In order to incorporate this idea when creating ecotourism attractions managers and residents need to know what ecotourists want, although surprisingly, this issue is often overlooked

Preferred characteristics of ecotourism attractions

Here are the main features that ecotourists seek when they choose destinations

- Intact natural resources
- Environmental education
- Conservation activities

Intact natural resources Ecotourists are nature lovers They want to visit unspoiled natural environments with abundant flora and fauna Areas with spectacular natural resources can easily be turned into a desirable product, however, this does not mean that a site must have the biggest or most unique or most breathtaking resources in order to be desirable Unlike some of the other elements that help to make a site attractive, having intact natural resources is generally predetermined Managers must make sure the area is well-preserved (perhaps by improving trails or replanting damaged vegetation) and must ensure that a conservation programme is in place, but in general the existing natural resources will be the main feature that determines the desirability of their tourism product

Environmental education Most ecotourists are eager to learn about the areas they visit and want a great deal of information about these sites These visitors appreciate visitor centres, information brochures and well-trained guides

Conservation activities Ecotourists want to know how the areas that attract them are being protected, for example by park guards The presence of conservation activities, research programs, and environmental monitoring systems adds a significant dimension to an ecotourism site Despite their preference for intact natural sites, ecotourists are so interested in conservation programs that many are willing to visit an area that is not in pristine condition if they know that conservation activities are

underway Ecotourists understand that they can help conservation programs by bringing income into the area if there is a clear plan for addressing external threats, such as logging, using ecotourism revenues

Other less important factors influencing the attractiveness of natural attractions for ecotourists include the uniqueness of wild species and the remoteness of the attraction

Uniqueness of wild species Sites with unique species such as the spotted leopard or an unusual natural phenomenon such as the migration of the monarch butterfly do attract big crowds of nature lovers

Remoteness of the attraction Many ecotourists want remote and relatively unknown sites They want to experience an authentic nature site that is not developed and commercialised, one that does not receive large numbers of visitors For many ecotourists, a desirable product is a simple, quiet place

Small, but Successful

- **The Community Baboon Sanctuary, Belize**
  The Community Baboon Sanctuary was developed in 1985 to help protect a population of black howler monkeys (known locally as baboons) on the banks of the Belize River outside of Belize City With the assistance of a researcher studying the howlers, local residents made an agreement to protect the monkeys' habitat The sanctuary consists of privately owned lands ranging from about 2 to 140 acres Visitation to the area has grown over the years, with almost 5,000 visitors in 1997, although this site remains small-scale Residents are receiving income from the sanctuary, and despite some disputes about how to distribute the revenue equitably tourism is largely responsible for the fact that the population of howlers is healthy

- **Capirona, Ecuador**
  Nestled in remote forests the community of Capirona in Ecuador was experiencing declining income from their traditional agricultural practices and in 1989 the residents decided to create a small ecotourism industry They built a small palm thatched guest house and residents started providing a variety of services for visitors such as cooking guiding and demonstrating aspects of their customs While the ecotourism industry is small with only 300 visitors in 1994, tourism provides supplemental income to the community The low level of visitation means that residents are easily able to manage the minimal negative impacts on the environment

Size does not determine attractiveness

Size is generally not a factor in determining the desirability of an ecotourism site The principles of ecotourism can be applied to sites of many sizes, and both small sites and large ones can effectively accomplish their goals of conserving natural resources and providing economic benefits While some large ecotourism destinations such as Yellowstone National Park in the USA or Manu Biosphere Reserve in Peru are very popular due to their extraordinary diversity of biological resources, smaller sites with a few, rare species or special features can also be very attractive If a site is small and has relatively low visitation, the economic benefits from tourism will be less than for a bigger site, but tourism can supplement other incomes and residents can still have incentives to protect the natural resources

In conclusion, to attract visitors to an ecotourism site managers must make sure that the attributes of the site satisfy the expectations of ecotourists, and that the marketing strategy takes advantage of visitor trends Visitors who are just beginning to plan a nature trip and looking at all the options in different countries may find more attractive sites in a worldwide search If the site is small and not particularly spectacular, managers should try to sell their product to visitors who are already planning to visit the

country or already in the country, and persuade them to make a side-trip A site may be less desirable to visitors that are thousands of miles away, but more attractive if it is just down the road from the visitors' hotel

DEMO Activities and Products

Many of the activities, reports, and documents produced during the DEMO Project addressed issues of preserving natural resources, environmental education for professionals and communities, promoting conservation activities, and obtaining financing to continue implementation of these objectives In fact, one of the central and ongoing activities of the DEMO Project has been protected areas management, including user fees and standard management guidelines

Most notable among these has been the adoption of a National Policy on Protected Areas which aims to achieve common environmental economic, cultural and social goals including recreational and educational opportunities for residents and visitors and maintaining financial sustainability for the protected areas system

3 Viable ecotourism plans

Another lesson learned from applying ecotourism principles in the field is that plans are critical at the site level and optimal at the community, regional and national levels At the site level, plans provide a basis for managing the development and operation of the attraction to minimise environmental impacts and ensure the overall viability of the enterprise Community plans bring together a broader set of stakeholders to jointly assess the merits of ecotourism in an area and help to identify the roles of local residents in its management At the regional and national levels, ecotourism plans are the means to express how ecotourism can advance the conservation mandate and economic development of an area or country In many cases ecotourism plays an important role in protected area management, regional and national plans help to direct its development within this context

For a variety of reasons not many sites have developed ecotourism plans and even fewer countries have them Managers and residents may believe they lack the skills to write a tourism plan, or perhaps there is no time for planning because managers are busy coping with the visitors who are already arriving Plans are missing at the regional and national levels, for the most part, because ecotourism has not yet caught the attention of government planners The absence of national ecotourism plans means that travellers and the tourism industry are the primary decision-makers in determining where tourists go and what tourists do In these cases, tourism growth typically has no direction, but follows the changing whims and demands of tourists and the interests of private companies

Site level plans

Planning models were originally designed to minimise visitor impacts in protected areas, but they are evolving into comprehensive planning tools to help participants make many basic decisions about the role of tourism in a given area Some of the latest planning models for nature attractions are found in three publications

- The Limits of Acceptable Change (Stankey et al , 1985)
- Visitor Impact Management (Graefe et al , 1990)
- Visitor Experience and Resource Protection (USDI, 1993)

Planning guidelines encourage managers and residents to first evaluate the objectives of the area, so they have a context in which to decide on acceptable levels of impacts from tourism The models provide step-by-step procedures to help map out where tourism will grow in the area and which activities will be allowed Guidelines are provided for the establishment of monitoring programs Group participation is encouraged in each decision and activity

Site plans are among the most easily accomplished Elements for Ecotourism Destinations Although group participation is necessary to provide input for parts of the plan, site managers and residents who are interested in ecotourism can actually complete a management plan even if it is a simple one Many of the other elements required for ecotourism destinations call for more help from others or collaboration on a bigger scale, but a site plan is an achievable first step in building an ecotourism enterprise

The Limits of Acceptable Change (LAC) Planning Process

The LAC planning process offers nine steps to establish a base for tourism and make judgements about its role and limits

- Identify the issues and concerns of the area
- Define distinct zones, such as primitive to accessible, where different tourism activities may be permitted
- Select indicators of resource- and social conditions
- Conduct inventories of existing conditions for each indicator
- Set standards for indicators in each zone
- Identify alternative activities for each zone
- Specify management alternatives for each zone
- Evaluate and select optimal alternatives
- Implement actions and monitor conditions

Source Stankey et al. 1985

Carrying capacity The *Limits of Acceptable Change* and other planning models emerged from concerns about the visitor carrying capacity' of ecotourism sites In the traditional sense, carrying capacity means the number of people an area such as a nature site can accommodate without incurring environmental damage or socially undesirable crowding In attempting to determine carrying capacities for various sites, researchers realised that asking the question 'How many visitors is too many?' did not adequately address the problem Research indicated that visitor impacts were not always directly correlated to visitor numbers five hundred visitors obeying the rules in a park could have less impact than ten visitors misbehaving

Several studies demonstrated that a better approach to determining carrying capacity was to ask the question How many impacts are too many?' Researchers found that the answer to this question depended on the particular resources and goals of the area More impacts could be tolerated at an accessible site designed for education than a fragile site where conservation was a priority It was also recognised that impacts could be reduced in many ways besides limiting visitor numbers Managers could educate visitors about appropriate behaviour for the site, disperse visitors into different areas or trails or harden' sites by improving the ability of the infrastructure to withstand visitor impacts

Planning models guide managers and residents through a participatory planning process, in which the results are subjective decisions based on group consensus Models help participants to determine the carrying capacity of an area by following a series of basic steps

1 Identify the management objectives of the site
2 Collect baseline data about the resources of the site or area
3 Determine actual or potential visitor impacts
4 Decide which impacts are acceptable in which areas
5 Identify mechanisms for minimising negative impacts

While these planning processes have been used primarily in wilderness areas in North America, they are now being tried in the tropics and applied to areas with larger communities Their effectiveness in these new settings has been fully established, but their step-by-step approach will likely allow them to be useful in many places (see box below on the LAC Process in Dominica)

Community plans

Communities around the world are experimenting with writing ecotourism plans, and are finding that plans are a good way to document their unique cultural and natural assets and express community concerns and aims for tourism growth Community plans promote a strategic approach to ecotourism, helping to delineate roles and co-ordinate the activities of the many players involved in ecotourism Effective community plans increase opportunities for residents to benefit from ecotourism

The Bluefields People s Community Association (BPCA) in Jamaica recently developed an ecotourism plan for its area to ensure that ecotourism is a positive addition to the area [2] The plan states that the main objective of ecotourism is to contribute to "the improvement of the quality of life of the Bluefields community through the protection of nature and the environment, while developing feasible economic activities based on tourism" (IIT, 1996) The BPCA is encouraging partnerships between private investors and local residents to jointly initiate and manage ecotourism One effort is the establishment of the Bluefields Area Sustainable Industries Corporation (BASIC), a company that will develop and support products business ventures, and nature resource uses that enhance the local economy, advance community goals and protect the environment These planning activities are a significant first step in creating an ecotourism destination

National and regional plans

While national ecotourism plans are limited, a few examples are noteworthy, such as Australia's National Ecotourism Strategy (Commonwealth Department of Tourism, 1994) This strategy fits within the broader framework of the National Tourism Strategy released by the government in 1992 One of these is 'to provide for sustainable tourism development by encouraging responsible planning and management practices consistent with the conservation of our natural and cultural heritage" (Commonwealth Department of Tourism, 1992)

The National Ecotourism Strategy of Australia was created to provide an overall policy framework for the planning, development and management of ecotourism, for both the inbound and domestic markets This document was prepared with input from many individuals, organisations, government agencies, and companies The strategy covers issues such as integrated regional planning, regulation, impact monitoring, marketing, industry standards, and involvement of indigenous peoples The government committed A$10 million over the subsequent four years to develop and implement this strategy (Commonwealth Department of Tourism, 1994)

[2] This plan is described in more detail in *Ecotourism in Jamaica an economic and environmental assessment of selected sites* (Lee et al , 1998)

The Limits of Acceptable Change (LAC) Process in Dominica

Dominica in the Windward Chain of the Lesser Antilles in the Caribbean, is a beautiful island with mountains, rainforests rivers and waterfalls Unlike its island neighbours, Dominica has only a few beaches, so tourism marketing focuses on its other assets This country is often referred to as "the Nature Island," and as more nature seekers discover Dominica tourism is growing To cope with an expanding tourism industry, the Dominican Division of Forestry and the USAID Environmental and Conservation of Resources Project (ENCORE) decided to develop a system for monitoring visitor impacts They selected the LAC methodology and in 1993 initiated the Limits of Acceptable Change (LAC) Planning Process at two sites in Dominica as case studies (Pedersen 1994)

Indian River The first site chosen was the Indian River outside Portsmouth Boat trips on the river are managed by the Portsmouth Indian River Guides Association The short trip is popular with both cruise ship passengers and independent travellers, with more than 50 000 visitors taking the trip annually As more visitors come their impacts are increasing One of the biggest problems is crowding, especially when big ships arrive Motor boats are also a concern as well as the lack of toilet facilities on the river As this is a privately owned area there are also non-tourist impacts affecting the river including litter in the river, oil spills, the use of agro-chemicals grazing of livestock and palm frond extraction (Pedersen, 1994)

Sulphur Springs The second site used as a case study for the LAC process was the Sulphur Springs area Complete with active fumaroles and remnants of the island's volcanic origins, the hot springs are used for bathing and recreation primarily by locals but they are also becoming more popular with foreigners Statistics about visitor numbers are not yet collected but visitation is increasing There is minimal infrastructure currently – trails and a cabin – although more is being developed This area has been proposed as a park to protect its interesting features and help minimise negative impacts, such as cattle grazing, illegal squatting , and visitors taking sulphur crystals away from the fumaroles

The LAC planning program for both these sites began with a training session about the LAC methodology Then each site developed a proposed **Park Vision Statement** defining the goals for the natural resources and all activities within the area A **Survey of Stakeholder Concerns** was conducted, soliciting comments from the community government representatives site management personnel ENCORE, the Forestry Division, guides, and tourism professionals

The next step in the LAC process was to develop **Opportunity Classes** to define desired conditions for specific areas The Indian River and Sulphur Springs areas were zoned and opportunity classes assigned to each zone The team members identified indicators of change for each site, such as trail width and vegetation A preliminary inventory of indicators was collected then standards were established for each indicator The final step was creating an **LAC Monitoring Program** to determine the extent of impacts and the conditions that would require management action

Source Pedersen 1994

One state in Australia, Queensland, has also produced an ecotourism plan Queensland is a significant ecotourism destination with five World Heritage sites and over 200 national parks and state forests that receive 12 5 million visitors a year The Queensland Ecotourism Plan (QEP) published in 1997 comprises a framework for planning developing, managing, operating and marketing these areas To date, the Queenslanders Tourist and Travel Corporation, implementers of the plan, have developed a comprehensive environmental tourism database initiated an ecotourism market research project undertaken specific ecotourism assessment projects and conducted operator workshops to discuss the National Ecotourism Accreditation Program (NEAP) programme (QTTC, 1998)

National Ecotourism Plan, Guyana

The objectives of the plan are to

- Identify the unique natural and cultural resources suitable for ecotourism activities
- Allow the people of Guyana to be the primary recipients of economic benefits
- Promote the conservation of natural and cultural resources
- Gracefully integrate tourism activities with other land uses
- Allow for the integration of tourism opportunities with neighbouring countries
- Respect the rights of Amerindian peoples and involve them in the decision-making process
- Provide standards for development of ecotourism products
- Provide a prioritised list of projects for implementation along with statements of probable costs
- Provide a specific master plan for the development of Kaieteur National Park
- Make recommendations for other national parks and protected areas to be integrated with the National Plan

Source OAS 1996

On the other side of the globe the Organisation of American States (OAS) has collaborated with the government of Guyana to produce a national ecotourism plan (see box below) This plan is part of an overall effort to help protect the country's high biological diversity In a variety of relatively pristine habitats such as rain forests, rugged mountains, expansive savannahs and roaring rivers Guyana has many tropical birds, the giant river otter black caiman and the rare harpy eagle In an effort to keep its resources intact Guyana is creating a system of parks and reserves The national government, with the assistance of outside advisors, is taking a lead role in establishing a plan and policies so that ecotourism becomes a mechanism to help finance conservation of the country's newly created protected areas (Andersen, 1996)

DEMO Activities and Products

The DEMO Project has sponsored and supported many activities that encourage sound natural resources management and viable ecotourism at all levels

At the site level The DEMO Project has supported the renovation of Hollywell Cabins in the Blue and John Crow Mountain National Park (BJMNP) Income from visitors to the renovated cabins will be a source of funding for park operations

The project has also provided financial and technical support to Valley Hikes, Ltd , a community-based ecotourism enterprise (see Case Study #3), through funding for trail renovation and guide training

Other activities at the local level include Negril Royal Palm Reserve, MBMP User Fees,

At the local level, DEMO Project staff have been key contributors to the establishment of the Negril and Green Island Environmental Protection Area Jamaica's first Environmental

Protection Area (EPA) The project also contributed to the development of a management plan for the area One of the primary goals of the Negril and Green Island EPA is to "Guide growth of the tourism industry in a manner which maintains Negril's unique natural beauty, and is within the capability of the area's ecosystem to support "

Other activities at the local level include the St Elizabeth Environmental Protection Framework (EPF) and the Port Royal EPF

At the national level the DEMO Project was instrumental in the design and development of a National Protected Areas Policy as well as a system of user fees and a national protected areas management plan

4 Policies, regulations and guidelines

Once an ecotourism plan is in place, ideally the next step is the establishment of policies, regulations and guidelines These provide a further framework for ecotourism development and management They offer structure for ecotourism projects, and help to ensure that benefits are maximised and costs minimised Policies, regulations and guidelines can be created at the site, national and international levels

Policies

Ecotourism policies cover a variety of issues such as developers' activities in protected areas, the interactions of tour operators with communities, or the importance of environmental education in parks Innovative policies such as giving incentives to lodge owners who use local products and services, can also boost ecotourism Another big policy issue in ecotourism is establishing entrance fee systems and allocating income to conservation and development programs This issue has stirred debate because many sites do not collect fees and some proponents of ecotourism contend that not collecting fees (or adequate fees) may be the single greatest barrier to the success of ecotourism

This issue is relevant not only because parks and reserves are so desperately in need of funds but also because research shows that there is a great untapped willingness-to-pay" among visitors It seems logical that parks should collect entrance fees to help finance operating costs and perhaps make a profit Many visitors state that they are willing to pay entrance fees at parks, or to pay higher entrance fees in those cases where the fee is very low, especially if the site can demonstrate how the entrance fees will be used to further conservation efforts

Willingness to Pay

In a study of visitor willingness to pay at the Montego Bay Marine Park in Jamaica, the researcher found that 82 9% of respondents were willing to pay an entrance fee (Walling 1996) At the time the entrance fees to the beach and park were between US $ 20 and $ 50 yet the average amount these respondents were willing to pay was US $28 90

The survey results also showed that the preferred method of payment was a site entrance fee as opposed to a surcharge on a hotel bill or an embarkation or disembarkation fee Walling estimated that a user fee of even a quarter of the average estimated willingness to pay would generate revenue of US $971 215 annually and almost cover the park s operating costs of US $100 000 per year

However, there are some reasons why entrance fee policies are not always created In some cases, there is a philosophical objection to charging fees for people to see nature nature should be free Another common objection is that entrance fees would exclude poor people and make public lands a playground for the elite Sometimes managers feel that residents will lose access to community recreational sites if fees are charged

This thinking needs updating First many protected areas are facing enormous challenges to survival If they do not have more revenue and better management capacity, they may not remain areas of national heritage Addressing these threats and preserving flora and fauna is a much more practical mission than

maintaining a policy of no payment for visitors Second, nationals can be excluded from entrance fee requirements with a two-tiered price system In our opinion, entrance fee policies should be created, across the board for all nature attractions and ecotourism destinations Furthermore, access to protected areas should be priced competitively with other forms of recreation A visit to a national park should be at least as valuable as seeing a movie (US $7), and in some cases might rival the price of attending the symphony (US $25-75) Such prices would be particularly appropriate for foreign visitors to pay

Regulations

Regulations which are closely related to policies, are also needed for ecotourism sites Regulations at the national level may cover issues such as establishing boundaries for investors' activities, prescribing waste management procedures in parks, requiring environmental impact assessments for ecotourism facilities or licenses for tour guides At the park level, regulations may cover issues such as prohibiting the removal of coral from a reef or disturbing wildlife, and instituting water treatment programmes Given that conservation is at the core of ecotourism, regulations are typically needed to protect natural resources and ensure benefits for communities as they encounter the impacts of tourism companies and visitors

Enforcement One critical component of both policies and regulations is that in order to be effective they must be enforced Enforcement requires personnel and funding, which can be obstacles for some sites Policy-makers, managers and residents must be committed and resourceful in seeking the means to provide for enforcement

Guidelines

Having established policies and regulations, it is important that guidelines be provided for appropriate ecotourism development and consumer behaviour at nature sites Alternatively, guidelines may precede policies and regulations, and some attractions, tourism organisations and governments have created guidelines and codes of visitor conduct as a first step towards instituting a more rigid framework for regulating tourism activities For example, the American Society of Travel Agents (ASTA) has created the *Environmental Codes of Conduct for Tourists*, also known as the 'Ten Commandments of Ecotourism (see box below) and the Tourism Product Development Company (TPDCo) in Jamaica has developed a list of guidelines for ecotourism attractions

There are several examples of codes of behaviour that have been created for the tourism industry as a whole to help promote the successful development of ecotourism and sustainable tourism These include

- *Code of Environmental Principles for Sustainable Tourism*
  – Tourism Association of Canada, 1992

- *Code of Environmental Principles for Tourism in New Zealand*
  – Government of New Zealand, 1992

- *Code for Environmentally Responsible Tourism*
  – Pacific Asia Tourism Association (PATA), 1992

- *Indicators for the Sustainable Management of Tourism*
  – World Tourism Organisation (WTO), 1993

5 Education and training

Education and training are critical to the success of ecotourism initiatives, primarily for employees of nature attractions and community members but also for tourism industry personnel and government officials Many people who are now becoming involved with ecotourism have had little experience in tourism In the case of protected areas, the staff typically consists of biologists, botanists or wildlife specialists whose job is to protect notable terrestrial and marine sites Non-governmental organisations are also getting involved in managing protected areas and they too are usually inexperienced in tourism management With increasing

Ten Commandments of Ecotourism

1 Leave only footprints take only photographs and memories

2 Respect the frailty of the environment Realise that all of us must be willing to help in its preservation

3 To make vacations more meaningful, take time beforehand to learn the customs, manners and culture of the area While on a trip, learn more about the area, talk to local people

4 Respect and support local cultures (religions, traditions, crafts, services and cuisine) and the privacy and dignity of residents especially when taking photographs

5 Never litter Carry litter bags with you Leave your surroundings cleaner than you find them

6 Do not buy products made from endangered species, such as ivory, tortoise shell, animal skins and feathers Read Know Before You Go,' the US Customs list of products that cannot be imported

7 Always follow designated trails Do not disturb natural habitats of animals and plants Keep your distance Never touch animals

8 Make an effort to know and support conservation-oriented programs and organisations Support the conservation of nature throughout the world

9 Ask travel agents tour operators resorts and attractions to adopt and put into practice ASTA's environmental guidelines or other conservation codes, including recommendations for special regions such as polar, desert or mountain areas

10 Whenever possible walk or utilise public transportation Encourage drivers of public vehicles to stop engines when parked

Source American Society of Travel Agents (ASTA)

visitation to parks employees are now facing changes in their professional duties Managing visitors and developing tourism infrastructure are taking more time and effort, and these duties require specialised training

Guide training

A 1996 survey of 60 conservation groups in Latin America asked respondents to identify pressing obstacles to ecotourism development, a lack of well-trained guides ranked second highest in their concerns (Jenks, 1997) In response to this training deficit, programmes are emerging for park and NGO personnel and individual entrepreneurs

For example The RARE Centre has developed a Nature Guide Training Program in collaboration with WorldTeach, a Harvard-based volunteer organisation specialising in English instruction This three-month intensive programme, featuring biology as well as language skills, prepares residents for careers as nature guides After the pilot programme conducted in Costa Rica, all of the 15 graduates doubled their salaries and 11 of them are now actively participating in environmental education programmes in their

communities Such great results have prompted RARE to conduct the course in Mexico and Honduras as well

Innovative guide training programs have also been developed by the La Selva Biological Station in Costa Rica, the Southern Trelawny Environmental Agency (STEA) in Jamaica (for their nature company, Cockpit Country Adventure Tours), and Valley Hikes, also in Jamaica In all of these examples, training was a collaborative effort between the NGO, government agencies and private funding sources

Guide Training in Guatemala

The *Association of Eco-Cultural Guides of Uaxactun* is a guide-training program founded in 1993 by the Association for the Rescue and Conservation of Wildlife (ARCAS) in Guatemala Uaxactun is a town just outside Tikal National Park in the Maya Biosphere Reserve Over the years the town had been visited by a small number of tourists, but *chicle* was the major source of income for residents until recently, when international demand for the product decreased In looking for economic alternatives, the residents of Uaxactun became interested in pursuing nature and cultural tourism (Beavers, 1995)

The residents of Uaxactun, none of whom had formal experience with ecotourism, asked ARCAS, a Guatemalan wildlife conservation group to help them organise nature tourism so as to supplement their incomes and retain benefits locally The result was the formation of a guide association and the development of a training curriculum that not only prepares residents to become guides but is also an important source of environmental education for local residents

Community training

The education and training of community members for ecotourism deserves special attention because for many people getting involved in ecotourism means not just a professional move, but a lifestyle change In promoting ecotourism, conservationists point out the value of providing employment alternatives to local residents It may look good on paper that former loggers have now become tour guides and are conserving the very trees they used to cut, but in reality making such a drastic career change is a major undertaking and requires special support

In order for community residents to manage ecotourism enterprises they may require other types of training such as in financial planning and accounting For many residents of rural areas, getting involved with international tourism is a big transition and they may need assistance to access international markets as well as conduct marketing studies and promote the site

Education and training for everyone

Education and training is required not only for people on-site who are becoming employed or interacting with ecotourism first-hand, but also for all the other individuals who are involved outside of the site Policy-makers need to understand the conservation and economic development goals underlying ecotourism Members of the tourism industry may also need this exposure, particularly if they are working in natural areas or with rural communities All sides have much to learn about the many dimensions of ecotourism that are outside of their primary professional arena The diverse parties involved in ecotourism can learn much from each other in sessions where each group educates and trains the others about its particular areas of expertise

6 Environment-friendly infrastructure

There have been increasing efforts in recent years to incorporate environment-friendly practices into tourism infrastructure development, especially at ecotourism sites One reason for this is that tourists are becoming stronger advocates for low-impact tourism development and the tourism industry is responding Part of the low-impact philosophy is to carefully evaluate and understand the environmental conditions of the area including the existing flora and fauna, before beginning construction, and to ensure that structures harmonise with the natural environment Also, developers are putting in place structures with the best chance for long-term survival, particularly in regions with weather challenges, such as hurricanes By taking into consideration the natural resources of the area and such factors as the sun and wind conditions, the development process becomes smoother and the products last longer

Advances in technology

The field of low-impact design and technology is moving from the conceptual to the demonstration phase, as new techniques in low-impact design and sustainable technology have been rapidly evolving Workshops and conferences have been held on this topic, and articles and books published In 1993, the US National Park Service published Guiding Principles for Sustainable Design (USDI, 1993), which covers low-impact site design, building design, energy management, water supply facility maintenance and operations, and waste prevention The Ecolodge Sourcebook for Planners and Developers (TES, 1995) covers all aspects of infrastructure development for ecotourism, including site selection, finance, planning, design alternative energy applications, and conservation education The book even provides architectural plans for ecolodges

Eco-sites and ecolodges

The transition towards environment-friendly tourism infrastructure is stimulating the creation of 'eco-sites' and 'ecolodges' around the world They focus on using local natural resources in buildings reducing waste, and limiting negative impacts to surrounding flora and fauna Some eco-sites and ecolodges feature the latest advances in alternative technology and can be considered the cutting edge," while others borrow practices from indigenous populations whose building practices reflect a history of wise natural resource use (see boxes below for examples)

What is an Eco-site?

An eco-site is a site and related facilities that takes less from the earth and gives more to the people

- It uses energy water, building materials and other resources efficiently
- It minimises its waste stream by reducing reusing and recycling its waste
- It enhances human health
- It strengthens local economies
- It protects agricultural cultural and archaeological resources
- It is economical to build and to operate

Source Caribbean Infra-Tech,

Contributions of ecolodges to ecotourism Apart from fitting in to natural settings better than large, concrete, sterile buildings, ecolodges are also making some tangible contributions to the growth of ecotourism In most cases, ecolodges are small-scale and local residents feel more comfortable with them, in fact, some communities are involved in building ecolodges In Ecuador, a community of Huaorani Indians collaborated with the owner of TROPIC Ecological Adventures to build a cabin in their traditional style The cabin receives up to 8 guests, once a month for stays of two to six days The profits are distributed evenly among all the participating families (Mehta, 1998)

Ecolodges are also making valuable efforts to help conserve the areas surrounding them The Galdessa Safari Eco-Lodge in Tsavo East National Park in Kenya generates income to help support the conservation of Hunter's hartebeest, an endangered species in Africa The lodge owners also participate

in the black rhino reintroduction activities in the park Money raised from visitors staying at the lodge is used to improve park rangers' equipment and monitoring efforts (Mehta, 1998)

In conclusion, the innovations in low-impact design and sustainable technology represent exciting trends in tourism and will likely continue to gain favour among consumers It is important to note that it is not only ecotourism, but the sustainable tourism industry as a whole that is benefiting from advances in low-impact design Many environment-friendly principles are being applied to areas outside of natural areas with a great deal of promise

Cutting Edge Technology

Maho Bay is an eco-site on St John, one of the United States Virgin Islands It has small tent cottages placed among the existing trees The tents are barely visible from the water and use solar designs such as roof overhangs and heat reflective glass and fabric Visitors use elevated walkways and stairs that connect the entire 114-unit resort Indigenous vegetation is nourished by the wastewater and compost generated by the resort The irrigated vegetation attracts birds, lizards, bats and tree frogs that in turn control the insect population The infrastructure is built with the environment as the centrepiece

Estate Concordia a sister resort on the same island, has a completely self-sustaining energy system provided by solar panels and a wind generator Rainwater is collected in cisterns and conserved by flow regulators and low-flush toilets Treated wastewater is used for irrigation and toilet flushing Many of the products used for the beautiful rooms are from recycled materials, such as floor tiles made from crushed glass and lumber created from plastic bottles and sawdust Estate Concordia demonstrates that even a luxury resort can be low impact and environment-friendly

Borrowing from Indigenous Practices

Lapa Rios is a resort and eco-site in the lowland tropical rainforests of Costa Rica Architects used natural products and structural designs similar to those of the native people of the area, including palm thatch roofs Their rationale was that native construction is often naturally energy-efficient, works in harmony with the local resources, and has thrived over the years in wilderness areas, often under harsh conditions The developers avoided destroying trees in constructing this complex of many buildings Only one tree – already dead – was used for construction

In addition to being an good example of an eco-site, Lapa Rios employs 38 people, with 35 from the immediate area The resort offers environmental education programmes for residents and is helping to build a school in the community

Source Kudalis, 1993

7 Mechanisms to solicit income

In order for ecotourism to succeed at any site, there must be mechanisms to solicit income from visitors and opportunities provided for them to spend money in the area Many potential ecotourism destinations are missing opportunities to collecting income, or at least an adequate income, to the detriment of their owners and the community Visitors are an easily accessible group and willing to pay to conserve the

nature they treasure However, it is important to note that the establishment of mechanisms to solicit income is usually directed by the policies, regulations and guidelines of the site

The first part of this section explores some of the many ways that nature-based attractions, protected areas, communities and governments can generate revenue from nature tourism The second part illustrates how income from tourism can be used to pay for resource conservation and contribute to economic development of a community, region or country

Mechanisms for soliciting income from ecotourism include

- Entrance and user fees
- Concessions and merchandising
- Services
- Donations
- Volunteers
- Partnerships

Entrance and user fees

Entrance fees collected at the gate, are charged directly to visitors to enter, see and experience the area Various fee structures may be used There may be a flat fee for all visitors or a two- or multi-fee system that sets different rates depending on factors such as whether the visitor is a resident or foreign tourist, a child adult or senior citizen, or a member of a special group User fees are charged for specific activities or for using special equipment in the attraction, such as electrical camping hook-ups or rental fees for canoes

In 1998, four US federal agencies will collect about US $160 million in entrance and user fees from public lands in the United States, with 80% of the money earmarked for maintenance at the site where it was collected For example, Mt Rainer National Park in Washington will use US $878,000 of revenue collected to improve trails upgrade a sewage system and renovate a visitor centre Entrance and user fees for US public lands were recently increased The fees now range from a low of US $1 to a high of $25 The majority of visitors are in support of these fee hikes The National Park Service conducted a visitor survey at 13 national parks and 80% of the respondents considered the fees adequate or too low (AP, 1998)

Concessions and merchandising

Concessions such as snack bars, restaurants, lodges, gift shops, canoe rentals and guide services can be operated by private sector interests that return a portion of the income generated to the park or attraction This arrangement is often preferable to the operation of the facility by the attraction itself, as it reduces business responsibilities assigned to untrained or perhaps uninterested personnel Concessions allow parks to benefit from the energy and expertise of private sector enterprises while avoiding the need to oversee employees in these ventures However, there are usually some items – such as merchandise or souvenirs related to the park or attraction – that can be sold directly to consumers at the visitor centre or a gift shop

Services

Attractions can generate income from services such as accommodations or guide services offered to visitors In Panama the National Association for the Conservation of Nature (ANCON) built its first Environmental Education Centre in the Bocas del Toro area to provide education for local students and other residents With help from Save-the-Rainforest, a US-based environmental group, ANCON

expanded into the international market by hosting students from the US and Canada during the slow season Now ANCON generates enough income during the three-month student season to cover the annual operating expenses of the first education centre, and it has built four more

Donations

Donations from visitors can be an important source of revenue for parks Funds may be solicited through a simple box at the door or perhaps a more sophisticated 'adopt an endangered species' program Visitors who have just completed a fascinating nature experience are a perfect target for this type of appeal Fundacion Natura in Colombia has a successful 'adopt-a-hectare' program Valley Hikes in Jamaica has a similar 'adopt-a-tree' program that allows visitors to 'sponsor' the planting and long-term care of a single tree

Volunteers

Volunteers to protected areas can be a significant source of in-kind support For example, Nature Conservancy volunteers now contribute more than 15,000 hours per year for the Florida Keys Marine Area This represents an economic value of approximately US $200,000 Volunteers perform a variety of tasks such as data collection, education and physical labour towards protection of the marine resources (TNC, 1996)

Partnerships

Protected areas can earn income and derive other forms of assistance from non-governmental partners In 1996, when the US National Park Service reduced staffing at the Great Smokey National Park for budget reasons the Great Smokey Mountains Natural History Association was able to offer US $520,000 to the park This contribution was in the form of publications and assistance to the visitor centre, library, special projects and interpretation services (CNPCA, 1996)

Another type of partnership may be established outside the protected area For example, Belize has recently established the Protected Areas Conservation Trust (PACT) This is a National Trust fund designated as a trust for the protection, conservation and enhancement of the natural and cultural resources of Belize for the benefit of all Belizeans and visitors " The trust is funded partly from an exit tax of US $3 75 paid by all visitors to the country In addition, 20% of entrance fees collected at protected areas go to the fund, which can also receive other donations (TSS, 1997) One important feature of the PACT is that visitors are informed of the portion of their exit tax that contributes to the conservation of the country's natural resources

Tourism income for communities

There are a number of creative ways for residents of communities near to nature attractions or protected areas to solicit income from visitors Sometimes it may be as simple as setting up a snack bar to sell drinks and snacks Offering native souvenirs for sale might induce visitors to spend an additional US $10 in the community Visitor demand may call for a locally owned lodge as an alternative to a hotel belonging to an international chain Opportunities exist both for individual entrepreneurs as well as community-organised enterprises to solicit income from visitors

Maya Centre is a small community in Belize that was created for residents who were displaced when the Cockscomb Basin Wildlife Sanctuary was established in 1984 While these people were initially unhappy about the move, they soon saw an opportunity to take advantage of their new location near the entrance to the reserve Several families formed the Maya Centre Women's Craft Group to make and sell Mayan

handicrafts such as baskets, weavings and carvings to the visitors who are attracted to the reserve because of its wildlife, especially jaguars
This craft industry provides supplemental income to their traditional agricultural work, which means that they benefit from visitors but have not become too dependent on the fluctuating tourism market

'Jampark' a Merchandising Partnership for Protected Areas in Jamaica

In Jamaica the lack of funding mechanisms for parks and protected areas is perhaps the main reason why so few protected areas have been established, despite the interest in protected area management shown by a number of ENGOs Recognising the importance of merchandising as a significant fundraising mechanism for protected area systems worldwide a group of concerned ENGOs has been putting together a plan for a joint merchandising enterprise to assist with financing parks and protected areas throughout the island The organisations are members of the Ecosystems Management Focus Group of the National Environmental Societies' Trust (NEST) an umbrella organisation for ENGOs in Jamaica

The group has proposed that a company named **'Jampark'** be established to purchase environmentally friendly goods and services produced by community-based organisations or individuals throughout the island and market them nationally and internationally, mainly through ENGOs, with part of the proceeds from sales going to the National Parks Trust Fund The souvenirs are intended to be authentic, interesting, educational and produced in an environmentally sustainable way They should not only generate revenues for protected areas but help to educate visitors and other consumers about the natural heritage of Jamaica and the importance of conservation Although this concept is still evolving and has yet to be implemented, Jampark is seen as a promising mechanism to help fill some of the gaps in financing for parks and protected areas in Jamaica

Source TSS 1998

Tourism income to regions

Despite the small-scale nature of employment opportunities at most ecotourism destinations, ecotourism is also bringing financial benefits on a larger scale to some communities and the surrounding areas Here are two examples

- In Queensland, Australia the national parks are the most popular outdoor recreation areas in the state There are approximately 176 tourism operators using protected areas and they employ about 2,500 people (Queensland Department of Environment,)

- In Key Largo Florida, one million watersports enthusiasts (divers, snorkelers, swimmers, photographers, boaters, sport and recreational fishermen) generate more than $50 million annually in local revenue (Florida Keys brochure, 1996)

Where Can a Visitor Spend US $20 on Nature Tourism?

In assessing the opportunities available for tourists to spend money on nature tourism at particular sites, one might ask the question If a visitor had US $20 to spend on nature tourism at this attraction, where could this individual spend it? More specifically we could ask questions such as these

- Are there entrance fees?
- Is there a soda nearby?
- Can the visitor find a restaurant that serves local cuisine?
- What if the visitor wants take home a souvenir for his daughter, is that possible?
- Are there guidebooks to buy?
- Can the visitor make a donation to conservation of the area?

Foreign tourists are the easiest group in the world from which to extract US $20, especially if there is a sincere request and a simple explanation of how valuable that financial contribution will be to a site Most tourists have an extra US $20 in their wallets that they would gladly leave at a site for a good cause, such as buying a craft item from a group of schoolchildren or helping to protect the habitat of an endangered wild bird In fact, some will spend US $20 on a hot day simply on cool refreshments The responsibility of the destination is to create opportunities for visitors to spend money

- Create worthy programmes that deserve funding
- Offer products and services that will let visitors participate in advancing a cause
- Publicise how revenue is spent at the site and what portion is allocated to conservation and development activities

This exercise could also be done at the national level Suppose a country attracts 50,000 visitors to its beaches each year and each one has an extra US $20 to spend on something in the country How many of those US $20 bills are being used to help protect the country s natural resources? How many are taken home unspent? Nature destinations need to find ways to reach these visitors and provide opportunities for them to spend at least US $20 at their sites This should be considered the **'US $20 Rule of Ecotourism '**

Linking tourism income to conservation

Ideally, there will be an obvious connection between income from ecotourism and the conservation attitudes and activities of people benefiting from the industry In terms of employment, while ecotourism jobs may be few in number they are designed to help protect the natural resources that attract visitors If residents are employed in ecotourism but do not improve their efforts to protect the resources that attract visitors, ecotourism will not be a sustainable industry

For most places the employment-conservation linkage is made For example, a survey in Belize asked residents in five villages near protected areas about their support for those areas Residents in all five communities cited that their support for protected areas had recently increased and in four of the five communities, the majority attributed this increase in support for conservation to tourism benefits (Lindberg, 1994)

The limits of ecotourism income

Although there are many examples of communities benefiting financially from nature tourism, it is important to recognise that for most ecotourism sites, employment spin-offs are limited Ecotourism is by definition small-scale It should not be compared to employment opportunities of larger industries such as manufacturing, but must be regarded as a way to help diversify economies in rural areas Residents of

Toledo Ecotourism Association, Belize

The Toledo district in the southern region of Belize is home to three distinct communities of people Creoles, Garifunas and Mayan Indians The district is considered one of the poorest in the country, with farming and fishing being the two primary economic activities Tourism is also a source of income due to the tropical rainforests and rich cultural heritage of the area but tourism revenues are limited because access to the area is difficult and there has been minimal investment in tourism development

However as Belize has become an international nature tourism destination in recent years, residents in the Toledo district have decided to try developing this industry locally In 1990 they formed the Toledo Ecotourism Association (TEA) as a vehicle to consolidate their efforts They created a program called the 'Village Guesthouse and Eco-trail Experience' to help residents plan, develop and manage a series of guesthouses

One of the key features of this guesthouse program is a rotation system whereby visitors are distributed among participating villages in order to distribute the economic benefits of tourism as equitably and widely as possible and to minimise the negative impacts of tourism within any one village Visitation to the area remains somewhat limited at roughly 500 visitor nights per year but is slowly increasing As tourists arrive, villages take turns hosting them The TEA office acts as the central coordinating body, assigning visitors to the next village on the list Within each village, several families take responsibility for preparing meals, attending the guesthouse providing guide services and offering other forms of entertainment

Of the roughly 30 villages in this area, almost half are actively participating in the visitor program Each is in a different stage of participation some with up to six years of hosting tourists and others just constructing guesthouses Of the money generated through tourism, 80% goes to the community members and 20% goes to TEA The vast majority of the money that goes to the community goes directly to the service provider with a small portion allocated to group maintenance and taxes The money that TEA collects is used mainly for health education and conservation projects in the area as well as administrative costs and marketing (Beavers, 1995)

While the TEA visitor program is generally considered a successful example of a community-based ecotourism project it has brought challenges to the community The issue of bringing in new members to TEA has caused conflict among some original members Each of the original members invested time and materials into the launching of this project and now that it is taking off, they feel new members should be required to pay the same dues Original members are resistant to the further division of their limited tourism income among more villages Although tourism income is intended only to supplement other sources, members do not want to have so many participants that the enterprise is not profitable In an effort to increase profits by increasing visitor numbers TEA is currently expanding its marketing efforts As this happens, residents are cautious about the pitfalls of too many visitors, but the promise of increased income is an attractive option for the community

communities with ecotourism attractions need to have realistic expectations about how many people can benefit financially from the attraction They should also keep in mind that employment is just one of many different benefits of ecotourism

Constraints to Collecting Economic Data on Ecotourism

Statistics on the economic impacts of ecotourism are greatly sought after by government officials, players in the tourism industry investors developers and other interested parties Questions at the macro-level include

- How much do ecotourists spend globally?
- How many jobs are created by ecotourism in any particular country?
- How much foreign exchange does ecotourism create in the region?

At the site level typical questions are

- How many jobs are created by ecotourism at this attraction?
- How much in total revenue does ecotourism create for a site?

However accurate financial data on ecotourism is very scarce for a number of reasons Tourism figures are particularly complicated because of the many variables involved In order to rationalise factors such as part-time and full-time work direct employment as well as indirect benefits from visitation to an area, multiplier figures often need to be established In terms of data collection, exact financial figures are usually difficult to elicit from the private sector Questions about salaries and profits may be answered incompletely or not at all In the case of small informally operated tourism-based enterprises, financial records may be non-existent and the operators themselves uncertain of their income and profits

These are data-collection challenges faced by the tourism industry as a whole Economic assessments of ecotourism are even more difficult because the ongoing debate about what qualifies as an ecotourism site means that it is hard to distinguish between the economic benefits of ecotourism and those from tourism in general Additionally ecotourism is designed to provide a wide range of benefits related to resource conservation for which economic values can not be precisely computed

8 Effective marketing and promotion

Attracting visitors to the site is another important factor in creating ecotourism destinations Despite the fact that ecotourism has developed in response to the growth of nature tourism, getting visitors to destinations is not always easy Ecotourism sites are often outside of mainstream tourism routes In some cases they are remote and have limited tourism infrastructure

Marketing

To bring visitors to a particular site, the first step is marketing In fact, marketing studies should be conducted before the product is developed as well as during its development Managers need to have some idea of the appropriate target audience for the site They need to know the preferences of the current and potential visitors In order to develop ecotourism activities, managers and residents should understand existing visitor patterns and try to forecast future tourism trends It is necessary to study the marketplace to see where the particular ecotourism product fits in

Currently, the four main tourism motivators globally are nature, culture, adventure and sports [3] These factors as well as specific research related to the country's primary features should be considered in

[3] Ricardo Betancourt of the Interamerican Institute for Tourism, in a presentation at the Green Tourism Conference, Port Antonio Jamaica, May 2-3, 1998

developing tourism promotion schemes Without this basic research, efforts to create an ecotourism destination will be inefficient and perhaps totally misguided

Promotion

Once market research is completed, managers and residents need a strategy to get the word out to the right people Travellers must know their nature tourism options, whether nature attractions are the focus of their vacation or they are just planning a side trip to a park For example, visitors staying at the all-inclusive resorts in Jamaica should be informed about the optional day-trips to nearby nature attractions Travellers considering a trip to the Caribbean need to know not only about each island's beaches, but also about its protected areas

There are many wavs to promote a site and various avenues should be pursued, particularly collaborating with established promotional campaigns In getting the word to the right visitors, managers and residents at ecotourism destinations should develop and work with a variety of contacts, such as

- Travel writers, so their site is featured in articles and included in guidebooks
- Travel agents and tour operators, both local and international
- Government agencies that promote tourism at the national level

Choosing the right strategy

For ecotourism enterprises marketing and promotion can be complicated because the objective may not be to just bring in more people If a site is already receiving visitors, perhaps even too many visitors, the goal mav be to reduce visitors and reach a different kind of traveller Maybe an attraction wants to limit mass tourism and specialise in ecotourism This takes a specific kind of approach to marketing and promotion

Site managers and residents also have to evaluate whether to try attracting nature tourists into the country or tap into the existing base of tourists already in the country In addition to co-ordinating promotional efforts with the main attraction to the country, such as beaches, ecotourism destinations can collaborate with other side attractions, such as cultural festivals or heritage sites, which are also too small to attract visitors to the country by themselves Nature tourism sites can be promoted along with events and other small-scale attractions in special tour packages for overseas tourists

Whatever the approach the key is to develop a product that will sell in the marketplace and let interested visitors know about the site Although many ecotourism destinations face inherent difficulties in their situation as small, remote places, some are not receiving enough visitors simply because they have not paid enough attention to market research and promotional strategies before developing the enterprise

DEMO Activities and Products

The DEMO Project has worked closely with the National Environmental Societies Trust (NEST) to determine the feasibility of implementing a central marketing agency for eco-enterprises and environmental friendly products managed and produced by local residents This concept currently being called JAMPARK was first aired at a workshop on financial sustainability sponsored by DEMO in February 1997

Other marketing efforts included funding for the development of promotional materials – including a Case Statement posters and brochures --for the Montego Bay Marine Park and the design and test marketing of branded items for the Negril Environmental Protection Trust (NEPT), a community conservation group

9 Strong partnerships

Even though private and public interests have found common ground in the concept of ecotourism, collaborating towards its success has not been an easy mandate Experience has taught that the goals of pursuing profits do not always mesh well with those of protecting nature
However, the establishment of strong partnerships, particularly between the private and public sectors, is critical to the success of ecotourism

The dual mandate of ecotourism

Ecotourism is a business as well as a proposed conservation strategy This means ecotourism must simultaneously be profitable and conserve valuable resources If ecotourism does not produce money, investors, developers and travel companies will not participate But if natural resources are not intact, visitors won t come Each side has much to teach the other, and needs the drive, skills and concerns of the other side in order for ecotourism to work

With the recognition that forging partnerships is very important for both the business and conservation sides of ecotourism, new types of relationships are being explored These include partnerships between government officials and site managers, tour operators and residents, conservation organisations and developers and other sets of participants Ecotourism is bringing together groups that have not previously worked together Of particular interest is the fact that communities are getting increased recognition from the other players, and are becoming more visible and vocal in the ecotourism arena This should lead to an improvement of benefits from ecotourism for local people

Examples of viable partnerships in ecotourism

Gunung Halimun National Park in Indonesia contains the largest tract of primary lowland forest in Java and protects a significant watershed Several economic development pressures are threatening this forest and the following partners are collaborating to help conserve the park

- Wildlife Preservation Trust International
- University of Indonesia
- McDonald's restaurant chain

An ecotourism enterprise has been created on land donated by the community The project, constructed by residents using traditional designs and materials includes three small ecolodges, each accommodating eight to ten visitors This unique partnership is helping to conserve the forest and benefits many groups (Mehta, 1998)

The Noel Kempff Mercado National Park in Bolivia covers 1 6 million hectares and has high biological diversity It features a variety of birds, mammals, reptiles, amphibians, fish, orchids, bromeliads and palms Most of the park is in pristine condition, although the increasing demand for the extraction of resources such as heart of palm and mahogany is a serious threat to the park

To help provide some economic alternatives, small-scale ecotourism to the park is being promoted at two sites within the park, which is managed jointly by the following partners

- The Bolivian Government
- Fundacion Amigos de la Naturaleza (FAN)

The partnership involves a ten-year management agreement that designates FAN, a conservation NGO, as the implementing agency An advisory board comprised of representatives from local and national governments FAN and the surrounding communities helps to guide the management process This consortium has turned out to be a viable partnership for managing the park

The Rio Bravo Conservation and Management Area in Belize consists of 300,000 acres of subtropical forest in the northwestern part of the country It supports many endangered species (15 mammal- and 21 bird species) and is a significant wintering and passage area for many North American migrant birds The following partners manage the Rio Bravo area

- The Government of Belize
- The Programme for Belize (PfB)

The mission of PfB, an NGO founded in 1988, is to conserve the park's high biodiversity through research, conservation education, and promoting viable economic land uses, such as tourism, in its buffer zones Visitors are accommodated at the research centre and two other sites selected by PfB for tourism in the Rio Bravo area, the Hill Bank Water Resort and the Warrie Camp Resort The PfB plays an important co-ordinating role between local residents and private sector tourism interests

The Tortuguero Conservation Area in Costa Rica has as its main feature the nesting site of thousands of Atlantic green sea turtles that come annually to lay their eggs on Tortuguero beach Conservation of the area is facilitated by a partnership of three main entities

- The Government of Costa Rica
- Costa Rica Expeditions
- The community of Tortuguero

Costa Rica Expeditions is a tour company that has operated river rafting and other nature tours for many years in that country and recognises the importance of intact natural resources to its business The company has contributed to the funding and organisation of conservation efforts such as training of park guards turtle research and tagging programs, and an education campaign to create awareness about the negative environmental impacts of a new road to the area

Costa Rica Expeditions has also been a partner to the surrounding community by providing employment and helping to fund community projects such as a playground, improvements to the school and a potable water distribution system At Tortuga Lodge, owned by CRE, 80% of the employees are from the immediate area

Redberry Lake in Saskatchewan, Canada is a 6,000-hectare federal Migratory Bird Sanctuary and the home of a colony of American White Pelicans It has been developed as an ecotourism attraction by two main partners

- The Canadian Government
- The Redberry Pelican Project

The Redberry Pelican Project was established in 1989 as a non-profit society to promote environmentally sound ecotourism development at Redberry Lake To support the protection of the birds' habitat, the society has spearheaded the construction of a research, education and interpretation centre, the development of a network of nature trails, and the implementation of a unique video monitoring system for sensitive nesting areas

The Association of Partners for Public Lands in the United States is a group of associations that have been partners to the US National Park Service, USDA Forest Service, US Fish and Wildlife Service, and the Bureau of Land Management The Association provides training in issues such as financial management networking and representation in policy decisions for its members In 1997, these associations raised almost $20 million for public lands, an increase of almost 12% over the previous year Donations were in the form of personal services, interpretative and educational activities, media, and research support Individual partners as well as the umbrella group provide an important source of revenue and services to protected areas in the United States

10 A favourable destination image

The final essential element for ecotourism destinations is a favourable destination image By this we mean that the overall social, cultural and physical setting of the destination is agreeable and conducive to tourism There are many macro-level social, economic, environmental, and political factors that may deter tourists of any kind from visiting a particular country and affect its ability to advance as a tourism or ecotourism destination Some of these factors, discussed in more detail below, include

- Visitor safety
- Environmental quality
- Accessibility
- Political climate

To address the external problems that may be detrimental to the destination image of the country, tourism entrepreneurs must take an active role in helping to articulate solutions and lobby for changes that will benefit the society as a whole, and not just the tourism sector A destination that is clean, safe and prosperous will by extension be more conducive to tourism than a polluted, unstable and impoverished country Fortunately for the ecotourism sector, ecotourists as a group tend to be among the more adventurous travellers, and thus may have a higher tolerance for some of the negative factors that are typically obstacles for tourism

Visitor safety

Personal safety is perhaps the traveller's greatest concern in choosing a destination The crime rate of a destination is therefore a major component of its image as a tourism destination Potential tourists will want to know about their chances of being the victims of crime, the level of visitor harassment to expect, and the kinds of safety and security mechanisms in place to protect them Ecotourists will want to know whether or not it is safe to travel to remote areas Crimes against tourists often receive extensive international media coverage that results in significant losses to the tourism sector of the destination

Environmental quality

The environmental quality of a country is another important issue, for ecotourists in particular While this is a broad topic it matters to ecotourists whether a country has a major pollution problem, whether the water is safe to drink, and whether there is litter along the roadsides Countries that are considered dirty and unhealthy are not attractive to nature lovers Once they return home, visitors who have become ill or encountered unhealthy conditions on their vacation are quick to spread the word about their unpleasant experiences in another country

Accessibility

Accessibility is another fairly important element of the destination image In the first place, the convenience and cost of overseas travel to the destination will affect its popularity Once in the country, the means and cost of transportation available in the country become primary concerns for the visitor The accessibility of sites and the condition of the roads leading to them will also affect visitation rates of ecotourism attractions, many of which are located outside of the main resort areas

The Importance of Perceptions

Last week we visited Jamaica on the cruise ship New Amsterdam docking at Ocho Rios We visited friends at the Jamaica Inn but on driving out of the customs gate noticed the dirt and garbage and the drifters and rip-off artists almost attacking the tourists walking to the shopping centre This letter is prompted by the comment of one tourist as we left Ocho Rios He said I would never come back to that dump! What a pity he never saw the real Jamaica

– R W Josenhanss of Longboat Key Florida, in a letter to the Editor
The Daily Gleaner March 15 1993

Crime is rampant everywhere and common sense should always be practised but many tourists have confided in me that they will never return to Jamaica because they don t feel safe How sad that 80 percent of your tourist trade [those who stay in all-inclusive hotels] will never experience the true Jamaican experience – its people and the culture!

– Cindy Newman travel agent, of Woodbine Maryland in a letter to the Editor
The Daily Gleaner April 22 1994

Harassment is the number one reason why most of my visitors vowed never to return [to Jamaica] Some were forced to buy stuff they did not want fearing for their safety Whether their safety was at stake is irrelevant It is their perception that matters and it is their perception we need to change Nowadays the walls of my office are bare of tourism posters and I no longer give people vacation advice I do not want to be accused of selling paradise and delivering hell

– Andrea Stewart, US travel agent, in a letter (e mailed) to the Editor
The Daily Gleaner October 8 1997

Political climate

In terms of the political climate, any perceived instability or danger associated with a destination will affect tourism numbers As some countries in Central America and the Caribbean have learned, it takes a long time for a destination to recover a positive image after suffering political conflicts

In conclusion, external factors typically outside the jurisdiction of individual sites greatly influence the development of ecotourism These factors contribute to the image of the country and play a significant role in influencing travellers' choices of one destination over another The image of a destination may be based on actual problems as well as the perceptions of visitors, which for the tourism industry are perhaps equally as important Travellers in today's world have many options, and for ecotourism sites to be competitive globally, a variety of conditions within the prospective destination must be favourable to the growth of tourism

ECOTOURISM IN JAMAICA

This section provides an overview of how ecotourism has evolved in Jamaica in the past decade within the context of the tourism industry in general, and also as a resource conservation tool For the purpose of this study ***ecotourism is defined as nature tourism that contributes to conservation and economic development*** This definition is one that emphasises the importance of natural resource protection and benefits for local communities as the main features of ecotourism

The economic importance of tourism

Jamaica, like many other Caribbean islands, relies heavily on tourism to provide foreign exchange and employment for its more than three million inhabitants Tourism has been a mainstay of the Jamaican economy since 1985, earning more foreign exchange than any other industrial sector (GOJ, 1994) According to Polly Pattullo, a journalist specialising in the Caribbean region, "the Caribbean as a whole is more dependent on tourism (and increasingly so) than any other region in the world" (Patullo, 1996)

In 1992 tourism provided an estimated 13 3% in direct revenues to the Gross Domestic Product (GDP) of the country surpassing both agriculture (9 1%) and mining (10 8%) (OAS, 1994)[4] The Statistical Institute of Jamaica does not compile statistics on tourism *per se* as an economic sector[5], but a preliminary report for 1997 lists the contributions to GDP of agriculture (including forestry and fisheries) as 4 4% and mining and quarrying as 3 1% (STATIN, 1998) By inference, the contribution of tourism to GDP has undoubtedly increased between 1992 and now

The number of stopover visitors to Jamaica has grown at an average of 4 2% for the past ten years, reaching 1,192,194 in 1997, with an estimated gross visitor expenditure in that year of US $1,131 billion (JTB, 1998) In terms of employment current figures indicate that about 30,000 people are directly employed in the accommodation sector (JTB, 1998) However, other estimates place the total impact of tourism on employment – direct, indirect and induced employment – at close to one quarter of the total labour force (OAS, 1994)

At present it is impossible to determine the economic value of ecotourism as a separate figure within the tourism statistics Visitor statistics collected by the Jamaica Tourist Board do not distinguish between ecotourists and other types of visitors which are categorised only as tourists or excursionists (JTB, 1998) Tourists, also called stopovers, are defined as visitors who stay more than 24 hours Excursionists, including cruise ship passengers, are visitors who stay less than 24 hours In presenting statistics for visitor arrivals there is also a separate category for armed forces visitors (JTB, 1998) The countries of origin of visitors, their age and sex are noted, but not their reasons for choosing particular destinations within Jamaica

Also, the economic benefits of environmental conservation (or the costs of degradation) have not been factored into economic values attached to tourism of any kind in Jamaica An interesting fact is that more than 80 percent of respondents to a 1997 visitor satisfaction survey stated that enjoying the natural environment was 'very important' to their visit to Jamaica (JTB, 1997)

[4] An update of this study is in progress and the report should be completed by late 1998

[5] Since 1991 the World Tourism Organisation has been lobbying statistical institutes worldwide to adopt a system of 'satellite accounting' that will track the economic contributions of tourism to national economies (A Lyn, JTB, personal communication)

Factors affecting the ecotourism potential of Jamaica

Along with the economic benefits of tourism have come certain negative environmental and social impacts, which are of concern to the Government of Jamaica and the tourism industry itself On the one hand are the impacts of tourism itself, and on the other are the external threats – both environmental and social – which have a negative impact on the industry The factors described below affect the potential for all types of tourism, including ecotourism

Environmental factors Large-scale resort development for the traditional "sun, sand and sea" mass tourism market has caused serious environmental degradation, particularly in coastal areas Foremost among these is the contamination of coastal waters and groundwater from sewage and other sources This is not just from resort development, but from the huge informal settlements that have sprung up in response to the economic opportunities associated with tourism Coastal development has left few remaining natural areas along the north coast of Jamaica Increasing visitation to popular natural attractions such as Dunn s River Falls and Fern Gully, both located near Ocho Rios, has resulted in degradation of these resources

Inadequate waste management is a national problem, but it is particularly evident in resort areas and their satellite communities, which generate large quantities of non-biodegradable waste from fast food restaurants catering to both tourists and transient workers Although pollution may be seen as an urban problem and not a significant threat to ecotourism, a negative image of Jamaica as a tourism destination will be a deterrent to tourism of any kind Also, the unseen dangers of groundwater pollution from toxic and solid wastes threaten Jamaicans and tourists alike, wherever they may be

Deforestation of the interior is perhaps the most serious long-term threat to ecotourism, because it destroys watersheds wildlife habitat areas of outstanding natural beauty, and forests with significant recreational potential Jamaica is losing its forests at a rate unprecedented in the island's history, and the process of establishing protected areas is lagging far behind Land is being cleared for agriculture, housing, the production of charcoal, and the extraction of timber for construction, yam sticks, and woodcarvings The tree that bears Jamaica's national flower, the lignum vitae, is an endangered species partly because it is highly prized by woodcarvers in the tourism industry

Social factors affecting ecotourism potential Tourism provides employment and markets for a wide range of goods and services in Jamaica, but the widespread perception that the benefits of tourism are not being shared equitably has led to social unrest in some resort areas All-inclusive resorts have been accused of keeping visitors away from local people and 'street level' tourism businesses Craft vendors find it difficult to compete for the patronage of cruise ship passengers with in-bond merchants, who

TOURIST HARASSMENT LOCAL VIEWS

Harassment is defined as the act of offering goods or services for sale within a prescribed area without a licence Often the act of harassment involves infringement on the tourist's personal space body contact or verbal abuse

Harassment is everywhere – in the resort areas on the streets on the beaches at the attractions at the airports at the cruise ports in the craft markets and in the communities It is therefore everybody s problem As a consequence *travel agencies refuse to sell some destinations cruise lines may pull out and millions of dollars are lost*

There is no single entity or individual who can adequately address the problem everyone must recognise the importance of working together to solve this problem and improve our tourism product

Source TPDCo publication *Jamaica Profile* (Winter 1997 98 p 21)

Much of this harassment which they perceive as harassment is just part of our culture and how our society interacts with people For example we will touch someone to hail them up and it's not a sign of assault By creating an environment to develop and market products then this problem can be minimised

reputedly pay bus- and taxi drivers to bring visitors to their stores Frustration over this perceived monopoly has led to public demonstrations by craft vendors in the streets of Ocho Rios and the closure of Jamaica s most popular attraction, Dunn's River Falls, on more than one occasion While these problems are concentrated in traditional resort areas, like the environmental impacts they damage the image of Jamaica as a tourism destination

Tourist harassment Jamaican vendors of both legal and illegal items and services are extremely aggressive and persistent, and tourists often feel as if they are being pestered or harassed to spend money This problem has become so prevalent that harassment is now considered the most serious threat to the Jamaican tourist industry (see boxes on harassment) Tourist harassment is mainly a problem in urban resort areas but also occurs in the vicinity of some more remote natural attractions, where residents have become overly dependent on tourism This dependence is itself a symptom of the poverty in these areas, resulting from a lack of economic alternatives

TOURISTS SPEAK OUT ON TOURIST HARASSMENT

The following messages were posted on CNN's Internet Chat Room on Tourist Harassment in May, 1998 Out of 23 messages about tourist harassment worldwide, 14 concerned Jamaica

I recently was in Jamaica and was harassed constantly Everyone wanted to sell crafts (junk) put beads in our hair or sell us dope It was intimidating the first day and became annoying after that All I wanted to do was enjoy the sun on spring break not buy a bunch of crafts

– Mary Ann Brantley, 3 18pm, May 7, 1998

I have visited many countries on vacations and have been approached to buy things often This occurs where tourism is high such as Mexico Egypt Indonesia etc The level of harassment in Jamaica however is unsurpassed and I felt very uncomfortable there Of the about 35 countries I have visited many in the third world Jamaica is the only one to which I will not return simply because of this problem

– William Early, 10 20pm, May 7, 1998

I was in Jamaica last November and after refusing to buy drugs I was hit with a stream of abuse which left me speechless The Caribbean is full of lovely places to visit so I will certainly avoid any trip which has Jamaica on the itinerary

– Steve Carr, 11 31am, May 8, 1998

I honeymooned in Jamaica a little over a year ago and was amazed by the level of harassment from the moment I got off the plane Many people don't just offer services but demand that you accept – a no thank you didn't always work for us Fortunately we stayed at one of the all-inclusive resorts Our one venture outside on our own lasted about 10 minutes In contrast I recently visited Grand Cayman and would have felt perfectly comfortable walking around the island all day Because of the harassment I won't soon be making another trip to Jamaica and I won't recommend it to anyone else

– Charles Wortham, 12 37pm, May 12, 1998

Crime The crime situation in Jamaica is another deterrent to all kinds of tourism The major resort towns have attracted criminals as well as tourists, and are centres for illegal drug dealing and the black market trade in foreign currency Tourists are the main targets of these illegal enterprises, and sometimes the victims of crime A US-based travel agent was recently quoted as saying that there has always been a fear factor associated with Jamaica as a destination and that cruise passengers especially are warned about the dangers of the country before being allowed to disembark (Davis, 1998) Although security in resort areas is now a priority of the Government, the presence of police and uniformed resort patrols on the streets does not exactly present a welcoming image

Partly as a consequence of these threats to the tourist industry, but also in the context of a growing environmental and social consciousness in Jamaica, there has been an increasing awareness of the need to promote more environment-friendly and socially sound models of tourism development Thus, in the nineties we have seen the emergence of 'alternatives' such as green tourism, ecotourism, and community tourism in the Jamaican market

The emergence of ecotourism in Jamaica

On February 16, 1992, a headline in the Daily Gleaner proclaimed "*Eco-tourism is here*" The article described a "pilot eco-tour" of Jamaica organised by The Nature Conservancy and a local tour company, Sense Adventures Many other newspaper articles, letters and opinion columns on the subject of ecotourism were to follow in that year Although pioneers of the concept in Jamaica would say that ecotourism had started long before this, they would probably agree that 1992 was the year that ecotourism began to receive publicity as a new and important trend in tourism

The trend did not go unnoticed by the Government's tourism agencies In April of that year, the Minister of Tourism, the Honourable John Junor, appeared on a television talk show, *Tuesday Forum*, to participate in a discussion of ecotourism and its implications for the Jamaican tourism industry The Minister declared that ' no longer will factors such as sun, sand and sea be the main centripetal forces for tourist arrivals as they appear to be drawn by educational, recreational, aesthetic experiences provided by the national parks reserves and wildlife refuges in countries such as Costa Rica " (JTB, 1992)

The Minister described the obstacles to ecotourism development faced by Jamaica, and put forward a list of practical solutions (see box on this page) He announced the imminent launching of a Public Awareness Programme on Tourism incorporating information on the importance of the environment, as well as an upcoming conference *New Investment and Development Opportunities in Tourism The National Park System and Ecotourism*, to be held June 18-20, 1992 The conference was to be a joint effort of the Jamaica Conservation and Development Trust (JCDT), Jamaica Promotions Limited (JAMPRO), the National Environmental Societies' Trust (NEST), and the Jamaica Tourist Board (JTB)

This conference signalled a growing interest in both the economic and environmental aspects of ecotourism from a variety of quarters But what became most apparent from this gathering of diverse

THE GOVERNMENT'S VIEW OF ECOTOURISM IN 1992

Obstacles to Ecotourism Development

- Conflicting use of the environment e g mining in the parks and protected areas and environmentally unsound agricultural practices
- The delay in having the Protected Areas Legislation passed This is preventing the rangers from taking action
- Possible over use of the areas as the carrying capacity has not been determined
- People s ignorance regarding the meaning of ecotourism for example a man-made beach being advertised as ecotourism
- Lack of incentives to encourage ecotourism operators
- Lack of trained personnel
- Lack of environmental awareness by the general population resulting in environmental degradation in the country

Proposed Solutions

- Clear policies to be developed regarding land use in protected areas
- Parks and protected areas should fall under one body instead of being fragmented
- Environmental Impact Assessments must be completed and reviewed by NRCA before any development takes place
- Appropriate mechanisms relating to the preservation and management of ecotourism sites must be in place
- Personnel of these attractions must be trained not only to operate attractions, but also on the importance of protecting the environment
- The defining of designated ecotourism areas and the passing of legislation as to prohibited activities in such areas
- Incentives for land owners in designated ecotourism sites.

interest groups was how very different were their perspectives and understanding of the term

'ecotourism ' Six years later, many of the participants of that first Jamaican ecotourism conference are still working towards a resolution of their "conflicting perceptions and competing agendas" (Morris, 1992)

Proponents of ecotourism in Jamaica

Since that initial flurry of publicity in 1992, ecotourism development in Jamaica has been driven by three main players in the field private sector entrepreneurs, non-governmental organisations, and overseas-based donor organisations To a lesser extent, the government has also contributed to the process At the conference mentioned above, JAMPRO put forward several proposals for ecotourism development However, all of these proposals were judged to be unsustainable by conservationists, who were reportedly horrified' by the JAMPRO Vice President's statement that "the imperative is to get our country developed in the fastest time possible' (The Daily Gleaner, June 29, 1992, p 28) More recently, the Tourism Product Development Company (TPDCo) has become involved in facilitating ecotourism development as described in the section on the role of the government, below

Ecotourism in the private sector Two of the private sector attractions examined in this study, YS Falls and Black River Safari Tours, are considered pioneers of ecotourism in Jamaica A number of other nature-based attractions were developed as recreational parks in the late eighties and early nineties, and promoted as ecotourism attractions Perhaps the best known of these was Crystal Springs on the north-east coast, billed as a "tropical theme park adorned with colourful orchids, flowering trees and shrubs, a bird sanctuary tropical fish and a small folk museum" (Brochure, ca 1993) Apple Valley in St Elizabeth offered 'an authentic experience of the island's rainforest" along with fishing and paddleboat rides (Brochure ca 1993)

Meanwhile a few local tour companies such as Sense Adventures and the Touring Society of Jamaica were beginning to cater to the demand for off-the-beaten-track nature tourism Tours offered by Sense Adventures promised to be "environmentally sensitive and consciously integrated into the cultural life of the communities" they visited (Brochure, ca 1993)

Even before ecotourism had emerged as a popular concept in the both the tourism and conservation fields the concept of community tourism' had been evolving in Jamaica The term was coined in 1979 by tourism marketing consultant Desmond Henry, who along with hotelier Diana McIntyre Pike developed, articulated and promoted the concept of community tourism through their company, Countrystyle, Limited They envisioned a kind of tourism that "celebrates the innate Jamaican way of life, protects the special qualities of the environment directly benefits individuals in the community economically, and promotes community development generally" (Countrystyle, 1992) In other words, this was ecotourism Jamaica-style Community tourism has been widely promoted in central and southern Jamaica and enthusiastically endorsed by international tourism organisations particularly in other Caribbean countries (Henry, 1998)

These two versions of alternative tourism – ecotourism and community tourism – have become popular primarily in two areas of Jamaica (1) the southern portions of Manchester and St Elizabeth, including both Mandeville and the southwest coast, and (2) the parish of Portland In each of these regions, a broadbased tourism marketing association made up mainly of tourism entrepreneurs and other business interests has been formed to promote alternative tourism The Central and South Tourism Organisation (CESTO) is a non-profit association formed in 1987 to promote community development in south-central Jamaica through environmentally sound tourism, with emphasis on special interest groups such as bird watchers, horticulturists, senior citizens, and church groups In Portland, Valley Hikes and a group of eight resort properties have formed the Tourism Marketing Alliance to promote ecotourism/community

tourism through their Port Antonio Destination Marketing program, which is marketed abroad by a US-based marketing company, Unique Destinations (Brochure, 1998)

NGO involvement in ecotourism Non-governmental organisations led by the Jamaica Conservation and Development Trust (JCDT) have been the driving force behind the establishment of a system of protected areas for Jamaica, including the country's first national parks, the Blue and John Crow Mountains National Park and the Montego Bay Marine Park Part of the funding needed to protect and maintain resources in these parks was expected to come from both local and foreign visitors (JCDT, 1992)

As early as July 1992 the Natural History Society of Jamaica had issued a 'Statement on Ecotourism' (see box next page) which included three main principles, a section on developmental and operational guidelines and ethics for ecotourism, and recommendations for community involvement (NHSJ, 1992) In January 1994 the St Ann Environment Protection Association (STAEPA) conducted a 2-week training seminar entitled 'Coastal Zone Management for Sustainable Tourism and Fisheries,' which brought together the local planning authorities NGOs and private sector interests to discuss the roles, responsibilities and requirements for the future of these enterprises in St Ann

The Portland Environment Protection Association (PEPA) has had a strong influence on the development of ecotourism in that parish having worked with residents of the Rio Grande Valley to establish an Eco-Tourism Action Group (ETAG) in 1994 out of which emerged Valley Hikes, a community-based ecotourism development company examined in this study In addition to its environmental education and advocacy activities PEPA is developing the Port Antonio Marine Park and Conservation Corridor Project (PAMPCC) in a bid to establish an environmental protection area that will provide "the highest quality ecotourism experience the island has to offer" (PEPA, 1998)

More recently the Caribbean Coastal Area Management (CCAM) Foundation and the Bluefields People's Community Association (BPCA) have both produced ecotourism development plans for their respective areas of operation, Portland Bight on the south central coast and Bluefields on the southwest coast (CCAM, 1998, IIT 1996) Like the Southern Trelawny Environmental Agency (STEA), which in 1997 began operating Cockpit Country Adventure Tours (described in this study), these organisations view ecotourism as one component of a holistic approach to promoting environmentally and socially sound economic development CCAM has begun to implement their ecotourism plans by training about 15 boat captains and about 20 tour guides in CPR, lifesaving first aid and 'tourism awareness,' and has initiated the formation of the Portland Bight Tourism Council (PBTC) BPCA has been building community awareness and support for the concept of a unique brand of hospitality to be offered in Bluefields (Morgan 1995 Williams[6], 1998, personal communication), but the organisation itself has not developed any tourism enterprises

Donor organisations' involvement in ecotourism Overseas-based donor organisations such as the OAS, USAID TNC, UNEP, CIDA, the United States Peace Corps and the embassies of foreign countries are the third set of players promoting ecotourism in Jamaica, whether directly or indirectly through related environmental conservation initiatives The first three organisations mentioned have all been involved, along with local NGOs and the GOJ, in the planning and implementation of the two national parks under the Protected Areas and Resource Conservation (PARC) Project Most of the funding for operating these parks has come from USAID As mentioned in the Introduction, the OAS has also funded research on nature- and heritage based attractions in Jamaica

More recently UNEP has undertaken with USAID a project on the promotion of environmentally sound tourism in the Wider Caribbean, as part of its SPAW (Specially Protected Areas and Wild Fauna and

[6] Terry Williams co-founder and director of BPCA

Flora) programme A report on tourism impacts and best practices is in preparation (UNEP, 1997) The Royal Netherlands Embassy has funded guide training programs for the ecotourism enterprises of Cockpit Country Adventure Tours and Valley Hikes CIDA, through its Canada-Jamaica Green Fund, has also contributed to NGO projects related to ecotourism, for example, STEA's Youth for the Environment project, which provided ecotours and environmental education materials to schoolchildren

Natural History Society of Jamaica
Statement on Ecotourism
July 1992

Principle I
The primary objective for protecting a natural area is maintaining its biodiversity and natural beauty

Principle II
The second objective is for people to experience, enjoy, and become educated about nature
This applies firstly to Jamaicans

Principle III
Development whether of structures or of economic activities within or around the protected areas must be appropriate and compatible with Principles I and II

A Developmental and Operational Guidelines and Ethics for Ecotourism

1 Mass tourism is damaging to the environment of natural areas Groups must be limited to numbers which the area can sustain This may vary according to the fragility or the robustness of the area concerned

2 Management of the protected area should ultimately be paid for by the users and economic beneficiaries of the protected area and its facilities Management in this sense does not include just salaries but natural area management activities such as afforestation, resuscitation, research, etc

3 Special consideration must be given to education and to strict control of behaviour destructive to the environment

B Community Involvement

1 A socio economic profile of the community should be undertaken to determine community development needs

2 The local communities should participate in the planning and benefits from opportunities that may arise Protection should be afforded to the local community from being marginalised by outside interests

The organisations mentioned are just a few of the many donor agencies that have provided technical assistance, training, financial support for workshops, support for protected areas development, park implementation and management, environmental conservation programs, and research Most of this assistance has been directed to NGO- and GOJ projects, but lately there has been some interest on the part of USAID to collaborate with private sector entities to share information on issues pertaining to ecotourism development in Jamaica

The role of the government guidelines, standards and training

Tourism administration in Jamaica During this period of evolution of alternative tourism, there have also been significant changes in the Government's institutional arrangements for tourism administration In 1993, responsibility for establishing, inspecting and monitoring the standards of all entities operating in the tourism sector shifted from the Jamaica Tourist Board to Tourism Action Plan, Limited (TAP), and again in 1996 to the Tourism Product Development Company, Limited (TPDCo) In 1998, TPDCo will also become the tourism licensing authority, leaving the JTB to pursue its primary function as a national marketing body (TPDCo 1997)

Tourism administration at the ministerial level has undergone several changes over the years, reflecting political changes as well as Cabinet reshuffling within the same governing party The following table shows the names of the government ministries responsible for tourism since 1986

GOVERNMENT MINISTRIES RESPONSIBLE FOR TOURISM, 1996 – present	
August 1986	Ministry of Mining, Energy and Tourism
February 1989	Ministry of Tourism
January 1992	Ministry of Tourism and the Environment
April 1993	Ministry of Industry, Tourism and Commerce
January 1995	Office of the Prime Minister (Tourism Division)

Source OPM (T)

Guidelines and standards for attractions In response to the ecotourism trend, in 1993, TAP commissioned a study on the ' range, characteristics, quality and potential of nature- and heritage-based attractions accessible to tourists in Jamaica" (TAP/OAS 1993) The outputs of the study were to be recommendations on guidelines for their sustainable development and management, and the identification of specific training needs within the tourism sector

This study and two subsequent workshops[7] highlighted a number of environmental problems, socio-economic issues and management weaknesses associated with the development and operation of nature- and heritage-based attractions and focused attention on gaps between visitors' perceptions of ecotourism and what was being marketed in Jamaica as ecotourism Although a few of the attractions investigated

TPDCo Ecotourism Guidelines (abbreviated)

1 The ecotourism attraction must satisfy all the requirements of safety, health, and environmental codes
2 The attraction is to be preserved in its natural state and provisions must be put in place to sustain the environment
3 Signage and interpretive media must be prominently placed and guests properly informed about the facility
4 Self-monitoring systems should be put in place to measure the level of guest satisfaction It is desirable that evaluation forms be made available to guests for them to record their criticisms, complaints and accolades
5 High standards for the recruitment of staff should be maintained and certified guides should be provided The guides should be trained in sociology, ecology, history, language, environmental laws, sustainability of the environment group management, CPR, first aid and basic life saving skills
6 The attraction should provide employment and training programmes for persons in the surrounding community Employees should be trained in communication skills and positive environmental practices
7 Each attraction must offer top quality service and personalized attention to guests
8 Every attraction must have a proper security system in place, particularly during opening hours
9 An Environmental Impact Assessment Report should be done on the site There should also be a policy on site management inclusive of carrying capacity, waste management preservation of the site, staff training, security and safety
10 Management and staff should conform to ethical business practices Management programmes should include regular internal audits of the facility to ensure the site is preserved

were operating along 'green' principles and conserving resources by virtue of private ownership and control of lands many of the attractions were in fact associated with negative impacts such as over-development and destruction of natural areas, inadequate disposal of solid waste and sewage, and the illegal and inappropriate use of captive wildlife in displays (TAP/OAS, 1993) The study and workshops produced a comprehensive series of recommendations for the development and management of attractions and suggested that training for this field should begin with the personnel of the tourism monitoring agencies

Partly as a result of this exercise, and also out of the recognition that alternative tourism with its unconventional attractions and accommodations required new and different standards from the traditional prerequisites for licensing Tourism Action Plan began to develop new operational guidelines and standards for the licensing of attractions, and added a 'bed and breakfast' category to the list of accepted accommodations These guidelines have since been further revised into the checklists produced by TPDCo from 1996 to 1998 containing licensing requirements and recommendations for ecotourism in general, nature attractions, heritage attractions, and 'bed & breakfast' accommodations (See Appendix 2 for a comprehensive list of prerequisites for a tourism licence, and the box below for TPDCo 's Ecotourism Guidelines)

While alternative tourism interests are generally appreciative of the attempts to incorporate new environmental and social criteria into tourism standards, they have criticised some of the requirements on these checklists as being unrealistic and impractical, if not impossible to achieve in Jamaica (Aga[8], 1998) One point made in the TAP/OAS study and reiterated at the Green Tourism Conference of May 2-3, 1998 was that all tourism activities in Jamaica should strive to be environment-friendly It is no use formulating environmental guidelines for natural and heritage attractions if the negative impacts of conventional tourism are allowed to continue unchecked" (TAP/OAS, 1993)

The 'greening' of tourism in Jamaica Partly in response to the demands of environment-conscious travellers a few private sector tourism interests have long recognised the need for tourism to be environment-friendly and pioneered their own 'green tourism' initiatives The example of Half Moon Hotel is described in the box on the next page, others include Hotel Mockingbird Hill in Portland and Maya Lodge in St Andrew

Not surprisingly NGOs have been in the forefront of the movement towards sustainable tourism In 1993 the JHTA commissioned a study to investigate and make recommendations for environment-friendly practices in hotels (JHTA 1993), while at the same time TAP was aiming to produce guidelines for the sustainable development and management of nature- and heritage attractions (TAP/OAS, 1993) PEPA subsequently conducted a series of training workshops on the 'greening of tourism' in Portland, and introduced this subject to the College of Agriculture, Science and Education

Recently donor organisations such as USAID have begun to support broad-based green tourism initiatives, notably the EAST project (Environmental Audits for Sustainable Tourism), developed and implemented in conjunction with the JHTA and a private firm of environmental consultants, Hagler Bailly The EAST project has developed standards and procedures for environmental audits in the hospitality industry, as well as the requirements for a new environmental certification programme, the Green Globe Hotel Certification Programme, being piloted in Jamaica (EAST Monitor, March 1998)

The Green Globe Certification Programme was developed by the World Travel and Tourism Council (WTTC) in collaboration with SGS (a large testing and inspection organisation) and Hagler Bailly of

[8] Shireen Aga hotelier Port Antonio In a presentation at the Green Tourism Conference, Dragon Bay, Port Antonio May 2-3 1998 she gave as examples of unrealistic recommendations the use of organically grown cotton for sheets, and wood products that are certified as sustainable harvest, neither of which is available in Jamaica

The Countrystyle Institute for Sustainable Tourism, Jamaica

The Countrystyle Institute for Sustainable Tourism (CIST) was established to help communities prepare for sustainable tourism The goal is to train residents of communities in all aspects of tourism development and management so thev are better able to benefit from this industry CIST offers a variety of tourism courses – short medium and long-term It also assists in developing tourism infrastructure as well as business and marketing plans for communities The aims and objectives of the Institute are

1 To develop and deliver a curriculum focusing on sustainable tourism
2 To co-ordinate promote and disseminate, as appropriate, the research and documentation of information related to the concept of sustainable tourism
3 To establish an information database and library on the concept of sustainable tourism
4 To work with communities private, public and institutional sectors organisations and individuals for the promotion and development of the concept of ecotourism
5 To promote training for the tourism industry in all aspects of sustainable tourism
6 To develop and promote the use of present and future technologies in support of sustainable tourism
7 To monitor evaluate and forecast changes that impact on the sustainability of tourism

EAST, as a means of promoting the adoption of Agenda 21 principles in the tourism industry Several properties in Jamaica have been audited by EAST and two have already received Green Globe Certification [9] which will be an internationally recognised symbol of best practices in the travel and tourism industry (Green Globe Newsletter, Issue 8, February 1998)

The current Tourism Division in the Office of the Prime Minister has joined the movement by hosting, in May 1998, the Green Tourism Conference mentioned above, and stating (in the invitation) that the OPM (T) ' recognises that a policy on Green Tourism (as a component of sustainable tourism) needs to be formulated

Training In 1993, a clear understanding of the goals of ecotourism was obviously lacking at a number of sites being promoted as ecotourism destinations Today, in 1998, there has been some improvement in the level of awareness about the goals of ecotourism amongst tourism entrepreneurs, as observed at the recent Green Tourism Conference Possible reasons for the increased awareness include the continued international attention being paid to ecotourism, local and international conferences on ecotourism (see Appendix 3) media reports of the critical environmental concerns that are affecting the island's tourism industrv in general and continuing environmental education efforts of the NGO community, especially those organisations working towards the establishment of protected areas The training objectives of the Countrystyle Institute for Sustainable Tourism are outlined in the box below

The government tourism agencies have also been attempting to raise general awareness about environmental and social issues affecting tourism by incorporating these into their training programs Courses such as "Cultural/Heritage Tourism," "Environmental Awareness and Management," and "Tourism and Cultural Awareness" are now part of the training curriculum developed by TPDCo TPDCo also initiated a program called "Sustaining the Environment and Tourism" (SET), first in Ocho Rios and later in Montego Bay, mainly to address the problems of the physical environment in these major resort towns SET activities include beautification projects, improvement of sanitation and waste management, and communitv outreach programs in tourism awareness (TPDCo , 1997)

Although this is an encouraging start, the training curriculum and environmental outreach activities have yet to adequately address the deficiencies identified by the 1993 TAP/OAS study in the level of

[9] Negril Cabins in Negril and Hotel Mockingbird Hill in Port Antonio

awareness of Jamaica's natural heritage flora, fauna, and the ecology of Jamaica's natural ecosystems, which are the basis of its ecotourism industry

The 'greening' of tourism in Jamaica the example of HALF MOON HOTEL

Half Moon Hotel near Montego Bay is an example of a "green" hotel Concerned about the damage that tourism causes to the environment the director of the resort established a sustainable tourism campaign in 1994 The campaign ' Half Moon in Touch with Nature and the Environment" began with a comprehensive recycling and reuse programme This includes cardboard, used paper, newspaper, glass bottles cooking oil, cart batteries used soap, candles and other items Fruit and vegetable waste are composted and used as fertilizer for the gardens

The hotel also strives to reduce chemical use overall and has installed an ECOLAB chemical dispensing system All laundry kitchen and housekeeping chemicals are phosphate-free Water conservation is also encouraged among the guests, with reminders placed around the hotel Water saving toilets and showerheads are also helping in this effort To conserve energy, fluorescent bulbs have replaced candescent ones and lights are regulated by timers Water and energy usage are monitored daily to make sure target goals are met

Half Moon Hotel is also collaborating with the Montego Bay Marine Park in a conservation programme to protect turtle nests and send hatchlings back to sea The hotel has established a 27-acre Nature Reserve to protect mangroves trees birds turtles and other wildlife The hotel also sponsors a tree-planting project that involves the children of the community (Brown, 1998)

Half Moon Hotel has received the 1998 World's Best Award from the readers of Travel & Leisure Magazine moving up from 15th position in 1997 to 8th this year It is the only resort in Jamaica to receive this award

The most recent government training initiative for tourism is called 'Team Jamaica' It is directed at all tourism personnel and focuses on three main elements Tourism Awareness, Customer Service, and Product Knowledge An advisory council was appointed in July 1997, a curriculum developed and a pilot programme implemented with the collaboration of several organisations, including the JHTA, the Office of the Prime Minister the JTB, the National Council of Technical, Vocational and Educational Training (NCTVET) and TPDCo The training methods, modules and resources will eventually be standardised for use by educational institutions (TPDCo , 1997)

The role of the Government policies and plans

Policies Ecotourism as an economic activity is mentioned in at least four government policy and planning documents promulgated within the last five years These are the 'green papers'[10] on the National Industrial Policy (1994), Land Policy (1994), and a National System of Parks and Protected Areas (1995) and the Jamaica National Environmental Action Plan (1994 and 1995)

The National Industrial Policy (NIP) recognises that tourism is Jamaica's leading foreign exchange earner, and notes that nature tourism is the fastest growing segment in world tourism (GOJ, 1994a) First on the NIP list of policy objectives for the tourism sector is the need to "improve and diversify the tourism product by the development of cultural [*sic*] and ecotourism and by extension into new geographical areas" (GOJ, 1994a, p 28) However, in outlining strategies for product development, the

[10] Policy documents circulated for public discussion and input

only objectives related to ecotourism were the development of the two national parks and the planned restoration of botanical gardens

The green paper on the proposed Land Policy for Jamaica deals more specifically with the needs of ecotourism, and describes problems such as "inappropriate development and destruction of conservation areas," "insufficient open spaces and recreational areas, and increasing despoliation of visual amenities, areas of natural beauty and heritage ' (GOJ, 1994b, p 42) The Land Policy calls for an improvement of the tourism product through the development of cultural assets, attractions and ecotourism," (GOJ, 1994b p 42) and proposes that environmental impact assessments, audits and statements be required for new resort development projects before approval is granted Under this Policy the government would continue to offer incentives for the development of hotels and resort cottages, and for the preservation of monuments and national heritage, but there are no proposed tax relief measures for private lands maintained as conservation areas

The Jamaica National Environmental Action Plan (JANEAP) of 1994 points out the importance of protecting the 'nation s natural treasures" in order to benefit from what it calls "the fast growing environmental tourism market" (NRCA/PIOJ, 1994, p 3) It announces that two new national parks will be created, the Black River Lower Morass National Park and another as yet undetermined The Plan makes no reference to the environmental impacts of tourism or the issue of sustainable tourism, but in a section on economic policies and the environment, it outlines the intentions of the government to charge user fees for visits to Jamaica s outstanding natural attractions, beginning in October, 1994 with the two national parks About 3% of the annual cost of park management (approximately US $1 million) was expected to be derived from access and permit fees for visitors, tour operators and other users of the parks (NRCA/PIOJ, 1994) (The 1995 update of the Plan reiterated these intentions, but without specifying a time-frame)

By 1995 the government policy document on parks and protected areas recognised ecotourism as a means to generate funds for the conservation of natural resources in parks "Management, including a careful assessment of carrying capacity, will be intelligently balanced with marketing to ensure that visitation and ecotourism generate net financial and environmental benefits on a sustained basis" (NRCA, 1995, p 20) The plan named the Black River and Cockpit Country ecosystems as priorities for the next two national parks and specified that NRCA would work with Tourism Action Plan to provide for ecotourism use of protected areas

Problems with implementation of policies While these policies all acknowledge to some degree the need for the government to make provisions for ecotourism, there has been little or no implementation of these provisions Although ecotourism development was the first priority identified for tourism under the NIP only about 10% of the GOJ funding provided to TPDCo for tourism product development in the current budget is allocated to facilitating ecotourism development (Chung[11], personal communication, 1998) One example is the proposed renovation of the interpretive centre at the Canoe Valley recreational area The rest of the product development budget, 90%, will be spent on improving urban resort areas

The environmental problems described in the green paper on Land Policy have actually worsened natural areas continue to be destroyed and environmentally unsound resort developments continue to be approved by local planning authorities[12] (The Daily Gleaner, March 8, 1998) Today, in 1998, although progress

[11] Sandy Chung Projects Manager of the Tourism Product Development Company, Limited

[12] One example is the controversial 'house in the sea,' a multi storey resort complex that was to be constructed over the water at San San Port Antonio, which received building approval from the Portland Parish Council despite a petition signed by over 300 people objecting to the development Only when PEPA focused national media attention on the issue did the Minister of the Environment intervene Six months later, the matter of building approval is still undecided

has been made towards establishing environmental protection areas in Negril and Portland,[13] neither the Black River nor the Cockpit Country ecosystems have been declared protected areas, and legislation has yet to be enacted to allow the existing parks to charge user fees

Participants of the Green Tourism Conference in May, 1998 called for the government to improve enforcement of environmental laws and impose strict environmental standards on developments They also recommended that the GOJ provide incentives such as tax relief for the adoption of environment-friendly technologies and privately owned protected areas Clearly, there is a need for a realistic assessment of the role of ecotourism in government policies and plans

The need for collaboration and coordination The TAP/OAS study of 1993 observed that "little progress has been made towards implementing the solutions in a cohesive manner, and the same environmental mistakes continue to be made in tourism development" (p 34) This situation was blamed on a lack of established mechanisms for interagency collaboration and coordination The study concluded that 'the sustainable development and management of ecotourism can only take place within a framework of coordinated planning, standards, guidelines, monitoring, licensing, and marketing, taking into account the following criteria environmental and ecological requirements, socio-economic needs (community integration and local benefits) historic preservation, archaeological preservation, and the needs of the tourists themselves (TAP/OAS, 1993, p 37)

One outcome of the workshops following this study was a resolution to form a 'National Council on Ecotourism to serve as a coordinating mechanism and lobby group to ensure effective communications and collective action to promote the sustainable development of ecotourism in Jamaica Nominations were received for members of a Steering Committee to be coordinated through TAP, but the council itself did not materialise

In 1998 the need for increased collaboration was reiterated by participants of the Green Tourism Conference who called for the formation of a multi-agency communications network as a support mechanism for the development of environmentally and socially sound tourism in Jamaica A steering committee comprised of representatives of the Office of the Prime Minister (Tourism Division), the Jamaica Conservation and Development Trust (JCDT) and the Association of Jamaican Attractions, Limited (AJAL) was named to initiate the 'Green Tourism Network', which is to include representatives of the government tourism business and environmental agencies, NGOs, private sector tourism associations and tertiary educational institutions such as CASE and UWI The Interamerican Institute of Tourism volunteered advisory services to the Network

Current tourism plans In 1997 the Tourism Division of the Office of the Prime Minister (OPM-T) obtained help from the Commonwealth Secretariat to begin work on a Master Plan for Sustainable Tourism Development which is intended to guide the tourism industry for the next ten years According to one consultant on the Plan, Michael Patterson, "the Master Plan aims to provide a shared vision of where Jamaica s tourism industry should be heading as this has been lacking up to now (The Daily Gleaner, June 24, 1998)

The Master Plan which personnel in the OPM-T say is guided by the National Industrial Policy, will identify ecotourism sites and make recommendations for the implementation of tourism projects for such sites The proposed Green Tourism Network is expected to be a source of information for this process It was stressed that the Plan is taking a holistic, integrated approach to tourism development, involving a variety of interest groups in a consultative process undertaken throughout the island

[13] The Negril Environmental Protection Area was declared in November, 1997 and the Negril Marine Park in March 1998 The Port Antonio Conservation Corridor and Marine Park are still awaiting official declaration s

The Plan will seek to ensure that linkage sectors such as agriculture, manufacturing, community facilities, recreational facilities, transportation and infrastructure are developed to benefit residents as well as the tourism industry The Plan will also attempt to make sure that the development of tourism products and markets is environmentally and socially sound
A draft strategy document is due by the end of September, 1998, and the complete Master Plan by March, 1999 The planning process will continue with the formulation of an Action Plan, which will have to be tabled in Parliament then ratified before it can be implemented

Public awareness of ecotourism

Despite the advances made in raising awareness about the importance of environmental and social factors affecting tourism in Jamaica, the concept of ecotourism is still poorly understood by the general public as well as the media, and often confused with the broader category of nature-based tourism The connection between tourism and the goal of protecting *natural* resources is not apparent at some attractions being marketed as 'ecotourism' Serenity Fishing and Wildlife Sanctuary, a private collection of exotic and native wildlife operated as a zoo and amusement park in St Catherine, is described by one of its directors as "a $30 million eco-tourism facility" (The Daily Gleaner, April 5, 1998) The Port Royal Heritage Tourism Project an ambitious proposal to "recreate historic Port Royal with the addition of museums, shops and contemporary attractions including restaurants and theatres" is described as a "financially and economically viable eco-tourism project" (The Daily Gleaner, March 25, 1998) Neither of these would be considered ecotourism attractions by any of the existing definitions of the term

The lack of awareness about the goals of ecotourism is partly explained by the fact that while many Jamaicans can easily understand the attraction of strange, exotic animals in a zoo, most do not appreciate the intrinsic value and uniqueness of Jamaica's own wildlife in its natural habitat For tourism entrepreneurs to fully understand the kind of experiences that ecotourists seek and develop authentic ecotourism attractions that satisfy this market, they must themselves recognise the attractiveness and ecological importance of Jamaica's native flora, fauna and natural areas

ECOTOURISM WORKS-IN-PROGRESS

Introduction

In this section we present case studies of eight nature attractions around the world that are attempting to apply the principles of ecotourism and attain the Ten Essential Elements for Ecotourism Destinations Each site has its own strengths and weakness and faces unique opportunities and challenges Each is at a different stage in its development, which is why we refer to these examples as 'works-in-progress ' What is common to all of these sites is that the natural resources of the attractions are better protected because of tourism and that economic benefits are reaching surrounding communities [14]

Case studies

The following ecotourism 'works-in-progress' are presented

1 Monteverde Cloud Forest Preserve, Costa Rica
2 Annapurna Conservation Area Project, Nepal
3 Parc des Volcans, Rwanda
4 Ria Celestun Biosphere Reserve, Mexico
5 Crooked Tree Wildlife Sanctuary, Belize
6 The Galapagos Islands, Ecuador
7 John Pennekamp Coral Reef State Park, USA
8 Bonaire Marine Park, Bonaire

1 Monteverde Cloud Forest Preserve, Costa Rica

Monteverde is owned and administered by the Tropical Science Centre (TSC), a private, non-profit Costa Rican organisation It comprises 10 000 hectares on the continental divide Monteverde has a diversity of wildlife including quetzals, jaguars monkeys, and over 2,000 plant species The preserve provides the scientific community with a valuable research site and protects the watershed of the largest hydroelectric facility in Costa Rica

In recent years tourism to Monteverde has grown considerably and has reached about 35,000 visitors annually From the start local residents have played a central role in managing this growth While they have done little to promote tourism, the residents meet regularly to discuss the growing popularity of the area and how to manage the consequences They have made decisions on several key issues such as which tourism businesses are appropriate and how they should operate, what fees should be charged at the preserve, and whether the main road to Monteverde should be paved to allow easier access Tourism remains a controversial issue in Monteverde, but overall it provides benefits to many members of the community

[14] No examples are given from Jamaica because eight case studies from Jamaica are presented in the companion document to this report (Lee et al , 1998)

The preserve has a graduated user fee system that differentiates between many categories, such as nationals, independent travellers and visitors who arrive by tour bus The highest fee is roughly US $15 Part of this money goes directly to the management of the preserve Because of this strong financial base, the natural resources in the area are well protected Revenue from tourism also funds research activities in the preserve and development projects in the community

Tourism also generates substantial employment in the community of Monteverde The preserve itself employs over 50 people and offers an extensive guide training program that gives priority to local residents Several tourism-based enterprises have been established in the community, including hotels, pensions souvenir shops and transportation services There is also a large handicraft co-operative that features many local products The TSC operates an information booth and has plans to build a new centre that will offer slides brochures and educational programs for visitors and residents The preserve is considered a valuable source of information on local conservation issues

The fact that Monteverde is a private sector destination contributes to its success Members of TSC, who are residents of the area have the ability to establish policies and regulations on their own They can set and change the entrance fees as necessary to meet the needs of the preserve, taking into consideration factors such as visitors willingness to pay Flexibility to capture the benefits of ecotourism is one of the advantages of private reserves

2 Annapurna Conservation Area Project, Nepal

In the Annapurna mountain range in Nepal, about 118,000 villagers live among the beautiful natural resources They are primarily farmers, sheepherders, and hunters In the last twenty years the area has seen a dramatic increase in tourism, primarily trekkers, and as a consequence the construction hundreds of lodges and teashops along the trekking routes Tourism has brought an increased demand for fuel, so forests are being depleted for wood The environment has also been damaged by water pollution, poor sanitation and litter along the mountain trails

Conservation organisations in Nepal became concerned about these negative impacts from tourism as well as the fact that local residents were expanding agricultural practices, putting further pressure on the land In 1996 the Annapurna Conservation Area was created as a result of lobbying by a Nepali NGO, The King Mahendra Trust for Nature Conservation A zoning plan allowed for multiple uses such as hunting and the collection of forest products in parts of the area Visitor fees were allocated to local development and management authority delegated to the village level The Annapurna Conservation Area Project (ACAP) was then established to help ensure that local residents received benefits from tourism to their area

The ACAP set up an artisan's co-operative and a hotel management committee The committee helps to set prices and standards for all accommodations in the area Since ACAP was started, roughly 700 local entrepreneurs have been trained in lodge management, finance, cooking, food hygiene and sanitation The vast majority of trainees are currently employed in tourism

Minimising visitor impacts has been a priority for ACAP, which established their headquarters within the intensive use zone of the protected area Several conservation activities were initiated in cooperation with the local communities, including forest management, conservation education and research about the impacts of visitors Lodge owners were encouraged to help maintain the trails In 1990, a visitor centre was built in Pokhara, a nearby town that offers many different educational activities for visitors and residents Many people are now learning about the natural resources of the area and threats to the environment To address the issue of increasing demand for wood among visitors, ACAP established a

series of kerosene depots so now trekkers cook over kerosene stoves rather than wood stoves The project has also taken the lead in planting trees in the area

The ACAP has set up a practical entrance fee system with different rates for foreigners and nationals The foreigners fee of US $13 (circa 1996) generates over half a million US dollars yearly and is used to cover conservation and community development programs such as bridge and trail repairs, agricultural extension, and women s programmes Community health and sanitation benefits include health clinics, mobile vaccinations and health education, latrines and rubbish pit construction, and improved water supply The ACAP has maintained a good balance between the needs of visitors and residents, and provides a good example of how revenue from tourism can be used to conserve natural resources

3 Parc des Volcans, Rwanda

The Parc des Volcans in Rwanda is home to the rare, endangered mountain gorilla During the nineteen-sixties and seventies the population of mountain gorillas in the wild declined sharply, to fewer than 400 individuals, due to intense poaching and habitat loss In response, the Mountain Gorilla Project was started in 1979 to assist the National Park Service and the National Tourism Bureau to protect the park, inhabited by more than 30 percent of the total gorilla population

Nature tourism boomed partly because of the uniqueness of this nature tourism experience and partly because of increased interest in mountain gorillas resulting from the movie *Gorillas in the Mist* The park kept increasing the entrance fee with no decrease in demand, until it reached about US $180 for a one-hour visit with the gorillas in 1990 Even with this high fee, tour operators had booked all the available entry tickets for many seasons With this revenue, the park itself became the third leading source of foreign exchange for the country after tea and coffee

Benefits were also flowing for local residents who were accompanying tour groups as guides and porters as well as selling crafts Hotels and restaurants, mainly outside the immediate community, were also making money from increased tourism The guides were highly trained and able to explain to visitors all about the gorillas species and appropriate visitor behaviour in their presence Group size was tightly controlled and visitor activity among the gorillas highly regulated Overall, the gorillas were thriving and their population increased as visitor numbers increased

When violent political conflict exploded in the region, almost overnight the tourism industry plummeted to a low point from which it has never recovered Interestingly, groups on both sides of the conflict have made efforts to preserve the gorillas during the war, realising their economic value for whichever side attains political control

Parc des Volcans is an important example of how one species can become a major ecotourism attraction and provide a significant source of income for an entire country It also demonstrates the critical and potentially disastrous role of external factors in determining the fortunes of ecotourism Hopefully, the political situation will improve in Rwanda and ecotourism can be revived to once again provide this country with much-needed foreign exchange

4 Ria Celestun Biosphere Reserve, Mexico

Ria Celestun Biosphere Reserve is located in the Yucatan Peninsula in Mexico and comprises about 149,000 acres of mangroves, coastal dunes and estuaries The reserve has seven types of ecosystems and lies in the migratory path from Canada to South America for several bird species Over 320 bird species have been identified in the reserve, including two endemics and the spectacular American flamingo (Macys 1996) In 1979, the area was declared a wildlife refuge by federal decree and this was upgraded to 'special biosphere reserve' because of its importance for birds The government is the official manager of Ria Celestun although it has no operating budget or staff for the area

The current threats to the area are overfishing, increased agriculture and unregulated tourism Visitation to the area began about ten years ago with fishermen bringing small groups of people to see the flamingos Tourism has increased significantly, with about 15,000 visitors coming to Celestun in 1996 Negative impacts from tourism include disturbance of the feeding and reproductive patterns of the flamingos from boats taking tourists too close to the birds

In order to help tourism develop in an environmentally sound way and generate some benefits, an NGO called Pronatura Peninsula de Yucatan (PPY) is helping to develop a sustainable nature tourism programme for the reserve Its first goal is to minimise the problems that visitors are now creating To this end PPY has been teaching boat guides about the needs of the birds as well as marking an area within the reserve where they can travel The organisation is also setting up an impact monitoring system and trying to reduce tourist numbers by finding other attractions in the area for them to visit

A second goal for PPY is to advance the educational component of ecotourism They are producing bilingual brochures for visitors, writing guidelines for visitor behaviour and setting up guide training courses A government foundation, Cultura, is building a visitor centre in the area Thirdly, PPY aims to raise money for reserve management It is trying to get the government to institute an entrance fee to the reserve and provides technical assistance to the small hotels and restaurants in the area Handicrafts are being produced locally and sold

A major obstacle faced by the reserve in becoming an ecotourism destination is the fact that it has no management plan, although one has been proposed by PPY and is under consideration Without a plan, a fee policy cannot be established, and without a legal framework there can be no binding regulations for developers and tour operators Until there is a management plan for the Ria Celestun reserve, operating within a legal framework, the benefits of ecotourism will remain limited

5 Crooked Tree Wildlife Sanctuary, Belize

The Crooked Tree Wildlife Sanctuary, just outside Belize City, was declared in 1984 to protect resident and migrant birds It consists of a network of inland lagoons, swamps and waterways The Jabiru stork, one of the largest flying birds in the world with a wingspan of 10 to 12 feet, can be seen in the sanctuary, which is managed by the Belize Audubon Society (BAS)

Crooked Tree Village is located on an island within a significant bird habitat Historically, the primary livelihoods in the area have been cattle farming, agriculture and small-scale commercial fishing Tourism has recently begun to grow in the area and many residents have started to participate There is a small lodge and food industry and villagers have joined the BAS in managing the reserve

In 1992 the community established a partnership with a large tour operator, International Expeditions, to market cashew nut products under the brand name '*Crooked Tree Cashews, cashews with a cause* Cashews are native to the area The nuts and their products, such as wine and jam, are sold to retail stores throughout the country as well as to visitors The Cashew Harvest Festival, initiated by the partnership with International Expeditions, has attracted more tourists to the area as well as boosting the cashew industry

According to local residents, the natural resources are thriving because visitation is still low However, because there are no formal visitor regulations in the area, resource conservation will certainly become more of an issue as tourism grows

6 The Galapagos Islands, Ecuador

The Galapagos Islands are considered by some as the ultimate ecotourism destination The many unique species of wildlife on the islands are found no where else in the world The Galapagos National Park was declared in 1959 and the first organised tours began arriving in 1969 led by Metropolitan Touring, a tour operator based in Ecuador

The high level of endemism in the Galapagos means that the island habitats are particularly vulnerable to environmental impacts From the beginning, park officials have been concerned about visitor impacts and have established numeric limits for visitors In 1971, the Galapagos National Park established conservation policies for the park and required that all visiting groups be accompanied by a trained naturalist guide The park is zoned for different types of use an intensive use zone accommodates boats with up to 90 passengers, while other areas allow only small boats with up to 12 people

Overall, visitor impacts are being monitored and most conservationists feel the park is being protected However, critics complain that the limits are extended almost every year to make more profits Increased visitation has led to visible impacts such as erosion along sensitive trails, and some plants and animals have been disturbed when guides allow tourists to go off trails to get a better look

The Galapagos National Park provides substantial economic benefits to Ecuador The entrance fee for foreigners is high – about US $80 – with a much lower rate for nationals These fees go to the central government, which redistributes them to the park to cover maintenance costs, as well as to other parks on

the mainland In 1993 US $2 6 million was collected in entrance fees for the Galapagos National Park In a twelve-month period between 1990-91, visitors spent about US $32 6 million on overall tourism to the park including air travel between mainland Ecuador and the islands, park fees, tour vessels and lodging These visitors also spent an estimated $27 5 million on the mainland on their way to Galapagos (Epler, 1993)

Local employment associated with tourism is also impressive Many migrants have recently come from the mainland because of the expanding tourism industry The communities near the park had only about 6 000 people in the early 1980's By 1994 this number had doubled, with 40 percent of the new residents directly employed in tourism-related activities in hotels, as tour guides, in the food industry or selling souvenirs (Carrasco 1994)

Overall, visitor impacts are being monitored and most conservationists feel the park is being protected, although some critics complain that the limits are extended almost every year to make more profits Increased visitation has led to visible impacts such as erosion along sensitive trails, and some plants and animals have been disturbed when guides allow tourists to go off trails to get a better look Tourism has also led to some conflicts among community members There have been disputes over lobster fishing, sea cucumber harvesting and shark fishing Some residents are disgruntled by the park restrictions and have tried to destroy some of the wildlife, killing tortoises and setting fires However, with the high level of international interest in this area, the Galapagos will likely remain a spectacular site to visit

7 John Pennekamp Coral Reef State Park, USA

John Pennekamp Coral Reef State Park in Florida was established in the nineteen-sixties and was the first underwater park in the United States It covers about 70 nautical square miles of coral reefs, seagrass beds and mangrove swamps adjacent to the Key Largo National Marine Sanctuary The park has over 50 000 acres of submerged land and over 2,000 acres of terrestrial lands More than 500 species of fish and 55 varieties of coral are found in its waters Visitors come to scuba dive, snorkel, sail and ride in glass-bottom boats There are 47 campsites, all with electrical hook-ups and water supply

John Pennekamp Coral Reef State Park has established a number of parknerships' with volunteers who perform a variety of functions They maintain the campsites and other facilities, offer environmental education programmes for visitors, improve trails and work with local schoolchildren on special projects for the park

The economic impacts of the park are substantial The park charges entrance fees of about US $5 per vehicle The user fee for campsites is US $25 The park also has a profitable concession agreement with the private sector to operate boat tours The concession operator pays US $25,000 or 12 5% of revenues (whichever is greater) to the park on a monthly basis All of the revenue to the park goes to the Florida State Park Trust Fund to be distributed among the parks in Florida Income from John Pennekamp exceeds its budget needs of US $200,000 annually, so this park helps to fund other parks (TSS, 1997)

In terms of natural resource conservation, there are questions about how well the wildlife is surviving so many visitors to the park It seems the park is managed for maximum economic gains with the unofficial visitor carrying capacity cited as the number of places in the parking lot (TSS, 1997) This park is sometimes regarded as a 'sacrificial' park, one that makes money but sustains high impact from visitation, thereby helping to relieve the pressure on other natural areas While sometimes there is good justification for this kind of park, maintaining the core resources is clearly an important issue for ecotourism and an impact monitoring programme is essential

8 Bonaire Marine Park, Bonaire

The island of Bonaire has a unique marine park that was established in 1979 The park encompasses about 2700 hectares and protects the valuable coral reefs encircling the entire island Bonaire Marine Park is a world-class scuba diving area Consistently voted as one of the five dive destinations in the world, the park has 86 marked dive sites and a system of more than 70 moorings used by dive operators

The park is managed bv an NGO, the Netherlands Antilles National Parks Foundation (STINAPA) STINAPA has a voluntarv board of local professionals responsible for the decision-making, finances and personnel for the area The day to day management of the park is carried out by a full time manager, chief ranger and two additional rangers, who comprise the 'Reef Patrol' Four other staff members, including administrative staff, are shared between the park and STINAPA

Bonaire has a strong record of protecting its marine resources through environmental laws and regulations Spearfishing was banned in 1971, coral was declared protected in 1975, and in 1982 moorings were installed in the Marine Park The park has an extensive research and monitoring program A 1995 studv of the area conducted by the Reef Environmental Foundation concluded Bonaire s waters have more species of fish than occur anywhere else in the Caribbean

The Bonaire Marine Park attracts more than 26,000 divers a year who spend an estimated US $30 million a year in Bonaire The park's US $10 admission fee is used exclusively by the marine park Tourism is providing economic benefits used to maintain the area, produce educational materials, emplov park rangers and provide a visitor centre

THE EVOLUTION CONTINUES

There are manv more natural attractions around the world that are not quite as advanced along the path to ecotourism as the examples presented here Ecotourism destinations face many difficulties in getting established Common problems include a lack of access to information, training and technical assistance for developing attractions Failure to establish partnerships with established tourism interests might mean that small remote attractions miss out on the wider visitor market Inaccessibility due to poor roads can also keep visitors awav Heading the list of obstacles to ecotourism development, however, are financial constraints and a lack of political support

Financial constraints can prevent attractions from investing in programs that could actually generate more income such as concession areas or training in business management Even creating and distributing a promotional brochure is beyond the capacity of some small enterprises Environmental management and monitoring programs, though essential for the long-term success of ecotourism destinations, are expensive and often neglected, leading to excessive visitor impacts Funding deficiencies may stem from a lack of information about potential donors, in the case of protected areas, or reluctance on the part of the private sector to invest in new and perhaps uncertain ecotourism ventures

The lack of political support is particularly noticeable in the case of protected areas or proposed protected areas Parks are not a top priority for government officials, and the conservation of natural resources is still not considered an urgent issue in many developing countries Without the necessary policy and legal framework, protected areas can not take full advantage of ecotourism opportunities Political authorities often acknowledge the importance of economic development in rural communities, where the greatest potential for ecotourism lies, but fail to provide adequate assistance to support ecotourism development, such as low-interest loans or training programs

After a decade of evolving, ecotourism remains a popular concept worldwide, but much remains to be learned about its practical application and value to resource conservation and economic development It seems clear that few sites are currently positioned to maximise the benefits and minimise the costs of this industry However, the documentation of a growing number of ecotourism success stories may provide convincing evidence to governments and donors that ecotourism development deserves both financial and political support

CONCLUSIONS AND RECOMMENDATIONS

The objectives of this study were to determine to what extent tourism is providing sustainable economic benefits to local communities and contributing to natural resource conservation at selected sites utilised as nature tourism attractions in Jamaica and to investigate the factors promoting success in ecotourism enterprises

In this section we provide a summary of how well the sample sites investigated are accomplishing the goals of ecotourism based on the evaluation criteria established for the study We list factors that are believed to contribute to the success and/or viability of ecotourism in the island and examples of success factors from ecotourism attractions in other countries around the world Factors identified as constraints to ecotourism are also discussed Finally, we make recommendations for improving the ecotourism potential of Jamaica These recommendations may be useful primarily for developers and managers of attractions and the personnel of government agencies responsible for facilitating tourism (including ecotourism) in Jamaica

We evaluated the success of the attractions on the extent to which they were achieving the following

1 Creating income-generation opportunities in the area, especially for resource users,
2 Increasing natural resource protection in their areas of operation,
3 Minimising environmental impacts associated with their presence and activities,
4 Promoting environmental awareness of visitors and residents, and
5 Managing the social and cultural impacts of tourism

The conclusions of this study are discussed under the following headings

- Economic and community benefits of ecotourism
- The role of ecotourism in resource protection
- Factors affecting ecotourism potential

Every site examined in this study is unique in terms of natural resources, community setting, and potential benefits of ecotourism Although we have identified some common factors and principles, the conditions required for viability economic benefits for local people, and long-term protection of natural resources are complex and in many instances beyond the immediate control of the management of attractions A synopsis of our evaluation of the five main sites is presented in Table 1 (Conclusions)

Table 1 (Conclusions)
SUMMARY OF EVALUATION RESULTS FOR CASE STUDIES

Evaluation Criteria	YS FALLS	BLACK RIVER TOURS	VALLEY HIKES	COCKPIT COUNTRY ADVENTURE TOURS	CRANBROOK FLOWER FOREST
Provides economic benefits	**Yes** Provides significant employment to 35 local people businesses and transportation sector	**Yes** to owners employees restaurants and tour operators (the latter get most of the benefits)	**Yes** to guides attraction owners, the transportation sector some farmers and craftspeople (sale of goods)	**Yes** to guides transportation sector B & Bs, food vendors Other spin offs for locals are being developed	**Yes** to employees and transportation sector and suppliers of goods Spin off opportunities are limited
Protects natural resources	**Yes** on site Little influence outside of site though size of site provides a buffer from external threats	**No** tangible conservation Tourism might help to stimulate protection by demonstrating the economic value of resources	**Yes** to a limited extent in area of operation (trail maintenance and seeding) Active in advocacy to promote land stewardship but external threats are severe	**Yes** in terms of local use of sites No control over other severe external threats Tourism may help to generate political support for protection STEA s soil conservation project has positive impact	**Yes** on site Little influence outside of site External threats are increasing although size of site provides buffer
Minimises environmental impacts	**Yes** very well Strictly enforced environmental policies to minimise impacts	**No** Could do more to reduce impacts of boat operations and should not be feeding the crocodiles	**Yes** Impacts are minimal	**Yes** Impacts are minimal	**Somewhat** but could improve some areas such as waste management
Promotes environmental awareness	**Somewhat** Will improve with planned visitor centre	**Somewhat** by providing limited information on tours	**Yes** for staff and visitors More EE needs to be done in the community to help prevent environmental damage from farming	**Yes** for guides staff visitors farmers and local youths More EE needed in community at large as resources are being degraded by unsustainable exploitation	**Too early to say** as EE plans have not been implemented
Manages social impacts	**Yes**	**Somewhat** Although harassment is not a problem many local people feel excluded from benefits of tourism	**Yes** local people are fully integrated into the attraction	**Yes** local people are fully integrated into the attraction	**Yes**

Economic and community benefits of ecotourism

Employment All five of the attractions are generating income for local people to some extent by providing revenue for owners and jobs for local people, especially those employed as tour guides The number of full-time jobs created by each attraction ranged from 7 to 35 In most cases salary levels were the same or somewhat better than those of alternative employment options in the community

Viability of the attractions All of the attractions investigated were experiencing problems that were threatening their economic viability Critical viability factors included the following

- The increasing cost of operations in the context of limited carrying capacity and Jamaica's unstable economy
- High cost of debt servicing for site development and operation (in the case of Cranbrook Flower Forest)
- Environmental threats from pollution, deforestation, unsustainable resource exploitation and poor stewardship of agricultural lands (all cases)
- Degradation of the resources from tour operations (in the case of the Black River Safari tours)
- Low visitation rates (all except YS Falls and Black River Safari tours, which had the opposite problem)

A summary and assessment of factors associated with the viability of each attraction is presented in Table 2 (Conclusions)

Goods The local spin-offs from tourism-related goods are fairly limited Goods purchased from local and regional businesses are mainly related to site maintenance or tour operation and not goods purchased by tourists, except for those marketed directly by the attractions or sold in their gift shops While merchandising has been a successful tool for income generation in some US parks, notably the California State Parks, even the most innovative merchandising we found – that of Valley Hikes, with their attractive T-shirts, bags and area maps – has not been very successful at generating revenue In this case we can not say whether the problem has to do with the type or quality of the souvenirs, the marketing and sales efforts, or the purchasing power of the type of tourists visiting the attraction

Interestingly a very small proportion of visitors to these sites claim to be interested in souvenirs, yet crafts and souvenirs are among the most common potential spin-offs named by people associated with the attractions There is a definite lack of unique or signature craft items or souvenirs associated with these attractions Where crafts are available they are usually no different from those found in the resort areas, where the visitors have usually had ample time to shop before venturing out to remote attractions If local crafts are to be developed for tourists' tastes, there must be some market research and education of the people about what ecotourists are likely to want

Table 2 (Conclusions)
SELECTED CHARACTERISTICS AND VIABILITY FACTORS FOR ATTRACTIONS

	YS FALLS	BLACK RIVER TOURS	VALLEY HIKES	COCKPIT COUNTRY ADVENTURE TOURS	CRANBROOK FLOWER FOREST
Land ownership	Private	Public	Public	Public	Private
Status of land/site	Managed	Unmanaged	Partially managed	Partially managed	Managed
Costs of site development	High	Low	Low	Low	High
Costs of site management	High	Low	Medium	Low	High
Number of employees	35	7-10 each	18 guides	8 guides	20
Fees (US $)	$10 / day	$15 / tour	$20 – 170 / tour	$20 – 40 / tour	$5 50 / day
Number of visitors	± 50 000 / year	> 80 000 / year	< 500 /year	< 500 / year	< 5 000 / year
Target groups of visitors	Wide range	Wide range	Adventure tourists nature tourists hikers	Nature tourists scientists students	Wide range
Economic value of ecotourism for local people compared to alternatives	Better than alternatives in area, but for a limited number of people	Similar to alternatives or slightly better but only for a few people	Valuable as a supplement to other livelihoods	Valuable as a supplement to other livelihoods	Similar to or slightly better than farming (the main alternative for workers)
Critical viability factors	Increasing cost of operations in the context of limited carrying capacity and unstable economy	Degradation of the resources from a variety of factors including tour operations and pollution	Environmental threats from poor stewardship especially in agriculture, low visitation rates	Environmental threats from resource exploitation low visitation rates	Low visitation high cost of debt servicing for site development and operation
Other viability factors	External threats (watershed damage)	Social conflicts over resource use and benefits high cost of tour packages	Regulation and licensing issues	Permit and licensing issues	Incomplete product development for ecotourism impending degradation of adjacent lands
Recommendations	Plan to increase entrance fees parallel to increased costs seek agreement with tour companies or find alternatives	Legal protection and established guidelines for all activities according to carrying capacity of resources	Education and enforcement regarding land use marketing of destination as a whole	Legal protection of area enforcement of existing laws environmental education regarding land use	Improve information services and mechanisms to solicit income market to specific target groups
Long-term economic potential of ecotourism at these sites	Likely unless economic conditions deteriorate drastically	Declining Will depend on effective regulation of resource use	Possible but depends on status of resources and visitation to Portland as a destination	Possible but depends on status of resources and ability to manage and market them for tourism	Likely if start-up period can be weathered

Services In the service sector ecotourism is providing significant benefits to local concessionaires, restaurants and roadside food vendors, and the transportation sector, particularly the major tour companies that bring foreign tourists to the well-established attractions Spin-offs in the accommodations sector are expected to increase as more residents gear up to provide 'bed and breakfast' lodging to ecotourists However at present the supply of accommodations in the areas near to the attractions investigated appears to exceed the demand created by visitation to the attractions, mainly because the

majority of visitors are day-trippers from established resort areas Destination marketing is one approach being taken to try to increase stopover visitation to these areas

Other community benefits In the case of the community-based ecotourism enterprises, tourism is providing some economic benefits from conservation that can not be calculated For example, Valley Hikes maintains trails used extensively by farmers in the Rio Grande Valley, and economic benefits are derived from soil conservation in the Cockpit Country promoted by STEA, the parent company of Cockpit Country Adventure Tours Two of the privately-run attractions, YS Falls and Cranbrook Flower Forest were also involved in assisting local residents in a variety of ways

The role of ecotourism in resource protection

Internal environmental impacts Most of the attractions investigated are successfully minimising the environmental impacts associated with their own presence and activities, mainly through strictly applied environmental policies and guidelines, environmental education of their staff, guides and visitors, and vigilance in monitoring the numbers and behaviour of visitors Only one type of attraction, the boat tours on the Black River, was judged to be contributing to environmental degradation in ways that could be reduced or avoided

Resource conservation In terms of ecosystem protection on a broader scale, however what we are seeing in Jamaica is that there is little, if any, natural resource conservation occurring in the areas surrounding the attractions as a result of tourism However, tourism is helping to protect some fairly large tracts of private land by generating income that allows the land to remain undeveloped for alternative uses, but it is only happening by virtue of the private ownership and control of the land All of the attractions are facing increasingly serious environmental degradation, mainly deforestation and pollution from sources largely beyond their immediate control Also, damage to nature tour sites by their recreational use by local residents poses a threat to the ecotourism potential of many natural beauty spots in Jamaica, particularly caves, springs, rivers, and waterfalls

The short-term economic potential of ecotourism for local communities is at present very limited The incentives for resource protection are more likely to come through educational and outreach programs to improve stewardship by farmers and other resource users, as demonstrated by STEA with their soil conservation program Ultimately the legal protection of the resources and enforcement of conservation measures will be essential for the long-term survival of ecotourism in areas with open public access

Environmental education Increased awareness of Jamaica's natural resources appears to be a significant benefit of ecotourism, especially for local people Programs such as STEA's "Youth for the Environment' are a great way to stimulate the local demand for ecotourism while educating people about their natural heritage and environmental conservation Funding for this program has also generated benefits for the local community as well as the tour and transportation companies involved

To address external environmental threats the concerned managers of some attractions are involved in community environmental education programs and projects as well as advocacy efforts directed at persuading the government to enforce environmental laws and/or establish protected areas For these managers, providing opportunities for local people to learn about ecotourism, be involved in ecotourism development in their community, and to benefit financially are seen as key factors in promoting conservation of the natural resources on which ecotourism depends For other managers, involving the community in ecotourism is not a particular goal of the attraction

Changes in behaviour If the economic benefits of tourism are to provide incentives for resource conservation some of the people damaging or harvesting the resources will have to be converted to tourism entrepreneurs While this has been achieved with fishermen in Belize becoming water taxi

operators and snorkelling guides, it is highly unlikely to succeed with most farmers and yam stick contractors in Jamaica In reality, the people who are cutting down the forests in Jamaica are doing what they can to make a certain profit in a short time (while the trees last), in contrast to the long-term vision of those who seek to benefit from ecotourism As mentioned above, resource protection will only come about through improved stewardship by all resource users, backed up by legal protection and enforcement measures

Factors affecting ecotourism potential

The potential of ecotourism to provide sustained economic benefits will ultimately depend on the attractions' long-term financial viability This, in turn, will depend on many other factors, some related to the policies and management of the attractions themselves, and some beyond their control Factors largely beyond the control of managers include environmental degradation from external sources, the image of Jamaica as a tourism destination, the increasing economic costs of operating attractions, and the limited carrying capacity of the sites on which their business is based

Among the most important management considerations affecting the viability of the attractions are their ability to protect the natural resources on which they depend and to create a mutually beneficial relationship between the attraction and the residents of surrounding communities Viability will also depend on how well managers develop their ecotourism product or activity and market the attraction to the appropriate target audiences

External environmental factors Deforestation and environmental pollution are perhaps the most serious threats to ecotourism in Jamaica Unfortunately, deforestation is a widespread problem in Jamaica, and there are many constraints to the implementation of effective forest conservation measures For example where timber is cut on unmanaged public lands, there is no incentive for sustainable harvesting, and reforestation efforts are hindered by a chronic shortage of tree seedlings (USAID/Jamaica, 1998)

Waste management emerges as an issue of national importance in terms of environmental threats to ecotourism (and tourism in general) Garbage – particularly disposable plastic soft drink bottles—is seen everywhere in villages and townships on sidewalks and roads, in gullies, on paths and trails in the forest This is a matter to be dealt with both by education and enforcement However, the present anti-litter law is inadequate and needs revision

In order for any ecotourism project to be sustainable, it is essential that managers or operators of tours or attractions become involved in addressing the external environmental threats to the site There are no quick solutions to resource conservation There must be a long-term commitment to the sustainable use and conservation of ecologically important areas

Carrying capacity Economic benefits from nature tourism are limited by the fragility of natural attractions and the need to restrict visitation in order to preserve them While the more spectacular sites such as YS Falls may attract a greater numbers of visitors, they require more intensive and costly management measures in order to facilitate sustainable use of the site for tourism If visitation is kept within the limits of the carrying capacity of the site, currently the only sure way to increase revenues (and benefits) is for the entrance fees to be increased This was one of the possibilities we investigated

Visitor statistics and market research Although not statistically significant due to the small sample sizes, the visitor surveys provided some insight into the expectations, preferences and willingness to pay of visitors to natural attractions in Jamaica In general, we found that foreigners are mainly seeking unspoilt natural sites to enjoy simply for their scenic beauty and wildlife, while many local visitors regard

natural sites as convenient settings for social or family get-togethers To overseas-based visitors, the most valued attributes of ecotourism attractions are their "naturalness" – unspoilt natural beauty in a peaceful, quiet setting To many of the local visitors, the site would be enhanced by music, entertainment, special events, or opportunities to participate in games or other physical activities Since most of the visitors are foreigners and they provide by far the majority of income for these attractions, managers should carefully weigh the consequences of investing in additional services that might be outside of the scope of nature tourism and detract from the natural values of the sites

In general we found that most attractions do not have effective mechanisms of gathering and analysing information about their visitors Improved collection of visitor statistics is needed both at the site level and at the national level which requires an approach designed to assess the economic value and potential of different market sectors such as ecotourism, heritage tourism, and other promising niche markets

A new approach to market research might reveal the answers to some questions we encountered during this study For example we thought it would be interesting to determine the proportion of visitors to major nature attractions from all-inclusives as opposed to other types of accommodations We wondered whether it would be worth marketing ecotourism attractions to "all-inclusive" tourists already in the island or whether ecotourism marketing had to target a completely different type of potential tourist

Willingness to pay We found that the matter of tourists' willingness to pay for attractions depends largely on how much they have to pay for transportation to the site For YS Falls and the Black River boat tours, without exception, all of the visitors who had paid for tour packages to these attractions indicated that the tour package was too expensive In contrast, all of the foreign tourists who had arranged their own transportation found the entrance fees reasonable or indicated that they would be willing to pay more (up to double the entrance fees in some instances) We conclude that tour packages seem to be expensive compared to the portion going towards the entrance fees of the attractions themselves and their high costs are affecting visitors' value-for-money judgements and the viability of the attractions themselves especially in light of their need to limit visitor numbers Elsewhere in the transportation sector rates vary greatly for tourists and locals, and between individual operators for the same destinations Some tourists said they felt they were being "ripped off" because of the double standard for locals and foreigners

Product development Most of the attractions neglected to use sufficient natural history or cultural heritage information to help promote their attractions or market them to a more diverse audience For example by incorporating information about the historic significance of the Black River area, the safari tour attractions might bring in tourists primarily interested in architectural or cultural heritage, not just those keen on seeing crocodiles These attractions have also not made the best use of their bases of operation by emphasising the historic associations of their own sites or using them as settings for interpretive displays Providing visual and printed information about the site is a practical way to enhance the visitor s experience and improve the quality of the attraction without developing additional services and activities

There is also a need for innovative developments such as heritage trails, nature trails, roadside nature reserves with interpretive signs, ecotourism programs for children (such as nature camps and field trips), and other mechanisms for improving the image of Jamaica as an ecotourism destination

Marketing Nature, culture adventure, and sports are currently the four main tourism motivators (Ricardo Betancourt, in a presentation at the Green Tourism Conference, Port Antonio, May 2-3, 1998) However, according to Patullo (1996), " the emphasis among Caribbean governments has been to develop mainstream tourism, to improve the arrival statistics (which inevitably has a social and

environmental impact) with marketing campaigns and so fuel that 'engine of growth' " We suggest that a different approach will be necessary to facilitate the success of ecotourism in Jamaica

The marketing of ecotourism attractions in Jamaica might possibly be improved if there were greater appreciation among Jamaicans for the native wildlife and resources More effort and resources must also be put into developing and promoting niche markets within ecotourism, such as community tourism, heritage tourism (history archaeology, architecture, folk culture, and so on), research tourism, and education tourism

Community involvement The issue of community involvement is quite complicated The best examples are found in NGO-driven ecotourism ventures such as Valley Hikes and Cockpit Country Adventure Tours, both of which have a very holistic approach to community development While the economic benefits are much less than at some of the private attractions, the people of the area have a realistic idea of the situation and are not overly dependent on tourism Two of the private attractions – YS Falls and Cranbrook Flower Forest – are very well integrated with local communities, but the others, the Black River safari tours, are seen as competitors with local people, both for the use of the natural resources and the economic benefits of tourism At least one manager did not agree with the premise that the local community should be involved in planning an attraction and have opportunities to derive economic benefits and wondered why other people should be allowed to tell him what to do with his own money

The matter of determining stakeholders for a private site or indeed any natural resources remains a sensitive issue For example, the entire city of Montego Bay relies on water supplied by the recharge area of the Cockpit Country but the protection of this unique ecosystem has been left to a handful of scientists, environmentalists, and concerned residents of communities on the edge of the area Another unanswered question regarding community involvement was the extent of a landowner's obligation to develop his land in accordance with the needs of the people around him Apart from an obligation to practise sound stewardship of resources, does the private landowner have an obligation to involve his neighbours in the benefits of ecotourism development?

The need for protected areas According to the Environmental Profile of Jamaica (GOJ and Field, 1987) 'Jamaica has been slow in developing national parks for conservation, watershed protection and recreational uses The issue has not been seen as sufficiently important by the general public, and governments have been reluctant to release scarce resources for a project the value of which appears to bring benefit only in the long term " While this may have been true a decade ago, there is now widespread agreement among many sectors of the Jamaican public that protected areas are essential for a variety of economic and environmental reasons This has also been acknowledged by the Government of Jamaica and expressed in several official policy documents

Policy, regulation and licensing One significant obstacle to the development and marketing of nature tours is the absence of a suitable policy and practical regulations for both tour operators and groups concerned with the use, management and protection of natural areas located within the public domain (for example, government-owned Forest Reserves) Partly for this reason, the ecotourism potential of wilderness areas such as the Cockpit Country remains largely untapped Existing use of these areas for nature tourism or scientific research provides few economic benefits for local people, and there are no mechanisms in place to allow revenue to contribute to resource conservation

The existing regulatory framework does not facilitate the needs of small-scale, low-impact ecotourism projects, which nevertheless have the potential to provide some economic benefits, however limited, to local residents, as well as the mainly intangible but important role of environmental education In terms of government requirements, the main stumbling blocks for small-scale ecotourism projects include

- Permit and licence requirements from the NRCA (which involves application and licence fees)
- Licence from the Jamaica Tourist board
- Public Liability Insurance
- ' Proper security arrangements" (uniformed guards from companies approved by the Ministry of National Security)

One point we would like to make is that **all** tourism entities should be required to be 'green' and to fulfil basic developmental and operational standards Aside from this, regulation and licensing interventions should be kept to a minimum and the private sector allowed to take the lead in developing unique ecotourism attractions that contribute to conservation We see progress towards this ideal in the form of the Government's recent Green Tourism Conference and the independent 'greening' efforts of the private sector Another indication of the trend towards making all tourism 'green' is the fact that the Annual CTO Conference on Ecotourism has now been superseded by an annual conference on 'Sustainable Tourism " We await with interest the results of the Master Plan for Sustainable Tourism now under preparation

The image of Jamaica social and cultural factors The success of ecotourism in Jamaica depends on the image of Jamaica as a tourism destination on the world market, and that in turn depends on how the destination is marketed as well as the feedback from visitors about their experiences The problem of tourist harassment has in recent years tarnished Jamaica's image as a tourism destination, and if not eliminated or reduced will be detrimental to the growth of tourism here Unpleasant encounters with local people will certainly tend to deter visitors from returning to Jamaica, and bad publicity may keep others away The incidence of violent crime in Jamaica is a national problem that needs urgent attention, and not just for the sake of tourism

Whereas in an urban resort centre tourists might expect and tolerate a certain level of "hustling," those seeking unspoiled natural attractions and contact with ordinary Jamaican people may be especially sensitive to harassment encountered on an "ecotour " Great care must be taken to develop and manage ecotourism sites and attractions in such a way as to avoid the growth of a harassment problem from area residents In areas with ecotourism potential, education and training for ecotourism development can help to keep residents' expectations of the benefits of tourism on a realistic level, help to generate goodwill of the community towards tourists, and improve security In general, privately owned sites and attractions stand a much better chance of avoiding a harassment problem than Government-managed attractions, where the control of surrounding areas is ineffective or non-existent

Success factors for ecotourism attractions

- The attractions have diverse and interesting settings, all of them with visible wildlife, especially birds, beautiful trees (mangroves in the case of Black River), and access to rivers Some have spectacular assets – flagship species such as crocodiles in the Black River or the splendid waterfalls at YS
- The sites have been developed in harmony with natural and cultural surroundings and their infrastructure is environment-friendly
- The attractions have environmental policies and operate along 'green' guidelines in order to protect natural resources
- As part of carrying capacity policies the attractions have set conservative limits to visitor numbers even without hard data on limits of acceptable change

- The attractions effectively monitor and control visitor impacts
- The sites are accessible
- The attractions have implemented safety measures and guides/staff have been properly trained
- The sites are relatively secure and perceived to be safe
- The attractions are well integrated into the surrounding community, either through longstanding harmonious relationships with property owners (as in the case of YS and Cranbrook) or by deliberate efforts to involve local people in tourism through membership in the organisation operating the attraction (as with Valley Hikes and STEA)
- The residents of the area have realistic expectations of the economic potential of ecotourism
- Visitors to the area encounter genuine hospitality and are not harassed or pressured to purchase goods or services
- The attractions have been extensively marketed through traditional as well as newer channels – the Jamaica Tourist Board, tour companies, tourist guide books, and the Internet
- The entrance fees or tour prices are considered reasonable by visitors
- There has been no unnecessary investment in goods and services not wanted by tourists
- Guides have been well trained and are knowledgeable about the natural and cultural history of the site
- Employees of the attraction are from the surrounding communities
- The management of the attraction has strong links with community groups, NGOs and government agencies that operate within the area of the attraction
- Large privately owned and managed areas are better conserved than public lands with open access
- Some ecotourism enterprises have publicised the need for protection of outstanding natural resources and may be helping to influence political decisions to have areas declared national parks or protected areas

Negative factors for ecotourism attractions

- Resource degradation is the most serious constraint to successful ecotourism This is in the form of major environmental threats such as deforestation and pollution from external sources, but also some internal impacts of boating and the feeding of crocodiles on the Black River (none of the other attractions is actually degrading resources)
- Conflicting agendas for land use and resource exploitation cause problems for ecotourism Short-term needs are more pressing than the perceived long-term benefits of ecotourism
- Lack of legal protection for important natural areas with ecotourism potential, and the lack of a legal framework to allow fees to be collected and used for management and conservation of these areas
- Lack of policies planning and basic guidelines for ALL resource users may lead to further resource degradation
- Lack of enforced regulations for resources use, such as rules of the river for boat tours, forest protection in the Cockpit Country, and land clearance regulations in the Rio Grande Valley
- Lack of dialogue between attractions and tour operators and all users of the ecosystem
- The presence of independent operators (guides, boat operators) in open access areas that are at or over their carrying capacity These people want 'a piece of the (ecotourism) pie' – like the established operators – but are compounding the damage
- Economic constraints include increasing management costs and limits to visitor numbers (by necessity or otherwise) in the context of an unstable national economy
- Inability to charge more for entrance fees due to tour packages driving up visitor costs, making attractions less viable
- Lack of mechanisms to solicit income, such as environment-friendly food and drinks concessions and gift shops stocked with unique souvenirs and printed materials on the environment, culture and resources Specifically there is a lack of unique craft items and other souvenirs to generate income
- Lack of visitor information and environmental education materials and/or displays Many attractions don't make the most of resources in terms of providing information that would enhance the knowledge and experience of tourists and solicit contributions for conservation
- Failure of attractions to provide opportunities for interaction with locals, such as a walk through the town in the case of most Black River tours
- Social problems resulting from residents near the attraction becoming overly dependent on tourism and exploitative towards visitors
- Inadequate market research and collection of visitor statistics
- Marketing not reaching best targets, or missing important messages such as information about diversity of resources in areas, conservation issues, and associated heritage values
- Problems with meeting licensing requirements, which affects ability to market through official channels

Ecotourism success factors from other countries

- Ecotourism is more successful where community residents have been given an opportunity to play a meaningful role in ecotourism development (such as planning, ownership and management) Participation at this level also allows for a more realistic view of the ability of ecotourism to generate employment and income
- A government that is involved in ecotourism helps to make it successful In particular, national ecotourism policy statements offer guidance and demonstrate commitment
- Ecotourism thrives best where natural resources are protected However, as tourism is developed the status of the resources must be carefully monitored
- A strong environmental education programme is essential EE is one of the main features if not the premiere element of a successful nature trip

- Integrating the energy and the needs of the private sector as well as the interests of consumers into the conservation process helps to make ecotourism a success It is, after all, a business

Recommendations for managers of attractions

- Minimise environmental impacts and get involved in dealing with external environmental threats
- Market research is first priority before any product development is undertaken
- Improve collection of visitor statistics in order to improve product and market it effectively
- Use innovative merchandising to 'sell' the product as well as make money
- Work with the government to implement strategies for ecotourism development
- Address the complex transportation issues in the travel industry (this recommendation also directed at government agencies)
- Educate the local community and provide opportunities for involvement in order to mitigate social factors such as harassment
- Regarding the crime problem, perhaps a community-based neighbourhood watch-type approach to conducting ecotours would help to protect tourists and the business

Recommendations for government agencies responsible for tourism

- Review the conservation mission of the country and fortify as necessary
- Gather and review all existing reports and recommendations on nature and heritage tourism and integrate them into tourism planning at the national level
- Review the current government policies that relate to ecotourism and decide if they are reasonable and adequate to protect natural resources
- Expedite the implementation of a system of parks and protected areas so that the country will continue to have a base to attract nature tourists
- Work with the private sector to develop plans and implement strategies for ecotourism development
- Apply basic environmental standards to ALL tourism operations (the "greening" of tourism), then add criteria specific to resource conservation for those being marketed as nature tourism/ ecotourism operations

Be more flexible in licensing to accommodate innovative, community-based approaches to ecotourism development

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Case study # 1 YS FALLS

Description of the attraction

Although not as well known as the famous Dunn's River falls, the YS Falls are considered by many to be the most beautiful waterfalls in Jamaica The falls are a designated Natural Heritage Site under the National Heritage Site Act of 1985

The YS River flows through the scenic countryside of a private, 2000-acre cattle property and horse farm near Middle Quarters in the parish of St Elizabeth The falls themselves are a magnificent series of cascades, terraces and deep pools along a 120-foot descent of the river's course In the vicinity of the falls the riverbanks are lined with natural forest inhabited by a variety of indigenous fauna, including endemic species of birds such as the streamertail hummingbird (*Trochilus polytmus*) and the Jamaican becard (*Pachyramphus niger*) (observed nesting), butterflies and other insects, and land snails The river itself is home to native freshwater shrimp known as "janga", crabs fish, and several species of river snails Conspicuous among the flora are native wild orchids, bromeliads, and the long vines which overhang the river and falls There are several magnificent trees along the river and elsewhere on the property

The entrance complex consists of a ticket office, souvenir shop, bathrooms, bar and informal restaurant with picnic tables and benches Visitors are taken to the falls, located about a mile away, aboard tractor-drawn jitneys The gravel road winds through the pastures of the YS Estate, where pedigreed cattle and thoroughbred racehorses graze in the shade of huge, ancient guango trees (*Saman samanea*) Visitors are dropped off and picked up at the edge of a five-acre landscaped compound near the falls, from which they walk a short distance to the river and falls Visitors can hike up the trail alongside the river, swim in the pools go bird watching, have a picnic, or simply enjoy the scenery The more adventurous can swing out over the largest pool on a rope suspended from a huge tree, and let go to fall into the deepest of the pools

Geographic setting

YS Falls is located near the southwest coast of Jamaica in an area that is becoming popular as an 'alternative tourism destination The region is attracting tourists who prefer a more authentic experience of traditional Jamaican culture such as that found in fishing villages and agrarian communities, and those who appreciate the unhurried pace and picturesque scenery of the rural countryside

A few miles away from YS is Bamboo Avenue, where the main road between Lacovia and Middle Quarters passes through a scenic arbour formed by the arching fronds of tall bamboo plants which line the roadway for over two miles Other nearby attractions include the wildlife boat tours on the Black River, the Great Morass (Jamaica's largest wetland, rich in wildlife such as waterfowl and crocodiles), and the seafront town of Black River, with its picturesque old residences churches, and courthouse It was here in 1893 that electricity was first installed in a house in Jamaica the Waterloo, whose owner also imported the first motor car into the island Just west of YS is the village of Middle Quarters, renowned for its 'pepper shrimp' (a traditional product of the Great Morass), and further south is the fishing village-turned resort community of Treasure Beach

The YS property itself has a varied farming history reflecting the agricultural economy of this region of Jamaica During most of the 18th and 19th centuries the southwest coast was the hub of a thriving trade in logwood, which was exported all over the world from the port of Black River Over the years, YS has produced logwood, sugar cane (for sugar and rum), cattle, papayas, and racehorses The name 'YS' is the shortest place name in Jamaica, and is believed to be derived from the initials of the surnames Yates and Scott, owners of the farm in the late 17th century The property has been in the family of the current owners, the Brownes, since 1887

Community setting

YS is located two miles north of the main southern coastal highway (the A2), on the secondary road (B6), which cuts across the southwest edge of the Cockpit Country and leads to Montego Bay The B6 intersects the A2 one mile east of Middle Quarters

There are five small communities within three miles of the property New Holland, White Hill, Redgate, Four Paths, and Bailey Ground Ginger Hill and Ipswich are villages about five miles away With the exception of the security guards contracted from a firm based in Black River, all of the employees of the YS Falls attraction come from these nearby communities Apart from employment at YS, the main occupation in the area is farming, whether cultivation of smallholdings or work on larger estates such as Holland and YS There are one or two small shops and bars and a limestone/silica quarry, but no other significant businesses within a three-mile radius of YS

Accessibility

Access to YS Falls is by major, signposted thoroughfares, except for the last few miles on a smaller, secondary road However, it is somewhat remote from other tourist attractions on the south coast, at least an hour's drive from the resort centres of Negril and Mandeville, and between two and four hours from the main resort areas of the north coast (Montego Bay and Ocho Rios)

Management structure

The attraction is managed bv the son of the YS property owners, from whom the site is leased for $800,000 per year

ECONOMIC INFORMATION

Entrance fees

The entrance fees to the attraction are $200 for residents of Jamaica, and US $10 (JA $350) for tourists from abroad These fees apply to independent travellers, or "walk-ins" Revenue to YS from tour package clients is slightlv lower at US $8 each There are no other user fees or activity fees associated with the site

The main consideration in establishing the fee structure was the projected cost of operation relative to the number of guests expected and the maximum desirable number Secondly, consideration was given to the financial status of target groups For example, a reduced entrance fee was established for residents of Jamaica, and special rates are sometimes given to school groups if they come early in the day Otherwise, groups are not encouraged or given discounts In fact a sign at the turn-off from the main road advises that groups of over 25 people are not admitted

Visitor statistics

The management of YS Falls reports an average daily rate of 170 visitors in the first seven months of 1998 (30,269 visitors from 177 business days) The typical daily rate ranges from 135 per day in the slower months, September through December, and 180 to 200 per day during the busiest periods, January through August, which is the busiest month of all [1]

Table YS 1 shows visitor statistics for 1995 and 1996 as reported to the Jamaica Tourist Board, and 1997 figures provided by the manager Foreign visitors, most of them on package tours, spend only one or two hours at the falls, while locals tend to stay longer (three to four hours)

1 The daily average of 170 visitors for 1998 represents the busiest months of the year, not the annual daily average, which is expected to be lower

Table YS 1

VISITOR STATISTICS FOR YS FALLS (1995-1997)

	1995		1996		1997	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
Foreigners	31,902	83 28	33,089	82 57	36,896*	82 00*
Locals	6,404	16 72	6,983	17 43	8,099*	18 00*
Total visitors	**38,306**	100 00	**40,072**	100 00	**44,995**	100 00
Total days	311		303		303	
Daily average	123		132		149	
Increase			**+ 4 6%**		**+ 12 3%**	

* Estimated proportions based on trends of previous years

Trends in visitation In 1995 and 1996 foreigners accounted for about 83% of visitors to YS Falls Of these, 65% were from Europe (manager's estimate) The proportions of foreign and local visitors for 1997 (82% and 18% respectively) were calculated on the basis of the figures and trends of the previous two years

Estimates for 1997 indicate a substantial increase in visitation (12 3%) over the previous year There was a slight increase in the proportion of local visitors, from 16 72% in 1995 to 17 43% in 1996 Although demand for the attraction is obviously increasing, visitation is considered by the management to be at or near the maximum allowable level The manager reports that more local visitors are turned away because they tend to arrive in large groups later in the day when the daily limit has already been reached

Visitor satisfaction The main avenue for visitor feedback is the guest book, located at the entrance complex Time did not permit a detailed examination of the contents, but a quick glance showed a majority of very positive comments According to the manager the most common complaint concerned the lack of toilet facilities at the falls which a newly purchased composting toilet will remedy

Our impressions of this site as a natural attraction were altogether very positive, with the highlight being the natural unspoiled scenery flora and fauna Although our visitor survey sample was quite small and the results are not statistically significant the responses provided some useful insights We found an extremely high level of satisfaction among visitors surveyed at this site, especially the overseas tourists Six out of seven visitors interviewed expressed appreciation of the "naturalness" of the site, and found nothing wanting in terms of goods or services The results of the visitor surveys at YS Falls are presented in Table YS 2

The only visitor who was not totally satisfied with the attraction was a Jamaican, who also found the entry fee too high In his opinion he shouldn't have to pay so much for something he could see any day (the scenery), and that the site lacked things to do" entertainment (such as a roller coaster), activities (such as horseback riding), and guided tours According to the manager, staff and other interviewees, this is a reaction that is quite typical of local visitors but almost never encountered among the foreign tourists

Table YS 2
RESULTS OF VISITOR SURVEYS AT YS FALLS

COUNTRY	TRANSPORTATION COSTS	ENTRANCE FEE PAID	ENTRANCE FEE OK?	WOULD PAY MORE?	HOW MUCH?	DEMAND FOR PRODUCTS	DEMAND FOR SERVICES	COMMENTS
CANADA	US $20 taxi	US $10	Y	Y	US $20	N	N	Keep it natural Willing to make donation to wildlife conservation
USA	*US $50 car rental*	*US $10*	Y	Y	US $20	N	N	Beautiful place, keep it natural
USA	US $20 taxi	US $10	Y	N		N	N	Came for nature, keep site natural, avoid commercialisation
FRANCE	US $68 total YS/BR package from Montego Bay		Y	N	–	N	N	Enjoyed the site as is Tour package made costs high – main reason why not willing to pay more
FRANCE	US $68 total YS/BR package from Montego Bay		Y	N	–	N	N	Enjoyed YS as is, but tour package expensive
JAMAICA (US citizen)	Own car	JA $200	Y	Y	JA $350	N	N	Keep it natural, don't do anything else to site
JAMAICA	JA $400	JA $200	N	N	-	N	Y	Scenery alone is not enough of an attraction Would like games, a roller coaster, horseback riding, guided tours If these activities were provided would then consider fee acceptable

Three out of the seven visitors said they would pay more for the entry fee, of these, two would be willing to pay double (US $20) and the other a US citizen residing in Jamaica would pay $350, or 75% more than the existing rate Two of the foreign visitors who said that they would not pay more had purchased a package tour for US $68, which included a Black River boat trip and lunch They explained that the high cost of the package was the main reason for their negative response to this question and that they were satisfied with the site in every other way

Revenue

The gross annual revenue for 1997 was reported as $10,800,000 in ticket sales, $300,000 in bar sales, and $1,075 000 in sales at the gift shop, amounting to a total of $12,175,000 However, 1997 was considered a year of exceptionally high capital investment for the attraction (a new tractor was purchased, as well as a composting toilet), and operating costs were almost 100 percent of revenue (see Table YS 3 for selected operating costs) In the manager's words, in 1997 they barely broke even Nevertheless, he considers the attraction a viable business Although there is no written business plan, the attraction is evolving all the time in response to needs

Comparison of foreign and local markets Package tours catering to overseas visitors provide an estimated 70 to75% of the attraction's visitors (manager's estimate) With revenue at US $8 for each package tour client, this

amounts to approximately JA $8 8 to $9 5 million, representing 82 to 88% of revenue 2 The remainder of revenue comes from foreign and local walk-in visitors Locals comprise approximately 17% of visitors, therefore the maximum possible revenue from local visitors (adult rate) would be $1 6 million, or 15% of gross revenue 3 Since many (if not most) of the local visitors might be children, the actual proportion of revenue from the local market is likely to be less than this figure

Constraints to revenue generation The operators of YS Falls are committed to maintaining visitation at a level that preserves the environmental integrity and peaceful ambience of the site For this reason, no more than 200 visitors are admitted to the attraction daily Limited visitation translates into limited earnings, unless entrance fees are increased

Entrance fees for foreign tourists were increased from US $6 in 1995 and 1996 to US $9 in 1997, and US $10 in 1998 No increase is planned for walk-ins in 1999, but tour operators have been given a year's notice of an increase in the fee for tour package clients to US $9 in 1999 Although resistance is expected from tour operators, the attraction considers this increase essential to maintaining viability

According to the manager of YS Falls, the revaluation of the Jamaican dollar in 1995 from approximately JA $38 US $1 to JA $35 US $1 resulted in a 7% decline in income for the attraction, while the cost of wages has increased by 75% over the last three years Visitation has increased steadily over this period, which so far has helped to compensate for the increased operating costs and decline in the value of income However, if this economic trend continues it will have serious implications for the sustainability of the attraction

Marketing and promotion

Information on visitor preferences is derived mostly from written comments in the guest book and feedback from guides and site attendants as no formal market research has been conducted for the attraction A planned visitor centre will be used to provide more visitor feedback opportunities and gather information for a visitor database

The attraction is listed in at least three local tourist guides, including the Jamaica Tourist Board publication *Focus on Jamaica* the *Negril Guide*, and *Jamaica Pocket Guide* It is mentioned in all of the major travel books for Jamaica such as the *Insight* guide (Zach and Hoefer, 1996), the *Lonely Planet* guide (Baker, 1996), the *Adventure Guide to Jamaica* (Cohen 1988), and the locally produced *Tour Jamaica* (Morris, 1995) It is also featured on a number of Internet websites covering travel in Jamaica

Joint brochures have been produced with St Elizabeth Safari and Black River Safari Tours, with which YS Falls is marketed as part of a popular tour package Tours are booked through several local agencies and 12 to 15 tour companies Tours to YS are occasionally paired with the Appleton sugar factory tour There is no telephone service at YS but messages are routed through the Jamaica Tourist Board office in Black River Considering that the attraction has been developed and marketed with such a limitation on communications, it has achieved remarkable success in marketing As already mentioned, the popularity of the attraction has grown over the years to the extent that visitation is at or near carrying capacity For this reason, apart from the original marketing measures outlined above no special promotional efforts are made to attract visitors

Operating costs

Examples of some operating costs for 1997 are presented in Table YS 3 These figures represent direct economic contributions of the attraction to the community in the form of salaries, as well as expenditures on site maintenance for resource protection Net employment benefits to local staff members, apart from occasional labour, amounted to almost $5 million in 1997 Approximately $1 9 million was spent on conservation of the site, including labour, grounds maintenance purchase of a composting toilet, and road maintenance

2 70% of 44,995 = 31 497 x US $8 = US $251,976 x 35 = JA $8,819,160 = 81 7% of JA $10 8 million (gross revenue) 75% of 44 995 = 33 746 x US $8 = US $269 968 x 35 = JA $9,448,880 = 87 5% of gross
3 18% x 44 995 = 8 099 locals x J$200 = $1,619 800 = 15% of gross revenue

In addition there was significant expenditure on tyres, oils, fuel and other supplies purchased outside of the community, but these figures were not requested for the study

Table YS 3 - **SELECTED OPERATING COSTS AT YS FALLS (1997)**

ITEM	AMOUNT (JA $)	COMMENTS
Staff salaries	4,940,000	Figure does not include security services or payroll taxes About 889,500 of the amount was for site conservation labour 4
Security services	1,000,000	This is the only labour from outside the immediate communities
Payroll taxes	1,300,000	NIS, NHT, PAYE income taxes, Education Tax, and HEART contributions
Building maintenance	347,000	Includes some hardware items
Grounds maintenance	470,000	Includes labour for bushing of roadsides and some hardware items
Purchase of composting toilet	315,000	Does not include building to house it (not yet constructed) Estimated cost of building $150,000 + labour
Vehicles and vehicle maintenance	700,000	Includes 200,000 in labour to off-site mechanic
Road maintenance	200 000	150,000 in crushed stone and marl and 50,000 in labour
General Consumption Tax (GCT)	714 000	From admissions and bar sales
GCT on gift shop sales	133 811	
Lease of site	800,000	Annual rate

Employment

The attraction has created 35 permanent, full-time staff positions In slower periods, some positions drop from a 6-day to a 5-day workweek The payroll is approximately $120,000 per week in salaries and payroll taxes, or $6 24 million per year Payroll taxes5 account for about $25,000 per week, therefore net salaries are about $95,000 per week, or $4 94 million per year

The carrying capacity policy outlined above means that there is limited scope for expansion of permanent employment opportunities at the site However, the management offers occasional short-term work in road maintenance, including bushing of roadsides, which means that the net benefits to the community from salaries are slightly higher than reported above

Apart from the manager's position, the kinds of jobs created include

- Drivers and sidemen for jitneys
- Lifeguards
- Security guards
- Gardeners
- Cashiers
- Mechanics/equipment maintenance personnel
- Road maintenance workers
- Parking attendants
- Cleaning personnel

4 Nine workers @ 2,400 per week each = $1,123,200 less payroll taxes @ 20 83%

5 National Insurance Scheme (NIS), National Housing Trust (NHT), Education Tax, Pay As You Earn (PAYE) income taxes, and H E A R T contributions

Additional benefits to staff The YS staff receive a variety of non-salary financial benefits amounting to an estimated cost (to management) of $25,000/month ($300,000/year) These include

- Work clothes year round (polo shirts with the YS logo)
- Medical benefits (most doctors' fees and costs of medication, except in maternity cases)
- At the end of the year, staff are paid for any sick leave days not taken (maximum 10 days)
- Interest-free loans of up to two weeks' wages at a time
- Half of the insurance costs on employees' vehicles

Income distribution Ideally employment is offered to local people rather than outsiders For positions requiring special training or experience, the local labour pool is fairly limited because many young people who leave to seek education and training find jobs outside the area Prior to being hired, all the employees interviewed had been known to the owners or managers

Indirect economic benefits (spin-offs)
There are a number of local and regional businesses that benefit from the operation of YS Falls as an attraction Local businesses include the concessionaires at the attraction (restaurant at entrance complex and drinks seller at the falls), an auto mechanic/welder (3 miles away), an industrial aggregates dealer (4 miles away), and the bar and grocery shop adjacent to YS Falls ticket office A few local artisans sell their work to the souvenir shop Most of the goods and services for the attraction are purchased in the towns of Black River (10 miles away), Santa Cruz (13 miles), or Savanna–la-Mar (38 miles) The following financial information was provided by local businesses and the management of YS Falls

Goods A quarry about four miles away provides road construction materials to the attraction YS Falls spends $100 000 a year on crushed stone and $50,000 a year on marl, for a total of $150,000 per year Although no financial records were available to check the actual figures, the secretary of the company guessed this to be about 10% of their business She also estimated that the Government's purchases of materials for repairing local roads represents about 20% of business, and that the fixing of roads in the area is directly related to the popularity of YS as a tourist attraction

The small bar and grocery shop adjacent to YS Falls ticket office receives an average of $20,000 to $25,000 per month (x 11 5 = $230 000 – $287,500 per year) in gross revenue from the management of YS in the form of complimentary drinks provided for bus drivers (via a coupon system) The YS management provided this figure No other details of revenue were available from this shop

The souvenir shop operated by the management of the attraction sells some local crafts (mostly woodcarvings) and produce such as honey The shop purchases about $30,000 worth of local crafts per year, virtually everything offered for sale to them by two local craft workers They also spend about $70,000 annually to purchase basketry from the Treasure Beach area However, the majority of their stock is acquired from craft suppliers in Montego Bay and Kingston with the main reason being lack of available supplies of local material

The potential for local production of traditional arts or crafts seems relatively unexplored We wondered what else there might be other than woodcarvings, that the shop could purchase locally One way to increase benefits at least within the region might be for the souvenir shop to make direct contact with the craft people who sell to the major suppliers The YS shop could offer better prices to the producers, while still saving money by eliminating the middlemen However, this would mean losing the convenience of one-stop shopping in Kingston or Montego Bay

The major expenses for the operation of the site include the purchase of vehicles and supplies, tyres, oils, fuel and maintenance supplies, ice and drinks for the bar, and hardware for site maintenance Several unsuccessful attempts were made to obtain financial information from the attraction's major supplier of hardware, located in Santa Cruz on the value of their business with YS Falls Although they expressed a desire to help, they felt it would be too difficult to extract the YS figures from their books When questioned about the relative importance of the YS business and other tourist attractions, the response was positive they were certain that more than 50% of their business was somehow connected to tourism development, and that this business was increasing

Services The concessionaire for drinks at the falls was willing to provide daily sales figures (gross income) for the two weeks prior to our site visit Using her listed prices and the standard wholesale costs of drinks, her costs were calculated at approximately 60% of the retail value of the drinks Her average daily gross revenue for two weeks in June was just under $3,500 (net $1,400) For a six-day week, this represents $21,000 gross ($8,400 net) For a year of 303 days, the approximate annual net income from sales is at least $424,200, and probably more, since June (when the base data were gathered) is one of the slower months The concessionaire receives approximately $3,500 per month from sales of complimentary drinks provided to tourist guides by YS management This works out to be about $40,000 per year gross (3,500 x 11 5), or $16,000 net, representing about 3 8% of her net revenue

An auto mechanic/welder three miles away builds the jitneys on imported flatbeds and repairs tractors and other equipment He reports revenue of approximately $200,000 per year from his work for YS Falls, and estimates this figure to be 25% of his business The demand from YS for his services remains relatively stable, because although YS keeps investing in new equipment, which requires less maintenance, he still has to repair the older machines

The restaurant at the attraction, "Mikey's Grill", is operated by a concessionaire It serves snacks, burgers, and simple meals of fish or chicken No financial information was available for this business

Apart from the concessionaire at YS Falls, there are no restaurants or facilities for lodging in the immediate area of the attraction Tour packages to YS and Black River typically include lunch at Black River, usually at one of two restaurants associated with the boat tour operators The closest accommodations are in Lacovia (six miles away) and Santa Cruz, with one guesthouse each Black River has five or six small hotels and a few guesthouses, while Treasure Beach has at least three hotels and several guesthouses, villas, and bed and breakfast places Although there are recognised economic linkages between YS Falls and the restaurants that cater to the YS/Black River tour packages, these businesses are discussed in the section dealing with the Black River boat tours

Other community benefits
The YS management contributes approximately $50,000 per year in financial donations to community groups, institutions and individuals (most of them local)

- $12,000/year to sports club (outfits for the New Holland football team)
- $25,000/year to other local causes (schools, community groups)
- $6 000/year part sponsorship of SOS Children's village in Montego Bay
- Assistance with extraordinary community needs such as funeral expenses, school projects, and other community needs

Costs associated with tourism
Higher tourism salaries at the attraction have led to demands for higher wages on the surrounding YS farm To the extent that these demands have been met, tourism has contributed to higher farming costs for the owners

For the other residents of communities surrounding YS Falls, however, there is no evidence that tourism has created inflation problems The site is relatively remote and there has been no commercialisation of the area or further tourism development in response to the success of the attraction

SOCIAL AND CULTURAL INFORMATION

Perceptions of the economic benefits of tourism
Interviews of people directly involved in tourism at the attraction (employees, concessionaires, tour operators, taxi- and bus drivers) sought to determine their perceptions of the demand for tourism-related goods and services from foreign tourists as well as locals Interviews of local business people and residents of the area were intended to ascertain the actual economic importance of tourism to local businesses, as well as residents' perceptions of its importance Tour operators and transportation workers were asked about both issues – demand for spin-offs and the value of tourism to their own businesses – so they are included in both sets of results (presented in Tables YS 4 and YS 5)

Table YS 4
PERCEPTIONS OF THE DEMAND FOR TOURISM-RELATED GOODS AND SERVICES

#	RESPONDENT*	COMMENTS
1	**Manager**	Foreigners are satisfied with attraction as is Locals want more activities and entertainment
2	**Receptionist**	Foreigners are satisfied with attraction Locals want more activities and entertainment Roadside vending increasing with tourism
3	**Receptionist**	Foreigners are satisfied Locals want more activities and entertainment Roadside vending is increasing
4	**Parking lot attendant**	Visitors want longer opening hours Foreign tourists satisfied with natural sites, want more heritage attractions Increased local spending in general (due to employment), but not by tourists Tourists might buy more souvenirs if there was more variety
5	**Lifeguard/site attendant**	Foreigners are satisfied with attraction but ask for more information about site Locals want more activities and entertainment
6	**Drinks seller at falls**	There is a demand for cigarettes (not sold at the site)
7	**Gift shop manager**	Foreigners are satisfied with attraction Locals want more activities and entertainment There is a demand for books and information
8	**Independent bus operator**	Foreigners love natural attractions, repeat guests would visit other natural attractions in the area if available Tourists want heritage sites as well With tourism, "everybody gets a piece of the pie" There is unfulfilled demand for T-shirts (or more variety in existing stock)
9	**Guide for tour company**	'Tourists never ask for more attractions – they love these" The choice of restaurants is too limited – everyone goes to the same two places (in Black River) and they are too crowded Everybody sells the same things There is a need for different souvenirs

* *These respondents were people directly involved in tourism-related business at the attraction*

Perceptions of the demand for goods and services In response to questions about potential spin-offs from tourism local residents connected with the attraction mentioned few options and could not estimate their value Tour operators were the exception, as they perceived widespread economic linkages to tourism Apart from employment benefits and concessions associated with the attraction, roadside vendors of snacks and water coconuts were most frequently named as beneficiaries of tourism in the area (Ironically, the tourism regulatory bodies do not condone roadside vending for a number of reasons – the lack of sanitary facilities, unsightliness, and possible traffic hazard to name a few This may explain why the agencies are sometimes seen by the community to be at odds with local interests)

The perceived demand for other attractions, restaurants, accommodations and souvenirs varied greatly in the interview sample There were no clear trends in the data, details of which are not presented here In general, respondents who indicated that supplies of these goods and services were inadequate did so mainly on the premise that such enterprises would provide much-needed employment in the area (whether or not there was a real demand for them on the part of visitors) Some respondents speculated that tourists might buy more souvenirs if there were more variety but most believed that in general tourists do their souvenir shopping at the resort centres where they are staying (a view supported by the visitor surveys)

Here are some other comments from the community interviews that were supported by the visitor surveys

- Foreign tourists are satisfied with enjoyment of the natural beauty of the attraction, but most local visitors want additional forms of entertainment at the site, such as games, music, and organised activities
- There is a possible demand for a wider choice of restaurants, as almost all tour packages include lunch at the same two establishments in Black River
- There is a demand for information (printed materials) on the natural and cultural history of the area

Table YS 5
PERCEPTIONS OF THE ECONOMIC IMPORTANCE OF TOURISM

#	RESPONDENT*	COMMENTS
8	**Independent bus operator**	Transports tourists from Negril, making 6 trips /week Averages 2-3 people per trip, maximum 7 Charges US $60 pp for YS/Black River package tour Costs for operating van are about US $25 per trip, plus $28 pp entrance fees and lunch Grosses US $720-1080 per week (average), nets US $234-426 per week 100% of business is derived from tourism, with 90% comprising tours to YS and BR Business is increasing, but also getting more competitive (more operators) Tourism is "very important" to local economy
9	**Guide for tour company**	Takes tours from Montego Bay for French tourists only (up to 50 per week) Clients pay US $68, but local representative, when contacted, could not provide breakdown of rates Tours are pre-sold in France 100% of business is derived from tourism, and YS/Black River is "most popular" tour Business is generally stable but slow this summer due to World Cup in France this year Tourism is "very important" to local economy
10	**Shop keeper**	Caters mostly to locals, but has had a "small" increase in business from tourists buying cigarettes (Did not mention the fact that YS purchases approximately JA $25,000 worth of drivers' drinks every month) Respondent was reluctant to answer questions, and had no opinion on most subjects raised Low awareness of value of tourism
11	**Auto mechanic / welder**	Builds jitneys maintains and repairs tractors and equipment Did not provide figures, but YS records show that the attractions paid him approximately $200,000/yr up to 1997, and $150,000 in 1998 25% of his business is derived from tourism (all from YS) Business is "OK " YS work is stabilising, because the attraction has been buying new equipment, which requires fewer repairs Tourism seen as "somewhat important" to the local economy (which seems to contradict his own experience)
12	**Secretary at local quarry**	Supplies crushed stone and marl for roads at YS and environs Value of business is about $150 000 /year, which represents about 10% of business (estimate only) In all, 30% of business is related to tourism, as 20% derived from government road repairs (This explained by perception that the Government repairs roads to facilitate tourism) Business is OK and increasing Tourism is "very important "
13	**Hardware merchant**	Supplies hardware materials for YS Falls site maintenance and for resort construction and maintenance elsewhere in the area Business is good Over 50% of business is related to tourism, and this proportion is increasing

14	**Farmer**	Not directly benefiting from tourism (grows peanuts), but family member employed by YS Falls Farming is not lucrative Sales are slow and decreasing in value Tourism is very good for local economy, as YS employs many local people
15	**Domestic worker**	Employed by owners of YS, so indirectly benefiting from the success of the attraction Tourism seen as very positive for local community

* *Respondents were mainly local business people and residents of the area, as well as tour operators*

Perceptions of the economic importance of tourism Perceptions of the economic value of tourism (other than employment) were generally low While most respondents expressed the view that YS Falls had contributed significantly to the local economy this was attributed mainly to employment and not seen to be the result of increased spending by tourists on spin-offs In general, the community members reported that employment with the attraction provided the best wages and working conditions available in the area One of the two receptionists who were interviewed also happens to be the restaurant concessionaire at the attraction When asked to list some of the economic benefits other than direct employment, this person did not even mention her 'other' economic connection to the attraction it was the YS Falls manager who informed me of this fact The auto mechanic/welder who reported that he derives 25% of his own business from YS Falls perceived tourism to be only "somewhat important" to his business and the local economy

In conclusion, the level of community awareness of the economic potentials of tourism at YS Falls is mainly limited to perceptions of the direct employment provided, along with the notion of small-scale vending of snacks and crafts Community residents seemed unaware of both the range of goods and services utilised by the attraction, and the high costs of operating the attraction A few respondents, notably the ones from the transportation sector, had a greater level of awareness of the ripple effect of tourism spin-offs in the local, regional and national economy

Social and cultural impacts of tourism
In general, the staff-visitor interactions that were observed on this site visit appeared to be very friendly and positive When the site was initially opened to tourism problems began to develop with harassment of visitors by local youths ' hustling' (selling) and offering unauthorised guide services to tourists This problem was effectively dealt with by the hiring of these same youths as full-time lifeguards, gardeners and sidemen for the attraction The soliciting of tips is strictly prohibited, so this form of tourist harassment, common throughout the island, is avoided at YS Falls The management purchases local goods for the gift shop, but no vendors are allowed on the compound As the Lonely Planet guide says, 'YS Falls is one of the few spots in Jamaica without any hustlers" (1996, p 434)

While the supply of tourism-related jobs at YS is clearly inadequate to fill the local demand for employment at the site, this is not recognised as a major source of conflict, but accepted as the reality of the situation All the employees are drawn from the local community, with training provided as necessary, so there are no conflicts over the hiring of external labour Almost everyone interviewed in the community agreed that employment at YS Falls provided a better income and working conditions than any alternatives in the area

The issue of involving residents in tourism developments at the site does not really arise at YS, because the main service provided is simply access to the falls Residents are not consulted about activities at the site, which is a small, privately owned area Employees are kept informed of all management plans for the attraction, so in this way the word gets out to the community about any changes occurring at the site

Recreational access to the falls has always been somewhat restricted, although control of the site is now much more effective during opening hours Although the entrance fee would probably be considered too expensive for locals, residents of the area are not discouraged or prevented from visiting the river outside of opening hours

Safety and Security
The management of the attraction has complied with all requirements for licensing as prescribed by the tourism licensing and monitoring agencies, the Jamaica Tourist Board (JTB) and Tourism Product Development Company Limited (TPDCo), including safety and security measures In addition to the physical safety measures described

elsewhere in this report, site attendants are trained as lifeguards and receive certification in first aid, including CPR The nearest hospital is in Black River, ten miles away

There is a CB radio system allowing communication between staff in all areas of the site, and the manager has a mobile cellular phone for personal and emergency use The nearest police stations are located at Lacovia, six miles away, and Black River

The incidence of crime in the area is generally low, but there have been two serious incidents of crime at the site shots were fired at the trailer during an attempted robbery in 1992, and a security guard was shot at near the falls in 1993 The suspects were the same people in both cases They were eventually arrested and brought to court, but were acquitted for reasons not clearly understood by the managers of YS However, the same two men were later convicted of another robbery and imprisoned

ENVIRONMENTAL INFORMATION

Natural resources

As mentioned in the site description, a variety of indigenous and endemic species of flora and fauna are found at the site, which is a designated National Heritage Site There have been no detailed natural resource inventories of the area, although the manager expressed an interest in having surveys carried out (especially surveys of birds and flora) Fortunately, the owners and operators of the attraction have, since 1991, assumed effective control and management of the area for tourism

Site development impacts

No formal environmental impact assessment (EIA) was carried out prior to the development of tourism activities at YS Falls However, great care has been taken in both the development and operation of the site to keep the area as natural as possible while providing safety features and measures, described below, to protect the riverbanks from erosion and vegetation from trampling Although these features have made the site somewhat less "natural" than before (particularly the use of tractor-drawn jitneys to control access to the site), the waterfalls themselves remain unspoiled

Landscape Forest areas along the riverbanks have been maintained in natural vegetation, with the exception of the planting of red ginger (a non-native species) Additional trees have been planted to help prevent erosion along the banks Lands below the falls were converted to pasture many years ago, and remain in this state Lawns have been planted to replace former pasture in the area approaching the falls, for use as picnic areas and recreational space

Buildings The concrete block entrance complex is located at the roadside entrance to the attraction (not near the 5-acre landscaped compound around the falls) In the area adjacent to the falls, two rustic, thatched wooden shelters have been erected one around the base of a large tree in the compound (for viewing), and the other for shelter where visitors are dropped off and picked up by the jitneys These structures are more than 100 m from the falls and are appropriate for the landscape A composting toilet will be installed in a secluded area of the falls compound Architectural plans have been developed for a Visitors Centre at the entrance complex

Trails and Paths Well-marked paths have been installed along one bank of the river with crushed stone to provide secure footing and bamboo guide rails to keep visitors on the paths Wooden slat boardwalks traverse some steep and/or muddy areas while a footbridge crosses slippery rocks in one location Wooden platforms at three places along the river provide safe access for swimming and prevent erosion of the banks

Signs and Fixtures Engraved wooden signs indicating safety rules and site conservation policy are placed at ticket office and falls Wooden lattice garbage containers (painted green) are placed around the site and on the trails

Sources of materials Locally produced materials have been used in construction as far as possible They include

- Wood and thatch palm for shelters
- Bamboo for railings
- Wood for boardwalks
- Concrete blocks for ticket office complex
- Crushed stone and marl for roads
- Superstructure of jitneys built with local materials and labour

Impacts on wildlife There is no evidence that development of the site for tourism has had a significant negative impact on wildlife Almost all of the natural vegetation along the riverbanks has been preserved, and no chemicals are used in site maintenance or pest control

Operational impacts

Environmental policies The attraction is operated along environmental ("green") guidelines as much as possible In order to reduce solid waste at the attraction, concessionaires are not allowed to sell drinks packaged in disposable plastic bottles (with the exception of "Evian water", which is not available in returnable bottles) The ' no littering ' rule is strictly enforced Visitors may bring picnics but are encouraged to remove their own garbage from the site at the end of their visit No cooking is allowed at the falls

For sewage disposal there is a standard soakaway system at the entrance complex, which meets government public health standards A composting toilet has recently been purchased When installed in the landscaped area near the falls, the composting toilet will prevent leaching of sewage into groundwater and river There will be a solar-powered lighting and ventilation system for the toilet

Visitor impacts Prior to 1991, when strict monitoring and control were implemented, there were significant visitor impacts, which included the following

- Removal of orchids and picking of flowers
- Trampling of vegetation, leading to erosion or riverbanks and forested hillsides
- Urinating in bushes along paths
- Littering
- Traffic on farm roads as visitors drove to the falls in their own vehicles

Measures used to control visitor impacts Constant monitoring of the area by lifeguards and other site attendants has helped to reduce visitor impacts on the vegetation to a minimum In addition, there is a carrying capacity plan to minimise visitor impacts at YS Falls Apart from setting a daily limit of 200 visitors, the number of people in the area of the falls at any given time is closely monitored and controlled so as to avoid overcrowding

The following policies and procedures are also used to minimise visitor impacts

- Restricted physical access (tractor-drawn jitneys)
- Restricted opening hours (9 30 AM to 3 30 PM)
- Closed on Mondays and all public holiday weekends
- No groups of over 25 people allowed
- No radios or "boom boxes" allowed
- Employment of local people as staff to monitor visitors and site (lifeguards, sidemen, gardeners)
- Site hardening measures such as paths, railings, boardwalks, and swimming platforms (described above)
- Signs clearly stating safety and site policies
- A landscaped recreational area away from riverbanks, which reduces impacts near the river itself

External environmental threats

Deforestation Deforestation of the YS river watershed from logging and clearing of land for cultivation has led to diminished flow rates especially during the dry season, and soil erosion, which increases turbidity of the river after

rains Evidence of diminished flow can be seen in the worn, moss-covered rock platforms at the edges of some of the tiers, where the river once flowed constantly

Pollution Although the water quality is pure at present, the possibility exists of water pollution from farming and domestic activities upstream

Environmental education and awareness

Current EE methods The principal means of environmental education at the site are signs explaining the safety and site conservation rules Printed materials on the importance of forests and watersheds are provided to school groups The materials cover the relationship between trees, water supply, carbon emissions, and forest products such as paper At present the attraction does not provide guided tours, but these are available from independent tour companies However, site attendants such as lifeguards monitor guests' behaviour and provide additional information as they interact with the guests

Changes in behaviour The environmental policies of the site have definitely influenced the behaviour of staff and visitors towards protecting the resources Although not specially trained in environmental education, the site attendants have some local knowledge of flora and fauna, and have become extremely sensitive to the need for site conservation According to one lifeguard interviewed, this awareness seems to have carried over into a general increase in concern for environmental conservation He commented that since working at YS Falls he has become extremely conscious of the problem of littering, whether inside or outside of the attraction In addition to making sure visitors do not litter he makes an effort to pick up any litter he sees, both at the site and elsewhere Most of the guests interviewed commented on the immaculate condition of the site

Future EE plans Plans have been drawn up for a visitor centre, which will feature exhibits on the flora, fauna, natural history and culture of the area, and provide detailed information about the site rules and policies Offering species checklists and other printed materials on the natural resources of the site would be profitable as well as educational The management would also like to institute additional training for site attendants in subjects such as the natural history of the site

The role of tourism in resource protection

For many years both local residents and tourists who had heard about the beauty of the YS Falls visited the site, with or without permission from the owners In response to the growing popularity of the falls as a nature attraction the owners began to charge an entrance fee in the early eighties However, the impacts of largely unmanaged visitation gradually led to the deterioration of the site and increasing problems of visitor harassment by local vendors attracted by the presence of tourists With the institution of proper controls and management in 1991, revenue from tourism is now effectively used for protecting the site from unauthorised visitation and for managing visitor impacts Tourism has probably helped to reduce fishing and shrimping on the river by residents of nearby communities by confining these activities to the hours when the attraction is closed to the public

As mentioned previously, approximately $1 9 million was spent on site maintenance in 1997 This figures includes labour for monitoring visitor impacts at the site, planting trees, replanting grass, and path maintenance, labour and materials for the construction and repair of boardwalks, swimming platforms, wooden staircases and railings, and the purchase of an environment-friendly composting toilet

In addition to providing funds for managing the site, use of the falls for tourism helped to avert Government plans in the 1970s and again in the 1980s to dam the YS River for hydroelectric power generation Thus, in a sense it can be said that tourism is providing a means for justifying protective status for the attraction, as well as increasing political support for conservation This is reflected in the designation of the area as a National Heritage Site On the other hand, the manager pointed out that the tax incentives for maintenance or development of heritage sites offered under the National Heritage Trust Act of 1985 have not been available to the management of the attraction, as these benefits can only be obtained by owners of the sites 6

6 An article in the Sunday Gleaner, July 5, 1998, states that to date, no one has made use of the incentives under the JNHT Act, which is currently under revision One of the things that will be changed is that the incentives will be made available not just to owners, but to a broader set of stakeholders responsible for sites

The conservation benefits of tourism compare favourably with the possible alternative uses of the site Farming, the traditional use of the property on which the site is located, does not provide sufficient revenue to protect and manage the falls Forest conservation is practised on the surrounding YS Estates, and educational materials are given to visiting school groups in an effort to educate children about forest and watershed conservation However, there is not much that the YS management can do to arrest deforestation outside its boundaries besides educating community members and setting a good example

To some extent the operation of YS Falls as a tourist attraction has brought increased attention from both the local and international conservation communities In 1991 a team comprised of personnel from the Jamaica Conservation and Development Trust and The Nature Conservancy visited YS Falls to assess the site and make recommendations for the development of visitor facilities at the falls Their recommendations (JCDT 1991) have helped to guide the physical site development and operation of the attraction In 1993 YS Falls was included in the TAP/OAS study of nature- and heritage-based attractions (van Barneveld, 1993), and now, in 1998, the attraction is being revisited as part of the current GOJ/USAID initiative to assess the economic and environmental impacts of ecotourism activities in Jamaica

CONCLUSIONS AND RECOMMENDATIONS

In conclusion YS Falls appears to fulfil all the criteria of successful ecotourism However, this does not mean that the attraction will remain viable indefinitely The main concerns regarding the sustainability of the business are the external environmental threats and instability in the overall economic and social climate of Jamaica

Economic and community benefits

Although this is a private attraction and there are no NGOs involved in nature- or heritage-based tourism in connection with the site the attraction is well integrated into the local community and there is no visitor harassment Almost everyone interviewed perceived the attraction to be contributing substantially to the local economy mainly by providing employment The attraction is also considered a viable business by its operators Despite their relatively low perception of other economic benefits from tourism, some residents of the area are also benefiting through opportunities for the operation of concessions or the provision of certain goods and services associated with the attraction

Resource protection

As a pioneer ecotourism attraction in Jamaica YS Falls has helped to set an excellent example of sustainable use of natural resources as the basis for a viable tourist attraction This has been accomplished mainly by strict environmental management keeping 'development' to a minimum, and effectively monitoring and controlling the impacts of visitation The long-term protection of this valuable heritage site is obviously an important goal of the management, which continues to limit visitation even faced with increasing market demands and economic pressure to exceed the site's carrying capacity The fact that the site is privately owned and controlled is an important success factor for the conservation efforts

Environmental awareness The environmental policies of the attraction have set a positive example and helped to change the attitudes and behaviour of employees towards the environment The strictly enforced litter policy, for example has stirred at least one site attendant to pick up litter outside of the attraction as well as within the grounds The planned visitor centre and natural history training for site attendants will enhance the experience for visitors and help to educate them about the natural heritage and environmental conservation needs of the area

Although the attraction provides conservation education materials to visiting schoolchildren and sets a good example of forest conservation, the challenge remains as to how the management can become involved in protecting the watershed beyond their boundaries Once the visitor centre is established, the management might consider implementing a systematic program of scheduled field trips with an emphasis on environmental education for area schools and community groups In order to influence the farmers and other resource users who are contributing to deforestation, the attraction might offer periodic 'open houses' to local residents, making sure that

all who accept the invitation are escorted through the visitor centre and provided with relevant conservation messages

In terms of national impact on environmental awareness, the success of YS Falls has helped to promote the concept of ecotourism in Jamaica and stimulated a greater awareness in the tourism sector of the economic benefits of conserving beautiful and ecologically important natural areas It can even be said that the environmental practices and policies demonstrated at YS Falls have helped to shape the evolution of official standards and guidelines for nature attractions in Jamaica

Factors affecting ecotourism potential

Environmental threats The external environmental threat of deforestation presently leads to increased turbidity and will eventually affect the attraction by reducing stream flow This is a national problem of stewardship of resources, and there is not much that we can advise the management of YS Falls to do except continue to set a good example and provide environmental education in the community

Instability in the national economy Instability in the overall economic and social climate of Jamaica remains a major concern affecting the financial sustainability of the attraction, especially in light of the carrying capacity limits of the site While we have suggested one or two additional mechanisms for soliciting income, such as retailing specific types of merchandise, these will not solve the main problem of the increasing management costs compared to the constraints on revenue generation described in this report

The only realistic option for remaining viable in the long term is to increase entrance fees Although the sample of visitors surveyed was too small for the results to be considered conclusive, the responses suggest that the foreign market at least could tolerate a substantial increase in the entrance fees Some tourists may even wish to donate to specific conservation projects at YS Falls, but at the moment they are not being asked Visitor satisfaction is extremely high amongst the foreign tourists, and it is this section of the market that provides the majority (82-88%) of the attraction's income In our opinion, the issue of visitors' willingness to pay for visiting YS Falls deserves further investigation

Transportation costs The matter of setting appropriate entrance fees is not as simple as it might at first appear, due to the involvement of the tour operators and the major role that package tours play in bringing visitors to YS Falls Despite the relatively small proportion of their tour package price that goes towards entrance fees to the attractions on their itinerary 7 tour companies aggressively oppose any fee increases for attractions, often claiming that the tourists are simply not willing to pay more While this may be the case for the purchasers of tours (because of the expense of the total package), this argument does not appear to hold true for independent travellers We recommend that any market research on willingness to pay be comprehensive enough to determine visitors' attitudes to the costs of tour components as well as just entrance fees to attractions Whatever the research reveals,

7 Prices for the Black River/YS Falls package tour range from US $60 to $93 per person, depending on the tour company, origin of the tour and extras offered on the trip The tour companies' discounted cost for a package including the boat tour, lunch and entry to YS Falls is US $23 The balance remaining per person is therefore US $37 to $70 If you multiply that figure by 40 (the average busload) you find that revenue to cover the remaining unknown costs and profit margin of the tour operator is in the region of US $1,480 to $2 800 per trip

YS Falls and other nature and heritage attractions will have to come to a mutually satisfactory arrangement with the tour companies on which they rely for up 75% of their business

Case study # 2 BLACK RIVER SAFARI TOURS

Description of the attractions

Three privately owned companies operate licensed boat tours on the river in very much the same fashion All three companies are located in very close proximity to each other They all use large, outboard engine operated pontoon boats and travel the same basic route up the Black River to the point where the Broad and Black River intersects, at which point the tour travels on the Broad River to the bridge at Salt Spring before turning back The tour lasts about an hour and a half, and cool drinks are provided Some operators allow their guests to disembark at the village where there is an opportunity to buy drinks and souvenirs Crocodile sightings are the highlight of the tours

The researcher was able to take two out of the three boat tours offered on the Black River, Irie Safari and the Black River Safari Both tours were basically the same with a few subtle differences The large pontoon boats were very comfortable seemed safe and provided a very smooth ride on the river The Black River Safari guide made a point of going over the safetv policies of the company Both guides gave some information on the history of the Black River and its past and present uses both guides told visitors about the life history of crocodiles, and pointed out the birds seen on the tour which were mainly cattle egrets nesting in the mangroves The Irie Safari guide attempted to speak about mangrove ecology but the Black River Safari guide neglected to do so The guides knew where to find crocodiles which had all been given names, and stopped the boats to give visitors a good view of each animal The guide for Black River Safari fed the crocodiles with chicken while the one from Irie Safari did not However, he admitted that on occasion thev do feed the animals On the return leg there was no dialogue with the visitors until the boats arrived back at the dock

For the majoritv of visitors the Black River safari tour is part of a package which also includes lunch and entry to the YS Falls We also visited the Bridge House restaurant, which caters to most of the package tour clients The restaurant is located about a minute s drive from the Black River Safari The service was prompt and courteous but the setting was rather like an institutional cafeteria instead of a restaurant catering to tourists in a rural, seaside Jamaican town Much could be done to give the place a more pleasant atmosphere and some local character

Geographic setting

The Black River is found on the south coast of Jamaica in the parish of St Elizabeth The river system is 70 kilometres long and starts in the foothills of the Cockpit country Several rivers join the system before entering the sea at the town of Black River The Black River Morass is the largest area of wetlands in Jamaica The Morass provides protection from storm surges and supplies water to the surrounding communities, which depend on the wetlands for wood (both for fuel and for furniture) fishery resources (shrimp, crab and fish), and grazing for livestock

Community setting

The population of Black River in 1991 was estimated at 3,590 representing approximately 2 5% of the population of St Elizabeth (Population Census 1991 STATIN, cited in Massa and Haynes-Sutton, 1998) The unemployment rates in St Elizabeth are among the lowest in Jamaica (10 1% in October 1992, according to the Statistical Yearbook, 1993 cited in Massa and Haynes-Sutton, 1998), even though the parish of St Elizabeth has an illiteracy rate of 32 5%, higher than the national average of 24 6% (STATIN, 1994)

The people of Black River are largely self-employed in economic activities such as small farming, sugar, livestock rearing, fishing and commercial trades in the town In addition to the licensed tour operators on the river, there are independent unlicensed fishers who take visitors along the river from as far as Treasure Beach in their canoes The route for these tours varies, due to the easier manoeuvrability of the smaller fishing boats in the narrow mangrove channels It is estimated that there are about ten such individual operators

As described in the YF Falls case study, the town of Black River was historically important as a shipping port and commercial centre from the time of Spanish occupation There are many buildings of architectural significance in the town adding to the character of the town, which was the first town in Jamaica to receive electricity and a motor car

Accessibility
Black River is approximately 40 miles from Montego Bay or Mandeville, and 90 miles from Ocho Rios However, the safari tours are easily accessible because roads to the South Coast are generally well maintained with helpful signage

Management structure
Each of the three companies is a licensed commercial tour business Table BR 1 gives a brief profile of the three companies

1 **Black River Safari** is owned and operated by J Charles Swaby Mr Swaby took persons on a small scale up the river for bird watching, fishing and nature viewing for over 20 years before starting his enterprise in its current form in 1986

2 **St Elizabeth Safari** is owned and operated by Dr Bennett who resides and practices medicine in Black River Dr Bennett also took small groups of people fishing on the river before expanding his business

3 **Irie Safari** is owned and operated by Mr Lloyd Linton Mr Linton is a wetland ecologist by profession and after visiting one of the other tours decided to start his own tour business with the intention of delivering a more educational tour than was available at the time

Table BR 1
PROFILE OF MAIN TOUR OPERATORS ON THE BLACK RIVER

	BLACK RIVER SAFARI	ST ELIZABETH SAFARI	IRIE SAFARI
Number of boats[8]	12	8	4
Number of employees	12	10	8
Tour price (foreigners)	US $15	US $15	US $15
Tour price (locals)	JA $300	JA $200	JA $300

ECONOMIC INFORMATION

Entrance fees
The rates for all three operators are the same with the exception that St Elizabeth Safari has a lower local rate than the other two Foreigners are charged US$15 and locals JA $300 by Black River Safari and Irie Safari, while St Elizabeth Safari charges JA $200 for locals These rates were set to cover costs and provide a marginal profit Package tours including lunch and entrance to YS falls are sold to other tour companies for US $23, and these companies retail the tours, including ground transportation, for between US $60 and $90, depending on the origin of the tour and extras offered on the trip Unless otherwise specified, all figures in this case study are reported in Jamaican dollars (JA $)

[8]The number of boats indicates the total number of boats which the operator had at the time of the interview, and not the number of boats which were operational

Visitor statistics

The visitor profile for all three companies seems very similar Approximately 80% of visitors are brought to the area from the north coast on tour packages arranged at the hotels The remaining 20% are either foreign or local independent travellers Of those visitors on tour packages, about 85% originate from European destinations while the rest are from North America

Table BR 2
VISITOR STATISTICS FOR BLACK RIVER TOURS (1997)

	BLACK RIVER SAFARI	ST ELIZABETH SAFARI	IRIE SAFARI
Average number of visitors/month	5,040[9]	2,000	300
Europeans (package tours)	85%	80%	25%
North Americans (package tours)	15%	10%	25%
Other foreigners and locals (independent travellers)	Minimal number	10%	50%
Total number of visitors per year	60,480	24,000	3,600
Combined annual total	88,080		

Note Figures above are estimates only

Visitor satisfaction For the past few years, the town of Black River has become well known for its safari/crocodile attractions According to the JTB Visitor Satisfaction survey for 1997, 10 8% of the respondents visited the Black River safari tours, which tied for fifth place in terms of visitation rates for various types of attractions The Black River tours ranked seventh in terms of visitor satisfaction rating most popular satisfaction rating for tours on the Black River was 3 36 out of a maximum rating of 5 0, making it the seventh most popular of the attractions named by respondents

Table BR 3
VISITOR SATISFACTION RATINGS FOR VARIOUS ATTRACTIONS (1997)

Attraction visited	Number of visitors	Percent of respondents	Rating index (out of 5 0)	Satisfaction ranking
Dunn's River Falls	1506	79 6	4 45	1
Rafting	397	21 0	4 33	2
Cave Tours	224	11 8	4 08	5
Plantation/farm tours	208	11 0	3 19	9
Black River Safari	**205**	**10 8**	**3 36**	**7**
Great House tours	205	10 8	4 12	4
Botanical Gardens	204	10 8	4 23	3
Riding Stables	168	8 9	3 31	8
Maroon Town Tour	52	2 7	4 02	6

Source Jamaica Tourist Board 1998

[9]This figure is based on an average of 180 lunches served daily to Black River Safari clients at Bridge house restaurant (180 x 28 = 5,040)

For this study, nine visitors were interviewed about their expectations and opinions of the tour The average cost for visitors who came on tour packages was US $73 00 All of these individuals felt the tour was well organised and educational, but too expensive This may have been an indication of the tour package being too expensive, rather than just the river tour component by itself, which would have cost US $15 In addition, most respondents were interviewed after visiting the first attraction, before they had had lunch or visited YS Falls, so it may have been difficult for them to assess the value of the entire trip for the cost paid All locals interviewed felt the trip was well worth the expense The results of the visitor interviews are presented in Table BR 4, below

Table BR 4
COMBINED RESULTS OF VISITOR INTERVIEWS AT BLACK RIVER TOURS

#	Country	Cost of tour	Was fee ok?	Demand for other goods & services	Comments
1	England	US $60	Too expensive	No	
2	England	US $65	Too expensive	More craft items	More interaction with locals needed
3	England	?	–	No	Friend paid for him
4	Denmark	US $75	Too expensive	No	
5	Germany	US $85	Too expensive	No	
6	United States	US $80	Too expensive	No	
7	Germany	US $21	Too expensive	No	
8	Jamaica	JA $300	Fair Would pay $400	No	
9	Jamaica	JA $620	Yes	No	Came in a group, rented bus

Note Respondents 1-6 came on package tours while the others arranged their own transportation

All respondents indicated that they did not come to the area to buy any souvenirs, but mainly to visit the attractions This was supported by the observation of one of the craft vendors at St Elizabeth Safari who stated that most visitors did not buy any crafts from him because they had already bought items on the north coast However, some visitors commented that there was no item that was compelling enough to buy

Revenue

Because exact figures for gross revenue were not available from these attractions, rough estimates of gross revenue were calculated from figures reported for the average number of visitors per month These figures are presented in Table BR 5 Estimates of visitor numbers were provided by the management of St Elizabeth Safari and Irie Safari For the Black River Safari, the figure for visitor numbers was based on the number of meals served to their clients by Bridge House restaurant which caters to package tour visitors taking this particular tour According to the manager of Bridge House an average of 180 persons are sent from this tour operator each day, which would result in a monthly average of at least 5,040 visitors (180 x 28 days) Since we are not sure whether this figure is typical of the busier months or represents the annual average, we realise that the revenue figure derived from it may be somewhat inflated

The manager of St Elizabeth Safari reported gross revenue of $300,000 to $500,000 per month, or $4 to $6 million per year However, there was a discrepancy between these figures and the estimate calculated from visitor numbers The manager said that about 2,000 visitors came on his tour each month From this, the monthly revenue of $796,000 was calculated from entrance fees using the reported ratio of foreign to local visitors Again, there is the possibility that the figure of 2,000 visitors per month is typical of the busiest months only, which would help to explain why our revenue estimate is much higher than that reported by the management

Table BR 5
ESTIMATED GROSS REVENUE OF TOUR OPERATORS ON THE BLACK RIVER

Name of attraction	BLACK RIVER SAFARI	ST ELIZABETH SAFARI	IRIE SAFARI
Estimated average # of visitors/month	5,040[10]	2,000	300
Estimated total # of visitors	60,480	24,000	3,600
Ratio of foreign package tour clients to local visitors	100 0	90 10	50 50
Average gross revenue /month	$2,116,800[11]	$796,000[12]	$108,000[13]
Annual total	± $25 million	± $9 5 million	± $1 3 million

Constraints to revenue generation It is interesting to note that the rates for the river tours have remained the same for the last three years, and during this time, according to managers, the margin of profitability has declined to almost nothing When asked why prices had not been raised, the answer was the package tour companies bringing visitors from the north coast (constituting 85% of the visitors to the river tours), will accept no raises in the price, as they claim visitors will not pay any more for the package

There is also conflict between the package tour operators and safari tour operators with respect to late payment of fees to the attraction owners It was reported that package tour operators are often months late with payment to the attractions and when payment is made it is usually at a less favourable exchange rate than the prevailing rate at the time of the tour Boat operators frequently ask the Association of Jamaican Attractions Limited (AJAL) to mediate for fees owed by the package tour operators

Marketing and Promotion
There is no specialised market research done by any of the boat operators on the river None of the operators interviewed had a marketing plan or any planned strategy for promotion With the exception of Irie Safari, the operators do not collect visitor statistics, which could be used to analyse visiting patterns and help to identify possible niches to target in the future Marketing is done through distribution of brochures in hotels and by the JTB, direct bidding to package operators and visits from journalists locally and abroad

The brochures are attractive and show beautiful scenes of the river and the YS Falls (which is typically coupled with the river tour) but we found some of the information in the brochures to be misleading For example, one brochure mentioned a guided tour through the town of Black River as part of the package, but this was not offered It also referred to the area as a national park, which is not the case This misinformation may lead visitors to feel that they have not received good value for their money because they have not been able to experience everything promised on the brochures

Employment
Black River Safari employs 12 people full time nine boat captains/tour guides and three bar attendants/salespersons Work is also provided for two part-time carpenters

[10]This figure is based on an average of 180 lunches served daily to Black River Safari clients at Bridge house restaurant (180 x 28 = 5 040)
[11]Calculations US $12 pp @ 35 1 x 5,040 = $2 116,800
[12]Calculations US $12 pp @ 35 1 x 1,800 + (JA $200 x 200) = $796,000
[13]Calculations US $12 pp @ 35 1 x 150 + (JA $300 x 150) = $108,000

St Elizabeth Safari employs 10 permanent workers and allows about three or four vendors to sell crafts on the compound

Irie Safari operates with eight permanent staff members one tour guide/supervisor, three boat captains, one secretary, one cashier/bartender and two chefs

Income distribution All employees of the three companies reside in Black River or surrounding areas within six miles of the town The employees questioned either knew someone working at the attraction or applied to management directly for employment All respondents were recent school leavers at the time when they were hired, except one an ex-fisherman who no longer fished due to his age It is not known whether he still has a boat operated by a relative in the fishery

Indirect economic benefits (spin-offs)

The spin-off benefits to the community from the tours appear to be rather limited at present Because the majority of clients arrive on package tours on a tight schedule due to the distance they have to travel from resort centres, there is very little opportunity for visitors to spend time exploring the town or shopping

Goods As indicated above there are a few craft vendors who have access to the visitors In the case of Black River Safari, Mr Swaby buys crafts from local vendors and resells them himself at the reception area for his tours The value of this trade is unknown There is also a demand for local produce and goods from grocery stores to supply the restaurants that cater to the tour packages Again no figures were available for the value of these goods, but one supermarket owner estimated that approximately five percent of his business is derived from supplying groceries to restaurants that cater to the river tour clients There are three gas stations in the town, which benefit from tour buses purchasing gas The value of this business was not ascertainable

Services The main service industries benefiting from the Black River safari tours are restaurants that cater for tour packages and tour companies that provide ground transportation to the attractions In the past guesthouses and hotels such as the Ashton Great House and the Invercauld Hotel benefited from tour companies sending visitors for lunch However, St Elizabeth Safari and Irie Safari now operate their own restaurants to which visitors are channelled after the river tour The Bridge House restaurant caters to approximately 180 visitors daily from the Black River Safari, representing about 75 percent of the restaurant's clientele At US $5 per person for lunch (exclusive of drinks), this would bring in at least US $900 daily A few visitors also patronise the Juici Beef patty and pastry shop, but the value of this business is minimal

Other attractions in the area also benefit from the presence of the river tours A Black River safari tour would not provide a full day's activities, so most visitors to the river tour also visit attractions such as the nearby YS Falls

There are five major tour companies that consistently send visitors to the Black River safari tours They are Tourwise, Caribic Vacations, Holiday Services, Tropical Tours and Jamaica Tours Ltd Three of the five tour companies were contacted and they confirmed that the Black River/YS Falls tour package was one of the more popular tours (especially with Europeans), accounting for 15 to 20 percent of all their tour business However we were unable to ascertain the level of benefit which these package operators were receiving

In the last few years there has been an increase in accommodations available on the south coast, including Black River The hotels use the river tours as part of their marketing strategy, and some hotels receive a 10% commission if they make bookings for their guests to visit the attractions

In addition to the employment provided by tour operators, labour is needed on a regular basis to clear the river channels of water hyacinth The Irrigation Board hires fishers to take loads of the plant out to sea Depending on the load transported a fisher can make between $2,000 to $5,000 per load It was estimated by a local fisher that about

10 to 14 loads are taken out to sea each month, making the value of this employment somewhere between $20,000 and $70,000 per month

Costs associated with tourism
There was no evidence or mention of increased economic costs for residents as a result of tourism in Black River

SOCIAL AND CULTURAL INFORMATION

Perceptions of the economic benefits of tourism
The river tours provide full-time employment for 30 local people as well as an income for the proprietors A former fisherman employed to one tour company felt that fishing provided a greater earning opportunity than tourism, but his age prevented him from going to sea any more As mentioned, a few craft vendors have access to the visitors or sell their goods to the tour company However the literature reports that many residents of the area feel excluded from the benefits of tourism on the Black River (ESL, 1997a) because of a lack of opportunity to interact with the tourists During our site visit we observed tourists from one bus walking through the town, but were told that this is rare The proprietor of one store in the town has approached a local river tour operator about the possibility of having tourists visit his store but was told the visitors were on a tight schedule and could not afford the time to do so Apart from the issue of the lack of opportunity to shop, there is also the question of whether or not the shops have items that visitors would be willing to purchase

Social and cultural impacts of tourism
It was evident from interviews with the managers of attractions that there has been very little communication with community members during the planning of these attractions When asked the reason for this, one operator suggested that the community members were not interested, while another stated that he himself was not interested in communicating with the residents of the area This is unfortunate, because there are many users of the wetlands resources who are at times in conflict with each other for use of the resources, and this situation has been exacerbated by the intensive use of the river by the three larger tour operators Traditional users of the river have to contend with the increased traffic from the river tours, which makes navigation much harder Furthermore, there are conflicts between the licensed operators and the individual fishers operating tours on the river The fishers feel that tour operators perceive them as a threat to their business as they can offer wildlife viewing – and other less publicised activities – in areas that are inaccessible to the larger pontoon boats

There are very few community-based organisations (CBOs) in the parish, which makes it difficult for citizens to voice their collective opinions on important issues such as competition for the use of public resources (Massa and Haynes-Sutton 1998) Perhaps the most dynamic organisation concerned with the development of the area is the South Coast Resort Board with a membership comprised of tourism interests, the St Elizabeth Parish Council, the Police schools and other community members With project funding from TPDCo, this organisation has helped to improve infrastructure and signage along the south coast, and is interested in protected area management (Massa and Haynes-Sutton 1998)

Safety and security
The three main boat tour operators have invested in the training of basic First Aid and CPR for their tour guides and boat captains which are among the requirements for obtaining their tour licence The independent operators who give tours in their fishing boats are not licensed and likely have no safety equipment or training in First Aid should an emergency arise To our knowledge, the river tours have not experienced any security problems to date

ENVIRONMENTAL INFORMATION

Natural resources

The Black River Morass is an important region for Black River and its surrounding communities, owing to its ecological, hydrological and cultural significance Of the 20 species of reptiles and amphibians found in the Black River, ten are endemic and two are rare (Massa and Haynes-Sutton, 1998) Plants which are economically important to locals and come from the morass include thatch palms and mangrove trees, which provide yam sticks, sticks for fishpot frames and poles used in construction In addition, the mangroves provide fish nursery areas that are economically important for the many fishermen in the area The wetland also helps to protect the town of Black River from floods and storm surges

Site development impacts

All three companies operating on the river have based their operations in buildings that were previously used, and have therefore not altered the physical environment very much The Black River Safari and St Elizabeth Safari operate from buildings that were once sugar warehouses, while Irie Safari has built on an area that was previously reclaimed for the Black River Marina

Operational impacts

Riverbank erosion caused by wakes from the pontoon boats is one of the most obvious environmental impacts associated with the operations of the tours Damaging wakes often occur while boats are speeding, especially on the return portion of the trip, where guides usually have little to say In some areas, the river has widened up to 10 metres (ESL 1997a) Erosion disrupts the nesting areas of crocodiles and some birds as well as the habitat of species living in and around the banks of the river

It has been noted that birds are seen less often than previously in areas frequented by the tours This is most likely from noise and air pollution from the boat engines as well as the noise created by the passengers on the boats

In order to ensure that crocodiles are seen on the tour guides frequently feed crocodiles with chicken This practice interferes with the normal feeding habits of these animals, making them dependent on humans and no longer inclined to forage for their own food

Measures used to minimise environmental impacts Two of the three operators on the river were aware of the many studies that have been carried out on the natural resources of the river and were knowledgeable about the threats to the resource both from external sources and from impacts caused by their own operations None of the managers felt that their own operations were having negative impacts that could not be alleviated with proper controls on the river

A carrying capacity study for boat operators on the Black River Morass was done in 1997 by Environmental Solutions Limited (ESL) for the Tourism Product Development Company The study concluded that the maximum sustainable level of operations is approximately 600 visitors per day (30 tours with 20 visitors each), although at the time ESL estimated the daily number of visitors to be 200 (It was unclear as to how the numbers of existing or projected visitors were determined from the carrying capacity study) The visitor numbers obtained in the present study suggest that the current level of combined operations is at least 260 visitors per day [14]

[14]The sum of the monthly figures for each operator divided by 28 days

ESL recommended that the existing level of operations should not be increased unless certain mitigative measures for boat tour operation were introduced, including the following

- Departures should be limited to between 9 am and 12 noon and 2 and 4 pm, with a ten-minute lag time between each departure
- A rest day should be instituted
- An upper speed limit of 10 mph should be adopted by all boat operators
- A warden system should be implemented to monitor the proposed measures
- Public education and training should be carried out in the area
- A waterfowl pond should be developed to enhance the bird population of the area

To date none of these measures have been instituted

External environmental threats

The resources of the Black River are threatened by many activities Apart from the environmental impacts caused by the three major boat tour operators, the major threats to the river and its associated flora and fauna include deforestation, pollution, unsustainable fishing practices, and the unregulated use of jet skis on the river

Deforestation Residents of communities surrounding the morass harvest a variety of tree species, including thatch palm, royal palms mangroves, logwood and mahoe The timber is used for making charcoal, furniture, firewood, sticks to make fish pots vamsticks, and crafts, to name some of its uses Resource exploitation has been relatively unchecked and the current levels seem unsustainable Mangrove channels are also cut by fishers to reach further into mangroves where more nursery areas for fish can be found If these practices continue, they could affect nesting habitats for a variety of species and change the biodiversity of the area

Pollution Nutrient input into the river in the form of dunder from waste processing at the Appleton rum distillery has caused a reduction in the amount of available oxygen for aquatic life, thereby disrupting the entire food chain of the ecosystem Evidence of nutrient increases can be seen from the abundance of water hyacinth that accumulates in the river If not cleaned out periodically this invasive plant can choke the river, making it impassable Pollutants from other sources also find their way into the river, including fertilisers from agricultural runoff and effluent from an aquaculture enterprise at Elim In addition, erosion in agricultural areas has in the past led to siltation of the river

Overfishing Some fishers in the area are resorting to unsustainable fishing practices that could lead to a decrease in the long-term fecundity of the fishery resource Morass fishers burn the sedges and mangroves to make it easier to manoeuvre through mangroves to set their fish, shrimp and crab traps Burning destroys the plant life and habitat for wildlife associated with these wetlands The illegal hunting of birds, crocodiles and other wildlife is also still practised

Jet skis Jet skis have in recent times been used on the river by hotels on the South Coast This is a safety hazard as many jet ski operators travel at high speed with little regard for other users of the resource or the informal traffic rules of the river Environmental impacts of the jet skis include excessive noise and toxic exhaust fumes

Environmental education and awareness

Current EE methods While giving the tour the boat operator or guide provides information about the history of the river and identification of the wetland vegetation and its associated fauna, including birds and fishes All three boat operators believe that they have provided valuable educational opportunities to school children from Black River and beyond by offering school trips on the river Managers felt that these activities will increase the awareness of the importance the resources and encourage local conservation efforts

Changes in behaviour There was no major change reported in the behaviour of resource users towards the river and wetlands as a result of the education efforts of the tour operators However, managers felt that residents, especially

those directly benefiting from the attractions, have learned to appreciate the importance of crocodiles, and would be unlikely to harm any of the animals

The role of tourism in resource protection

It is obvious that tourism in its current form is not helping to conserve the resources of the river Managers of the boat tours expressed the opinion that tourism has led to increased attention from political leaders and conservationists and recognition of the need to conserve the morass in its natural state, but that this attention had led to very little positive action For example, the area has been promised a warden to police the traffic on the river, but this has not yet happened although a boat was purchased for this purpose by TPDCo and the South Coast Resort Board (Massa and Haynes-Sutton, 1998)

One tour operator is an honorary game warden and has worked closely with the NRCA and other organisations towards conservation of the natural resources of the area He has assisted the IUCN[15] Crocodile Working Group that is developing an action plan for the protection of crocodiles, including public education, law enforcement and protection of critical habitats

Many proposals have been put forward for alternative uses of the Black River Morass, although none have turned out to be economically viable Examples include the drainage of the morass for agricultural land and mining of the peat for fuel As a result of these interests the morass has been well studied The importance of conserving this valuable ecosystem has long been recognised and included in plans for the area, but there has been little implementation of these plans They include the National Physical Plan (1978-1998), produced by the Town and Country Planning Department (TCPD), the St Elizabeth Development Order of 1983, and the Plan for a System of Protected Areas in Jamaica (JCDT 1992), which recommended that the Black River area should be declared a protected area (Massa and Haynes-Sutton, 1998)

At present, the only legal framework for conservation is through the Wildlife Protection Act, which designates the area as a Game Sanctuary thereby prohibiting hunting However, the Act is rarely enforced In February 1998, the Black River lower morass was declared a Wetland of International Importance under the Ramsar Convention on Wetlands of International Importance (Massa and Haynes-Sutton, 1998) It remains to be seen what impact this designation will have on the conservation status of the area

CONCLUSIONS AND RECOMMENDATIONS

The safari tours on the Black River show great promise to become successful ecotourism attractions, but the operator need to work individually and collectively to address certain environmental problems inherent in their operations, as well as some social concerns

Economic and community benefits

In terms of our criteria for successful ecotourism, these attractions are definitely providing economic benefits to the area and especially to their owners Although it is clear that most residents of the area should not expect to make a living from spin-offs provided by safari tours, we feel that more effort could be made to ensure a broader range o spin-offs to the community A greater level of involvement with the community in general would perhaps mitigat some of the social tensions resulting from tourism in its present form on the Black River, and help to give people more realistic expectations of the spin-offs that can be derived from the river tours

To alleviate any resentment that locals may have against the boat and package tour operators, perhaps the tour should include a walk through the town of Black River so that visitors can interact with the local people However much education must go into preparing the residents for this If they are to provide goods and services to the tourists they must first determine what the tourist would like and be interested in This could perhaps be ascertained b

[15] International Union for the Conservation of Nature and Natural Resources

market research conducted by the tour operators If locals provide goods and services that the tourist does not wish to have, this will lead to more resentment, as the locals will continue to feel excluded from the benefits of tourism

Income generation There are few mechanisms to solicit income on these tours A few craft items and other souvenirs were on sale at the attractions themselves, but with the exception of wicker shrimp traps, not much was available in the way of items distinctive to the area and representative of what a visitor may have seen while on the tour No literature on the ecology of mangroves, birds, or crocodiles was offered for sale

Funding initiatives that could help to protect natural resources should also be investigated One obvious need is for a legal framework that allows for the collection of user fees, but this will have to await the declaration of the Black River Morass as a protected area The ESL Study suggests that the boat tours solicit a contribution from visitors that would go towards paying for warden services If the visitors have had the conservation needs of the area explained to them, they might likely be glad to provide a contribution On a typical tour no mention is made of the environmental problems and conservation needs of the area, thus an opportunity is missed to spark interest in the visitor or solicit contributions

As recommended in the previous case study of YS Falls, the question of package tour prices in relation to revenue derived by the attractions themselves needs to be addressed Our visitor survey indicates that most package tour clients think the tour is too expensive, which makes them less likely to spend additional money in the area, thereby reducing the possibility of spin-off revenues for the community At the same time, the viability of the boat tour companies may be compromised unless they are able to increase their prices

Resource protection In our opinion, not enough is being done by the tour operators to minimise their environmental impacts and contribute to the protection of the wetlands resources While the lack of legal protection for the area hinders effective regulation of the many competing activities on the river, this should not prevent resource users from communicating with each other and collaborating to conserve the resources that are so important to them all In the absence of a formal management plan and enforced regulations for the Black River Morass, there should at least be some level of agreement on a set of informal rules for tour operators and other resource uses A starting point for discussion could be the carrying capacity recommendations made by ESL in their 1997 study With carrying capacity in mind, managers should develop long-term plans (which are currently lacking) for each attraction

The matter of the unlicensed tour operators is a difficult one, which we did not have the time to investigate fully These operators add to the river traffic and other environmental impacts of tourism, as well as presenting a problem for the tourism licensing authorities At present, these fishers take tourists on journeys of up to several miles along the coast and up the river without any formal training in First Aid and usually without adequate safety equipment on board their small boats Somehow these operators must be regularised and brought up to par in terms of both operational guidelines and safety measures

Environmental awareness While the tours provide a unique opportunity for viewing wildlife and educating many visitors, we feel that the conservation message could be stronger, more diverse, and directed more towards the local community The boat tour operators have trained their tour guides in the basic ecology of crocodiles, but they do not make the most of the opportunity to provide a learning experience for visitors and residents It was our impression that the tours concentrate too much on the crocodiles Much more could be said about the ecology of the wetlands, the history and lifestyle of the people in the town, the importance of the wetlands resources to the surrounding communities and the environmental threats to the area There was also room for improvement in the delivery of the information to the visitors

By using existing buildings for their bases of operations the tour companies have not damaged the physical environment However they have not made the best use of the space and historic connections of these buildings, which would be ideal as display areas for exhibits depicting the history and natural history of the Black River area Black River Safari Tours and St Elizabeth Safari Tours both operate from buildings that were once sugar

warehouses, but no mention is made (in the building) of this interesting fact, nor of any other historical facts about Black River itself

Factors affecting ecotourism potential

Environmental threats appear to be the main constraint to the continued success of these river tours The managers of the attractions have done a good job at marketing the tour and attracting visitors from the resort areas of Montego Bay, Negril and Ocho Rios The roads and other infrastructure are quite adequate and the people of Black River in general are friendly and welcoming towards tourists However, at all three attractions the collection of visitor statistics needs to be improved By focusing almost exclusively on crocodiles, the tours may be missing other target markets such as visitors who may be interested in the historic architecture of the town of Black River

CASE STUDY # 3 VALLEY HIKES

Description of attraction

Valley Hikes is a non-profit organisation founded in 1995 with the mission "to promote sustainable development of eco-cultural tourism in the Portland area thereby enriching the visitor's experience and improving the quality of life for the residents" (untitled profile of Valley Hikes, 1998) The efforts of Valley Hikes are intended to enhance economic viability for the area while preserving natural and cultural resources (Brochure, 1998) The company offers a wide range of outdoor activities which emphasise the natural and cultural heritage of Jamaica, including hiking, historical and cultural attractions, camping, caving and horseback riding within the Rio Grande Valley in the parish of Portland Jamaica

There are approximately 20 trails used by Valley Hikes, each with distinctive attractions such as caves, waterfalls, historical monuments and scenic vistas Hikes can last from two hours to as long as three days and can be customized to accommodate visitors' interests and fitness levels Table VH1 describes several of the trails and hiking tours offered All guides are from the Rio Grande Valley community and know the area well Some guides are specially trained in bird identification, caving, horseback riding, herbal remedies, insect identification and plant identification On average, one guide is provided for every two to three clients, making the hikes highly personalised

The trails that are used have been in existence for many years and are still travelled by community members today In addition the trails traverse private properties in several places, providing opportunities for visitors to see local farming practices and purchase snacks, fruit and drinks from resident vendors

Geographic setting

The Rio Grande Valley is the river basin of one of Jamaica's largest rivers, the Rio Grande, which flows northward through the parish of Portland from the slopes of the Blue Mountains The valley covers an area of 286 km^2 – approximately one third of the area of Portland – and borders the Blue and John Crow Mountains National Park The terrain of this area is mountainous, rugged and ideal for hiking

The main settlements in the Valley are Millbank, Comfort Castle, Ginger House, Alligator Church, Cornwall Barracks, Moore Town Bellevue, Seaman's Valley, Windsor, Stanton, Harcourt Tom's Hope, Durham, Bourbon, Cooper's Hill Fellowship and Berridale The majority of these villages are located along the banks of the Rio Grande with Millbank and an area called White River falling within the boundaries of the park

Table VH 1

EXAMPLES OF HIKING TOURS OFFERED BY VALLEY HIKES

REPLACE WITH CURRENT TRAIL DESCRIPTIONS TO BE FAXED BY VERONICA

Name of tour	Duration and price per person (foreigners)	Level of difficulty	Brief description of trail and hike
DARLEY	4-6 hours – US $25 US $37 with visit to Scatter Water Falls	Moderately difficult	The hike starts at Berridale Visitors cross the Rio Grande by raft, passing Scatter Water Falls along with two other waterfalls The hike continues to Darley, where an old ruin known as the "slave building" is visited The trail leads Bourbon and eventually back to Scatter Water Falls where Foxes Caves may also be visited
SCATTER WATER FALLS	US $12 for SWF	Very easy	The hike begins in the town of Berridale with a short walk after which visitors are taken across the Rio Grande on a bamboo raft On the other side there is a 20-minute walk to the Falls, where refreshments are served A hike of 15 minutes up the hill will take the visitor to Foxes Cave
STANTON	Short (2 hours) – US $20 Med (3 hours) – US $25	Very easy	The hike starts at the tramway in Stanton, going through farm land to Tom's Hope and from there to 'land settlement" (once a large estate) and back to Stanton
MOORE TOWN	Short (2 hours) – US $25 Long (4 hours) – US $30	Easy	The tour starts at Moore Town where a visit is paid to the Colonel Visitors then hike along a trail leading to Nanny Falls
PLANTATION TRAILS	Short (1 hour) – US $20 Long (3 hours) – US $30	Easy	The hike starts at the banana boxing plant of Premier Bananas and passes through coffee fields
WHITE RIVER TRAIL	Long (4 hours) – US $30	Moderately difficult	The trail starts at Millbank and leads to White River Here visitors may see the giant swallow tail butterfly The trail goes along a riverbed where several waterfalls may be seen
GUAVA RIVER TRAIL	Long (7 hours) – US $30	Difficult	The trail begins and ends in Bellevue Most of the trail goes through the area of Guava River Several waterfalls can be seen
WATCH HILL TRAIL	5 hrs (price not listed)	Moderately difficult	The hike starts in Windsor The trail passes through banana plantations in operation, and leads to the ruins of an 18th century sugar plantation and works
NANNY TOWN TRAIL	3-day tour – US $170	Difficult	The tour starts in Windsor, with visitors crossing the river by raft They are able to observe banana cultivation and other farming The trail passes through the deserted village of John's Hall, and leads through the national park to a campsite

KEY TO LEVEL OF DIFFICULTY		
Easy/Very easy	**Moderately difficult**	**Difficult**
Easily accomplished by anyone of average physical fitness	Hiker must be in good physical condition	Hiker must be experienced and in very good physical condition

Community setting
In 1995 the population of the Rio Grande Valley was estimated at 17,640, or 24% of the parish of Portland (Douglas and Parchment 1995) The major source of income and employment in the Rio Grande Valley is agriculture, with the main crops being bananas, plantains, ground provisions such as yams, and coffee Employment is usually seasonal Most of the residents are educated only to the primary school level (Douglas and Parchment, 1995)

Accessibility
The base of operations for Valley Hikes is in the town of Port Antonio where bookings are made Transportation is usually arranged from the office to take visitors from their hotel to the beginning of each trail in the valley, as the roads leading into the Valley are in very poor condition In the case of loop trails, visitors have the option of providing their own transportation and parking near the trail head Several of the trails are located on private property and visitors must be escorted by guides in order to enter

Management structure
Valley Hikes is a membership organisation currently comprising 25 members, including all of the 18 trail guides The company has seven board directors Four organisations are regarded as playing a pivotal role in the development and success of Valley Hikes, and mandatory seats on the board are reserved for their representatives These organisations are the Social Development Commission (SDC), the Jamaica Tourist Board (JTB), the Portland Environment Protection Association (PEPA), and the Blue and John Crow Mountains National Park (BJMNP) The remaining three directors are chosen from the membership

A Trail Guide Association has been set up and meets monthly to discuss issues relating to the role of trail guides A representative of the Trail Guide Association currently sits on the board of directors of Valley Hikes

Origin of Valley Hikes In 1993, Veronica Thaxter, the current manager of the organisation, undertook some research to investigate the perceptions of community members of the valley towards tourism (Her family owns Scatter Waterfalls which was at that time the only operating attraction in the Valley) Ms Thaxter found that the residents of the Valley knew little about tourism and its benefits, and were unaware of how they could become involved Ms Thaxter then set out to change the perceptions of community members by educating them about the tourism potential of the area

At the same time, the Dutch government was involved with the Social Development Commission in an integrated rural development project in the Rio Grande Valley, which was assisting with agricultural development, the creation of cottage industries, improved health care and environmentally sustainable community development in general (The box on page _ provides details of the Rio Grande Valley Project) With funding from the Netherlands Embassy, the Rio Grande Valley Project collaborated with Ms Thaxter on a project to promote the concept of ecotourism in the area New trails were scouted and 20 local people were trained as hiking guides (van den Berg, 1995) The curriculum included tourism awareness, the management of trails, CPR and First Aid The Project also funded a feasibility study to examine the potential for developing and promoting ecotourism sites and activities in the area

Arising from these initiatives an Eco-Tourism Action Group (ETAG) was set up in 1993 involving the Dutch government, PEPA, JTB, the Jamaica Hotel and Tourism Association (JHTA) and other tourism entities to guide the development of ecotourism in the valley In 1994, after several ETAG meetings, it was decided that a company in the form of a non-profit NGO should be established to coordinate ecotourism development and activities for the benefit of the communities of the Rio Grande Valley Valley Hikes was this new company, incorporated in May 1995 and officially launched on June 21, 1995

According to a profile of the organisation provided to participants of Green Tourism Conference (1998), the goals of Valley Hikes include

- Developing natural and cultural heritage attractions in the Rio Grande Valley and guidelines for their sustainable use,
- Promoting ecotourism and marketing the entire area as a destination,
- Encouraging community participation in creating the total tourism product, while preserving the natural, social and cultural resources upon which tourism depends,
- Generating income and enhancing living standards for the people of the area, by ensuring direct benefits to trail guides, craft producers vendors, and providers of transportation and accommodation services,
- Educating local people through training and cultural exchange with visitors,
- Working with other organisations, particularly PEPA, towards environmental education and conservation of resources

ECONOMIC INFORMATION

Entrance fees

The cost per hike depends on the trail and duration of the hike, and there may be additional charges for certain attractions visited on the hikes For foreigners, tour packages range from US $20 to US $80, excluding transportation costs Local rates are $250 per person per hike – much lower than for foreigners – and consist mainly of the tour guide fee (typically $500 per hike) For this reason Valley Hikes requires a minimum of two locals per hike These rates were designed to be comparable with existing rates for other attractions in Jamaica

Transportation costs depend on the number of clients booking a hike, and the particular location, but the average transportation cost per person was reported as US $15, or about JA $500 Attraction fees, if any, are paid directly to the attraction, less a commission of 15% for Valley Hikes For example, the entrance fee for Scatter Water Falls is US $12, while a cultural show can be arranged for US $9 Lunch can also be provided at Scatter Water Falls for US $12

Visitor statistics

The total number of hikers in1997 was 421, with 376 of them paying clients and the other 45 being guests of Valley Hikes There were 279 paying hikers in 1996, and 268 in 1995 When clients make a booking for a hike some visitor statistics are collected, for example, the chosen trail, numbers of visitors, and where visitors heard about Valley Hikes After each hike, comments are solicited from each visitor Table VH2 shows the frequency of hikers on the various trails and activities for 1997 The most popular hike is to Scatter Water Falls, chosen by 56 percent of the visitors The data were provided in a raw form (notes in the record book), and had not been tabulated or analysed by Valley Hikes It is not clear how these figures will be used to help inform trail development or marketing plans

Table VH2

FREQUENCY OF PAYING HIKERS ON VALLEY HIKES TRAILS (1997)

TRAIL/ACTIVITY	NUMBER OF HIKERS ON TRAIL	PERCENTAGE
Scatter Water Falls (hike & attraction)	211	56 1
Thaxter s to Buckley's Hill	42	11 2
Moore Town	39	10 4
Bourbon	33	8 8
Golden Vale	22	5 9
Darley	10	2 7
White River	6	1 6
Stanton	2	0 5
Bonnie View	2	0 5
All other shorter hikes combined	7	1 9
Extended Hikes	2	0 5
Total	**376**	**100 00**
Rafting and hiking combination	39	10 4
Horseback riding combination	5	1 3

No data were recorded on the country of origin of visitors, but in 1997 there were 249 paying foreigners and 127 paying locals According to the manager, the foreign market appears to be made up of an equal number of Europeans and North Americans Most visitors are middle aged and come from various backgrounds It has been noted that more locals come during the summer than the winter, and they tend to come in large groups for events such as office parties and school camping outings Visitation on the whole is increasing, although it remains much lower than desired

Table VH 3 lists the sources of referrals mentioned by the visitors The data show that hotels and guesthouses in Portland are a significant source of referrals to Valley Hikes, responsible for 38 5% of all referrals The Jamaica Tourist Board referred a surprisingly small proportion of visitors, only 2 8% These figures suggest that visitors already staying in Portland are the most likely source of clientele for Valley Hikes Unfortunately, most walk-in customers do not indicate where they heard about Valley Hikes This would be valuable information for the marketing strategy, as walk-ins comprise the majority (almost 42%) of all customers

Table VH 3
SOURCES OF VISITOR REFERRALS TO VALLEY HIKES (1997)

SOURCE OF REFERRAL	NUMBER OF RESPONDENTS	PERCENT OF REFERRALS
Walk-in visitors	165	41 8
Hotel Mockingbird Hill	58	14 7
PEPA	28	7 1
Dragon Bay	24	6 1
San San Villas	23	5 8
Goblin Hill	16	4 1
Bonnie View	15	3 8
JTB	11	2 8
Trident	10	2 5
Jamaica Crest	4	1 0
NRCA	4	1 0
Fern Hill	2	0 5
Other	35	8 9
Total	**395***	**100 0**

* *Out of a total of 421 hikers in 1997*

Visitor satisfaction During the period of fieldwork for this study, July 21 to 24, 1998, only two customers went on a hike with Valley Hikes When questioned, they described their experience as "wonderful" and the guides as extremely knowledgeable and friendly The visitors commented that they had been on a tour the entire day and it was refreshing to meet only community people and learn more about the culture of the island In their opinion the fee was high compared to rates for other available activities, but they acknowledged that the hike was indeed special and worth the money paid They were impressed by the fact that so many of the guides were women (there are seven female guides out of a total of 18 guides) A detailed analysis of visitors' comments in the guest books was not made in the available time At a glance however, all comments were of a positive nature

As part of the fieldwork for this study one of the researchers arranged with Valley Hikes to be taken on one of the shorter hikes part of the Stanton Trail, where maintenance work was in progress by Valley Hikes members Transportation was provided at a cost of $500 from the Valley Hikes office in Port Antonio to the trail head at Tom's Hope, a journey of about 30 minutes along winding, rugged roads The hike lasted approximately 4 hours and would be considered moderately difficult as defined in the description of hikes above The trails were well defined, although the terrain was rough and relatively steep in places

The hike led through several banana plantations as well as settlements and areas of natural vegetation The tour guide was able to identify different types of plants and their medicinal uses, as well as a few birds In the plantations the hikers were able to observe workers cutting and sorting bananas, and speak with them about the process of preparing bananas for export As the hikers passed through settlements they had opportunities to purchase refreshments, meet local people and observe typical activities in the villages Lunch was provided about halfway through the tour at a spot with a panoramic view of the Rio Grande Valley, where other trail guides were engaged in trail maintenance The trail ended at a local farm where the proprietor rears rabbits, tilapia and bees for honey He gave a short tour of the property and explained aspects of his business Honey was available for purchase The group was picked up from this point by a taxi and taken back to the office

The hike was in our opinion very enjoyable All persons we met were friendly and approachable, and conversations with the local people were interesting and informative The tour guide was well informed about the concept of Valley Hikes and its future endeavours He was good at identifying plants when asked, although not proactive in providing information (a matter that should perhaps be addressed at the next training opportunity)

Revenue

Valley Hikes generates income from hiking tours, commissions from entrance fees to attractions along the trails, the sale of merchandise (such as Valley Hikes T-shirts, bags and maps), and commissions on craft items sold on behalf of community members Valley Hikes assisted some local taxi drivers to obtain their "PP" (public passenger) licence plates and in return gets a 15% commission on transportation costs for hikers In addition, the organisation benefits from a tree sponsorship programme for re-seeding and trail maintenance, receiving contributions of US $10 per tree Grant funding totalling over one million dollars was received for specific projects in 1997, but this income is managed separately from the business operations Tables VH 4 and 5 provide figures for Valley Hikes income and expenses in 1997

The sale of merchandise accounted for a relatively small amount of revenue ($22,709, or 4 3% of total income) We learned that 58 items were sold in 1997 (26 T-shirts, 26 maps, and 6 bags) Even if each item has been sold to a different person, fewer than 8% of the 421 hikers (376 of them paying clients) would have purchased Valley Hikes merchandise Although we do not have any comparable sales figures from other attractions, these figures seemed quite low

Another disappointingly low figure was the income recorded from the tree sponsorship programme in 1997, which indicates that only two trees were sponsored in the entire year However, the manager reports that in 1996 the programme "did very well and in 1998 sponsorship has already been received for 70 trees Valley Hikes also makes interest on the sponsorship money that is held in the bank while maintenance fees for the planted trees are gradually paid out to staff who manage this program over a period of years (Seedlings only cost $30 each, so initial expenditure is low)

Table VH 4

INCOME FROM OPERATIONS OF VALLEY HIKES (1997)

SOURCE OF INCOME	AMOUNT (JA $)	EXPLANATION
Hikes and other activities	373,668	
Port Antonio Destination Marketing Fund (PADMF)	60,900	Amount allocated to pay administration costs such as foreign bank drafts, printing of invoices, communications, etc
Sale of merchandise	22,709	
Interest and other bank credits	76,557	
Gross income	**533,834**	
Operating expenses	(712,332)	
Net income/(loss)	**(178,498)**	

Table VH 5
GRANTS AND NON-OPERATIONAL EXPENSES (1997)

ITEM	INCOME	EXPENSES	NET INCOME/(EXPENSE)
Combined income from grants	794,946	687,664	107,282
Port Antonio Destination Marketing Fund (hoteliers' contributions)	279,880	147,952	131,928
Tree sponsorship programme	700	3,313	(2,613)
Memberships	500		500
Accounting fees		34,040	(34,040)
Equipment		54,900	(54,900)
Receivables	1,700	23,000	(21,300)
Payables	16,000		16,000
Totals	1,093,726	950,869	**142,857***

* *Corresponding figure on original Valley Hikes spreadsheet is $132 846 ($10 011 less) although all other figures are the same*

Operating costs

The operating expenses of Valley Hikes in 1997, presented in Table VH 6, were $712,332 This represents more than 133% of their gross income from operations, resulting in a net loss of $178,498 Grant funding for project undertaken in 1997 helped to maintain staff and keep the organisation functioning

We made a rough calculation of a break-even point in terms of numbers of hikers needed annually to cover operating costs as reported in 1997 [16] Because foreign hikers bring in much more income per person than locals ($367 net revenue per person as opposed to $71 for locals), we calculated the break-even point only in terms of the numbers of foreign tourists To generate an additional income of $178,498 (the net loss for 1997) Valley Hikes would need to attract at least 486 additional foreign hikers, for a total of 735 foreigners (almost three times as many as the 249 paying foreigners in 1997) [17] This is a conservative estimate, partly because grant funding for projects is currently used to supplement the salaries of administrative staff, who are paid a relatively small amount from income generated by operations The manager s rough estimate of the break-even point was 100 hikers per month, or 1,200 per year

[16] Our assumptions and calculations are itemised in a note at the end of this case study

[17] Shortfall of $178,498 – $367 = 486 hikers

Table VH 6
OPERATING EXPENSES OF VALLEY HIKES (1997)

ITEM	AMOUNT (JA $)	EXPLANATION
Expenses for hikes and activities	254,380	Fees for community attractions and activities such as horseback riding, camping, and rafting
Salaries	161,070	Office staff Salaries are supplemented by fees for project management, funded by grants
Transportation – office	69,000	
Rent	60,500	
Marketing	48,467	Printing of brochures and flyers for local hotels, transportation to promotional events & meetings
Transportation – repair & maintenance	45,427	
Office expenses	43,011	
Utilities	13,040	
Merchandising costs	7,690	
Trail Maintenance	5,164	
Port Antonio Destination Marketing Fund – administration	4,531	Amount spent on administration costs such as foreign bank drafts, printing of invoices, communications, etc
Equipment repair & maintenance	0	
Training	0	
Total	**712,332**	

Constraints to revenue generation The main constraint to revenue generation seems to be a lack of visitors to the area Most foreign visitors (who provide a much higher profit margin than locals) are referred from hotels and guesthouses where they are already staying in the area However important this market is to Valley Hikes, it is still a very limited market as fewer than 1% of all bed/nights sold in the island in 1997 were for Port Antonio accommodations (JTB 1998[18])

The low stopover visitation to Port Antonio can be attributed to a number of factors Among them are the relative inaccessibility of the area, the lack of awareness of Portland as a destination for eco-cultural tourism, and the dominance of the image of Jamaica in the international market as a 'sun, sand and sea' destination served by all-inclusive resorts (untitled profile, 1998)

On the other hand the well-known attraction of rafting on the Rio Grande is the second most visited attraction in Jamaica (JTB 1997) Therefore it would seem that more marketing and promotion of Valley Hikes should be done for the day-trip sector of the market One factor that might make this difficult is the poor condition of the roads from Port Antonio to the Valley The roads along with their associated signage are inadequate for tour buses or tourists travelling on their own Also, in order to attract day-trippers Valley Hikes would have to successfully compete with the popular rafting attraction, which is already a full day's excursion from Ocho Rios

Another possible constraint to revenue generation is the fact that Valley Hikes is not yet licensed as an attraction, which means that the company does not benefit from the national tourism marketing arrangements It is felt that

[18] Port Antonio accounted for 49 817 (0 94%) of the 5,285,479 bed nights sold in Jamaica in 1997

some of the requirements, such as providing security guards on hikes, are not only unaffordable but unrealistic fo attractions such as Valley Hikes The management therefore sees a need for revision of the policies and guideline for ecotourism attractions

Marketing and promotion

From its inception, Valley Hikes has carried out a relatively aggressive marketing campaign to promote the company and its product It has had help from many journalists and industry officials, who have visited the area and written articles in all kinds of media about this innovative ecotourism company With funding from the Environmenta Foundation of Jamaica Trafalgar Development Bank and the JTB, brochures were prepared for use in all promotiona activities and given to the JTB and area hotels for distribution The sale of merchandise with the Valley Hikes logo i another form of advertising the company, which has produced Valley Hikes T-shirts, bags and a decorative map o the area

Since 1995 Valley Hikes has been promoted by a US-based marketing, promotion and reservations firm, Uniqu Destinations In 1997 Valley Hikes, in partnership with a number of Port Antonio hotels and villas, launched 'Generic Destination Marketing Plan' to promote the entire area and all it offers through this same agent Trad shows, marketing networks, and an Internet website are some of the methods being used to market a variety of Por Antonio vacation packages which all include Valley Hikes activities such as bird watching, hiking, horseback riding and workshops on herbal remedies The cost of this marketing program is covered by the accommodations secto partners of Valley Hikes

From January to August 1998 Unique Destinations referred an estimated 25 tourists and 35 journalists to Valle Hikes, each of whom spent an average of US $25 per hike In addition, approximately 3,500 brochures on Valle Hikes have been sent out to general travellers, travel agents, tour operators, journalists and writers between 1995 an now

Employment

Valley Hikes employs an Operations Manager and Assistant, as well as 18 guides who work on contract for $500 pe day/hike In 1997 the total number of guide-days worked was 151, providing employment income of $75,500 to th community Benefits ranged from $1,500 for 3 days of work to $9,000 for a maximum of 18 days worked, with mean income of $4,194 (about US $120) for the year Individuals from the local communities are occasionally hire for trail maintenance and the painting of signs for the tree sponsorship program Since unemployment is high in th Rio Grande Valley, this work is appreciated However unless visitation increases greatly, it is clear that thi occupation can only be viewed as a supplement to other forms of employment

Indirect economic benefits (spin-offs)

Valley Hikes contributes to the economy of the Rio Grande Valley and surrounding communities in the followin ways

Goods Clients of Valley Hikes regularly purchase snacks and drinks from local vendors and shopkeepers in th Valley, although the value of this trade has not been calculated Local craftspeople have an outlet for the sale of the crafts through Valley Hikes, which offers crafts for sale in the office in Port Antonio There are also craft market along some of the trails used by Valley Hikes, and each tour guide signs a contract with local vendors agreeing t take visitors into these markets

Services Valley Hikes has helped to diversify the tourism product of Portland and bring visitors to remote attractior that would otherwise see little business Valley Hikes takes hikers to various attractions in the Valley and pay entrance fees set by the owners, less a 15% commission which the organisation retains Hotels that refer visitors t Valley Hikes receive a 10% commission on any business resulting from such referrals

Other community benefits
There are also some economic benefits from the activities of Valley Hikes that can not be readily computed These include

Tree sponsorship programme To combat some of the problems associated with deforestation Valley Hikes has instituted a tree sponsorship programme Visitors may sponsor a tree for US$10 The tree is planted on the land of a participating landowner, who signs an agreement to help take care of the tree until it can survive on its own (approximately three years) and not to cut the tree for 20 years Valley Hikes staff are also responsible for taking care of the seedlings The sponsor receives a certificate, and a sign is posted with his name on the tree Farmers in the Rio Grande benefit from the tree sponsorship program of Valley Hikes in a number of ways Valley Hikes provides hardwood (timber) trees fruit trees, and trees that are effective at binding the soil so as to reduce erosion The tree is therefore an investment opportunity as well as a soil conservation tool for the farmer The Forest Industry Development Company (FIDCo) estimates that after 20 years of growth a hardwood tree can provide for its lumber a return of between $6,750 and $12,000, depending on the species planted

Trail maintenance The maintenance of the trails is an invaluable benefit for residents of the Valley, particularly the farmers who use the trails to travel to other communities and to take their produce to town

Training Valley Hikes provides training and advice to craftspeople through workshops on business management, product quality and other topics relevant to the craft industry First aid training is provided to the tour guides, all of whom who reside in the Valley Since the nearest doctor is many miles away, this expertise is an asset to the area

Donations from visitors Because of their interactions with the local people, visitors sometimes send contributions such as children s clothing to be distributed by Valley Hikes in the area

SOCIAL AND CULTURAL INFORMATION

Perceptions of the economic benefits of tourism
Residents of the Valley are well aware of the many economic linkages to the activities of Valley Hikes, such as the employment of local guides the work of trail maintenance, and the sales of snacks, drinks, produce and craft items to Valley Hikes clients and to attractions in the Valley A number of community members have approached Valley Hikes seeking help to develop new attractions and trails, which could be marketed in partnership with Valley Hikes For example, residents of Moore Town have asked for help and advice on the development of the White River Falls and associated trails, as well as the Maroon museum now being implemented In such cases, Valley Hikes assists by suggesting guidelines for development of the areas

Despite the interest in participating in tourism activities, most residents of the Valley do not expect to be dependent on tourism as a full time job but merely as a means of subsidising their present earnings from farming Thus, residents do not expect to see a major shift from agriculture to tourism

Social and cultural impacts of tourism
There appears to be a very positive relationship between Valley Hikes and communities in the Rio Grande Valley and there was no mention of conflict between the company and the community or between the community and visitors Owners of land sign an agreement with the company to allow visitors and guides to pass through their land

Valley Hikes regularly collaborates with the Portland Environment Protection Association (PEPA) and the Blue and John Crow Mountains National Park (BJCMNP), both of which have representatives on the Board of Directors and are very supportive of the work of Valley Hikes The success of Valley Hikes is seen as a pivotal element in the conservation of the natural resources of the area Collaboration is through workshops and training sessions on such topics as environmental management wildlife identification, and first aid training, and also in the area of advocacy In a joint letter to the Natural Resources Conservation Authority, Valley Hikes, PEPA and the JTB recently publicised their outrage at the environmental damage caused by the land use practices of a coffee farmer in the area His unauthorised road construction and clearing of a steep hillside had resulted in land slippage, extensive damage to hiking trails, and the siltation of a community water supply (The Daily Gleaner, August 31, 1998)

The pre-feasibility study for Valley Hikes examined the attitudes of community members to tourism Most respondents said they were in favour of increased tourism activity in the area, as it would provide employment for residents (Douglas and Parchment, 1995) No one questioned felt that tourism would bring problems to the area The respondents believed that the type of tourists that would be attracted to the valley would be mainly interested in the existing natural and cultural attractions, and this type of tourism was expected to have a minimal social impact

Safety and security

The level of difficulty of each hike is clearly articulated so that visitors can select the most appropriate type of hike for their fitness level Guides are trained in first aid and trails are regularly maintained The area has a low crime rate and is generally considered safe for tourists

ENVIRONMENTAL INFORMATION

Natural resources

The natural vegetation of the Rio Grande Valley is relatively undisturbed, and the area boasts high animal and plant endemicity Twenty-five endemic species of birds and five endemic species of frogs are found in the area Forty percent of the fern species here are not found outside of this valley The Valley is home to the endangered giant swallowtail butterfly (*Papilio homerus*) the world's second largest butterfly The area is located in the area of highest rainfall in Jamaica and receives an average annual rainfall of 635 cm per year (Douglas and Parchment, 1995)

The Rio Grande Valley is a very important watershed for a large area of Portland The Rio Grande itself is 34 km long with its main tributaries being the Guava, Corn Husk, Negro, Back Rio Grande and Foxes Rivers These rivers originate in the upper reaches of the surrounding mountains and descend into the valley to form this large river (Douglas and Parchment, 1995)

Site development impacts

Site development impacts for Valley Hikes activities have been negligible All trails are well established and commonly used by the communities of the area The attractions in the area such as Scatter Water Falls and Foxes Caves have been carefully developed according to environmentally friendly principles and in keeping with the local culture and practices of the area All structures at Scatter Water Falls are made from indigenous or natural materials There is no central sewage system in the valley and the management of Scatter Water Falls has provided environment-friendly dry toilets for hikers who stop at the water falls

Operational impacts

The environmental impacts associated with the operations of Valley Hikes are minimal due to the present low level of trail use as well as the measures taken to minimise possible visitor impacts, described below Valley Hike

operates all its facilities along 'green' guidelines The organisation uses recycled paper from the Fairy Hill paper project and encourages concessions at attractions to offer natural juices from fruits and vegetables grown in the area Floors are polished using teak leaves (*Tectona grandis*) and toilets are cleaned with vinegar and the leaves of the gully bean (*Solanum torvum*), thereby avoiding the use of harsh commercial chemicals [19]

Measures used to control visitor impacts Although no carrying capacity studies have been carried out for the trails, Valley Hikes is very wary of the consequences of the overuse of trails and has established daily visitation limits for trails and attractions These include

- A daily limit of 30 persons on any trail
- A maximum of eight persons allowed into caves at any one time
- Operations are closed on public holidays

Given the current number of trail guides (18), and the policy of providing at least one guide for every four hikers,[20] the maximum number of visitors that Valley Hikes would be able to serve daily is 72 This is far below the estimated carrying capacity of 600 visitors daily (30 persons on each of the 20 trails), a figure we feel is too high and would probably be unsustainable

The hikers actions in the valley are highly regulated by the guides Visitors are requested to take all garbage back with them and collecting of flora or fauna is strongly discouraged Valley Hikes commonly uses the motto, "take nothing but pictures, leave nothing but footprints and kill nothing but time "

External environmental threats

The main environmental threats to the Valley are deforestation (for charcoal production or clearing of land for farming) improper solid waste disposal, road construction, sand mining, and the overuse of pesticides and fertilisers in agriculture One particular problem associated with the cultivation of bananas is the inadequate disposal of pesticide-impregnated banana sleeves These tend to be left in unsightly piles on the ground and the toxic residues become a chemical hazard to rivers and wildlife

Environmental education and awareness

Valley Hikes is very vocal about the environmental threats in the area and uses its contacts with residents, schoolchildren and hikers to sensitise people in the community about these issues They also actively participate in solving some of the environmental problems though activities such as the tree sponsorship programme and the banana sleeve programme, where guides collect any discarded banana sleeves encountered on hikes

[19] Ironically their use of natural cleaning agents instead of synthetic disinfectants has been criticised by the government inspectors of tourism enterprises

[20] In practice the average number of hikers per guide is 2 8

The role of tourism in resource protection

Valley Hikes has definitely helped to promote the study of the natural resources of the Rio Grande Valley by facilitating access to the area by university research groups Scientists have been visiting the area in increasing numbers to conduct ecological research, particularly on threatened species such as the giant swallowtail butterfly Certainly the marketing and promotion efforts of Valley Hikes have helped to increase awareness of the natural resources of Portland However, the management of Valley Hikes is of the view that tourism has not yet provided a means to justify legal protection of the areas used by Valley Hikes, or even those used by the popular attraction, rafting on the Rio Grande, which has been operating there for many years

While Valley Hikes has been promoting ecotourism in the Rio Grande Valley, PEPA has been working towards the establishment of an extensive protected area under the Port Antonio Marine Park and Conservation Corridor Project (PAMPCC) Ecotourism is recognised as an important element of the management plan being developed for this area which stretches from the border of the Blue and John Crow Mountains National Park to the coastline of Port Antonio The GOJ has indicated its willingness to co-manage a conservation area with PAMPCC/PEPA, but the process has not been finalised Nevertheless, the increasing collaboration between the GOJ and PEPA seems to indicate that political support for conservation is increasing

Changes in behaviour At the community level, according to Valley Hikes personnel, the attitudes of community members towards protection of natural resources have been slowly changing The guides have been the first community members to realise the value of these resources and the importance of the local knowledge that has been passed onto them such as the medicinal uses of certain plants More recently, Valley Hikes has been receiving reports from residents and visitors to Jamaica about questionable environmental practices in the Valley or in hotel elsewhere in Portland, which indicates an increased awareness of conservation needs Valley Hikes is able to respond to these reports and recommend positive changes, often acting through its contacts and alliances with PEPA and the BJCMNP

CONCLUSIONS AND RECOMMENDATIONS

The activities of Valley Hikes have most of the necessary elements needed for a successful ecotourism venture although at present the business depends on grant funding and other forms of donations to keep running The main constraints to viability include the external environmental factors affecting the area in which the tours operate, and the low visitation rates

Economic and community benefits

The whole concept of Valley Hikes as a business revolves around community participation and opportunities for local people to generate income from tourism To the extent that Valley hikes has itself been successful, it is the members of the community themselves who have benefited While the actual income from the hiking tours has not been sufficient to maintain the business, those employed as guides have received some economic benefits and there have been spin-offs generated in the form of sales of goods and transportation services Attraction owners and hotels have benefited from commissions, and the presence of the tours is an attractive tool to help market the destination of Port Antonio and environs

There are also a number of less quantifiable benefits associated with the activities of Valley Hikes such as trail maintenance, the tree-planting program, increased environmental awareness and the opportunity for locals to interact with foreign visitors The organisation has forged strong partnerships with others in the region, including hotels, park officials and local NGOs These links need to be carefully monitored and fostered

The concept of Valley Hikes has been carefully thought out and researched in a pre-feasibility study In addition, the company has operational plans with clearly defined goals and objectives that are updated frequently In terms of mechanisms for soliciting income, Valley Hikes has been able to find innovative ways to make money, such as their tree sponsorship programme, their links with craftsmen in the area and their sale of this merchandise as well as merchandise and souvenirs which Valley Hikes itself produces It appears that the low levels of visitation have resulted in the limited success of their merchandise sales so far

The marketing plan seems comprehensive and promotion of the attraction has been vigorously pursued Although the number of hikers continues to increase, the fruits of these marketing efforts have not yet been realised From this brief study we were unable to say why Valley Hikes has not been more successful One theory that we tend to support, however, is that the viability of Valley Hikes appears to be dependent upon the ability of tourism interests in Portland to successfully promote the entire area as an ecotourism destination Therefore the goal of the region's destination marketing plan – to attract more stopover visitors who will take the time to experience the variety of attractions that Portland has to offer – seems critical to the success of Valley Hikes

Resource protection

The environmental guidelines for the operations of the company seem to be working well, as structures are in harmony with the natural and cultural environment and there is no evidence that visitor impacts are damaging trails However the impacts need to be carefully monitored so that appropriate visitation levels can be established before any significant damage does occur

The guides provide information about the area and its resources, which contributes to environmental awareness of visitors We encourage Valley Hikes to maintain its obviously high quality of training and continue to seek ways of educating the local people about the importance of environmental conservation, which is recognised as one of the greatest challenges faced by the organisation Together with partner organisations such as PEPA and private sector tourism interests Valley Hikes must continue to work towards the realisation of the Port Antonio Marine Park and Conservation Corridor Project

Factors affecting ecotourism potential

As with many other ecotourism attractions, external environmental factors threaten the long-term viability of the business Valley Hikes is involved with other entities in efforts to alleviate this problem, but until there is an effective legislative framework and enforcement of environmental laws the degradation of the environment will remain a threat to ecotourism in the Rio Grande Valley Visitation rates remains well below the level required for the financial sustainability of Valley Hikes Viability of this ecotourism enterprise will ultimately depend on the potential for the parish of Portland to attract a greater share of the national tourism market

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Notes on the assumptions and calculations for the break-even point

Costs

- Total number of guide-days for 1997 was 151 Total amount of hiking fees to guides was 151 x $500 = $75,500
- Total number of hikers was 421 Average number of hikers per guide was 421 – 151 = 2 8
- Average *hiking fee* cost per hiker was 75,500 – 421 = $179 (whether or not the hiker paid for the hike)
- Assume all 'other" costs (attractions, etc) are distributed amongst 376 paying clients $254,380 – 75,500 (guide salaries) = $178 880 total ' other" costs – 376 = $476 average "other" cost per hiker Therefore, total average cost per paying hiker was 179 + 476 = $655

Income

- We were told that local hikers are charged $250 Gross hiking fee income from 127 locals @ $250 = $31,750
- We were not told the average hiking fee for foreigners, but can work it out this way

	$373,668	Gross income
less	$31,750	Gross hiking fee income from 127 locals @ $250 each
less	$205 712	"Other" hiking costs @ 178,880 + 15% commission retained by VH
=	$136,206	Gross hiking fee income from 249 foreigners

- Average hiking fee for foreigners was therefore 136,206 – 249 = $547
- Gross income per foreigner is 547 + 476 = $1,022
- Net income per foreigner is 1,022 – 655 (average cost per hiker) = $367
- Gross income per local is 250 + 476 = $726
- Net income per local is 726 – 655 = $71
- To make up the 1997 shortfall of $178,498 they would need $178,498 – $367 = 486 more foreign hikers, for a total of 735 foreigners (486 + 249)

CASE STUDY # 4 COCKPIT COUNTRY ADVENTURE TOURS

Description of attraction

Cockpit Country Adventure Tours (CCAT) is an enterprise initiated by the Southern Trelawny Environmental Agency (STEA) based in Albert Town Jamaica This community-based non-governmental organisation has as its mission "to facilitate the economic development of southern Trelawny through environmental protection and research eco-tourism, and the promotion of environmentally sound agricultural practices" (Agency Profile 1998)

The company offers three main walking tours as well as custom tours upon request The main attraction for visitors apart from the outdoor experience or adventure, is intended to be "minimum-impact recreation and nature study" (CCAT brochure) Swimming in rivers, bird watching and cave exploration are some of the activities featured on the tours Tours originate from the agency's offices in Albert Town, a farming community on the eastern edge of the Cockpit Country Visitors can choose from a range of sites and experiences, from a "leisurely walk" to physically challenging "bush hikes" and cave tours, which involve negotiating steep descents on ladders with rope handrails The advertised selection of tours is summarised as follows in Table CC 1

Guides for these tours are people from the local community who have been educated about the geography, natural history history and cultural heritage of the area, as well as trained in leadership skills, public speaking, first aid, camping skills and cave exploration The eight available guides are the graduates of a pilot ecotourism guide training program developed by STEA with funding from the Royal Netherlands Embassy Agencies such as the Jamaica Red Cross, Jamaica Tourist Board, and Tourism Product Development Company Limited collaborated with STEA to implement the three-week program and certify the guides for the tourism licensing requirements

Table CC 1
TOURS OFFERED BY COCKPIT COUNTRY ADVENTURE TOURS

Name of tour	**BURNT HILL ROAD**	**ROCK SPRING CAVE & RIVER**	**QUASHIE RIVER SINK**
Type of tour	Walking tour	Bush hike	Steep hike and cave descent
Description	A 'leisurely walk' along the Burnt Hill Road to Barbecue Bottom mainly to observe flora and fauna, especially birds	Explore the channels, chambers and underground rivers of Rock Spring Cave Swim in Mouth River	Hike up Congo Hill, descend into Quashie River sink (cave) via series of steep ladders with rope handrails, and swim under waterfall
Duration	3 5 hours	4 hours	5 hours
Price p p for foreign tourists	US $20 (2-4 people) US $17 (5 + people)	US $35 (2-4 people) US $30 (5 + people)	US $40 -
Local rates (JA $ equivalent)	US $14 US $12	US $25 US $22	US $30 -
Food & drink	Snack (two fruits)	'Bush cook' lunch of roast yam, saltfish, steamed vegetables and natural juice	'Bush cook' lunch of traditional foods
Maximum group size	15 people	8 people	6 people

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Geographic setting

The setting for these tours is the eastern edge of Jamaica's largest wilderness, an area of about 450 square kilometres of largely uninhabited forest and rugged, karst topography known as the Cockpit Country The area offers a variety of attractions for the nature tourist a remarkable landscape of conical hills, limestone cliffs and steep-sided valleys, dense forests filled with interesting flowering plants, ferns, birds, butterflies and other wildlife, and caves to explore, some with underground rivers flowing through them

The Cockpit Country also has an interesting cultural history as one of the two main strongholds of the Maroons, descendants of slaves who escaped or were freed by the Spanish in the 16th Century From their hideouts in the rugged terrain, they fought a guerrilla war against the British lasting for over 70 years Eventually in 1739 a treaty was signed between the British and the Maroons, who were granted autonomy and 1 500 acres of land in the Cockpit Country in return for a cessation of hostilities The Maroons and their mainly African-based cultural traditions have received attention from tourists to the extent that the people of one Maroon community, Accompong in southern Trelawny, have formed a company offering village tours Their annual celebration of the signing of the treaty on January 6th has become quite popular as a tourist attraction in recent years

Apart from its wild beauty and historic and cultural connections, the Cockpit Country is internationally recognised for its extraordinary biodiversity Many of the species of flora and fauna found here are endemic to Jamaica and to the area itself Proctor (1986) found 101 species of plants endemic to the Cockpit Country, and Oberli reports a new undescribed species of the cactus *Mammilaria sp* that has been found only on one cliff face, making it one of the rarest plants in the world (Cockpit Country Workshop 1998) The Cockpit Country is one of only two places in Jamaica where the endangered Giant Swallowtail Butterfly *Papilio homerus* the largest butterfly in the western hemisphere, can be found Other endemic invertebrates found here are the bromeliad crab *Metapaulius depressus*, two species of *Peripatus* (considered the "missing link" between annelids and insects), a giant (18 cm) millipede, and several cave-dwelling species of insects with interesting adaptations to the dark (Garraway 1998) Two-thirds of the island's 26 endemic species of herpetofauna occur here, making it the most important habitat for snakes and other reptiles in Jamaica (Vogel 1998) According to Lack (1976), 91% of Jamaica's endemic birds species can be found in the wet limestone forests of the Cockpit Country (cited by Davis 1998)

The Cockpit Country is ecologically important for yet another reason it is the groundwater recharge area for at least four major hydrological basins in the western part of the island and is ultimately the principal source of water for the parishes of Trelawny, St Elizabeth and St James (Smikle 1998)

For these reasons, the Cockpit Country has been designated a high priority area for the establishment of a National Park (GOJ 1995) and proposed as a World Heritage Site as defined by the World Heritage Committee of UNESCO (Eyre 1995) A group of concerned members of the conservation community in Jamaica including STEA, met at a workshop in March 1998 to share information about the Cockpit Country and discuss options for its conservation and management[21] Informally referred to as the Cockpit Country Stakeholders, the group under the auspices of the Ecosystems Management Focus Group of the National Environmental Societies' Trust (NEST), has applied for funding under the Global Environment Facility (GEF) of the World Bank to pursue this cause The role of ecotourism in the conservation of the Cockpit Country is one of the issues under consideration

Most of the land area of the Cockpit Country is government owned Forest Reserve Some lands are under the control of the Maroons, but there is an ongoing dispute over the boundaries of Maroon territory and logging rights in the Cockpit Country The areas used by CCAT are a mixture of government- and privately owned lands, the latter used by permission of the owners

[21] W Lee attended the Cockpit Country Workshop

Community setting

Centred in Albert Town, STEA membership is drawn from communities within a radius of about 30 miles, with the most active involvement being from the nearby districts of Freeman's Hall, Rock Spring and Spring Garden The combined population of these satellite communities is estimated at about 1,000 residents, with Albert Town itself having a population of 100 (Dixon, personal communication) The principal economic activity of southern Trelawny is farming, particularly the cultivation of yams for export This area produces approximately 70% of the yam exported from Jamaica (Agency Profile 1998) Coffee, bananas, plantain and other produce are also grown, but the local economy is said to be 90% dependent on yam farming (Dixon, personal communication)

Despite being an agricultural community, Albert Town has no produce market and no supermarkets Residents travel half an hour to Christiana (15 miles away) or Mandeville (30 miles away) to purchase most of their groceries and household supplies, and they go even further afield to sell their produce at markets in St James Westmoreland St Elizabeth and Manchester (Buckle 1998, personal communication) Apart from a few small shops and bars, the town has a bakery, a gas station, a wholesale beverage store, a feed and agricultural supplies store, a lumberyard, and two modest restaurants There are a number of roadside vendors selling food and drinks on the streets of Albert Town

There is no doctor in town – one visits twice per week from Ulster Spring – and the nearest hospitals are in Mandeville and Falmouth However, there seems to be a thriving transportation business based in the town, which is invariably thronged with taxis The town received telephone service about a year ago, and STEA has a good communications system (phone, fax, and e-mail) Although this is not traditionally a tourism area the local people have become used to seeing field researchers, bird watchers and perhaps adventure seekers who enter the Cockpit Country along the Burnt Hill Road near Albert Town

Accessibility

The nearest resort centres are Falmouth about 30 miles to the northwest, and Montego Bay, a further 20 miles west from Falmouth Ocho Rios is approximately 50 miles away Mandeville, which is gradually becoming a base for alternative tourism on the south coast of Jamaica, lies about 30 miles to the south Although the roads are acceptable by Jamaican standards, they are narrow and winding and take longer to negotiate than expected from reading the mileage figures on road maps

None of the major tour companies take tours to the Cockpit Country Unless the tourist has private connections within Jamaica, the transportation options for getting to Albert Town are by rental car, taxi or public transportation With car rental rates of up to US $90 per day, and the taxi fare from the nearest resort centre perhaps not much less, the cost of transportation might be prohibitive for the independent tourist Public transportation while cheap, might be somewhat daunting to the uninitiated traveller

Management structure

STEA is a non-profit NGO founded in 1996 and it currently has over 100 members Membership is open to individuals for JA $100 a year, students ($50), groups ($250) and corporations ($1,000) An eight-member board of voluntary directors oversees the activities of the organisation The ecotourism development project, CCAT, is one of two commercial enterprises through which STEA is attempting to generate funds for environmental conservation, socio-economic research and community development projects The other is the operation of a business services centre in Albert Town, where customers can purchase copies, use telephone and fax services and have documents typed, formatted and printed Membership fees, donations, fundraising events and project funding from donor agencies are additional sources of revenue for STEA

STEA operates with a staff of four full-time employees and (currently) two Peace Corps Volunteers The four staff positions are associated with a one-year soil conservation project funded by the Environmental Foundation of Jamaica (EFJ) The tour business, CCAT, is administered mainly by the Peace Corps

Volunteers, with assistance from the office staff and the guides themselves A rotation system is used to ensure the fair distribution of work among the guides

ECONOMIC INFORMATION

Entrance fees

Tour fees range from US $20 to $40 for overseas tourists, depending on the site and duration of the tour Details are shown in the table above There is a 30% discount for residents of Jamaica (quoted here in US dollars but payable in the Jamaican dollar equivalent) The fee structure was decided primarily on the basis of the goal of paying a realistic wage to guides after covering costs The fees were also considered to be in line with what other tours were charging

Visitor statistics

Records are kept on the number and country of origin of all clients for the tour business, and adult visitors are distinguished from students For the period January to July 1998, there have been 282 clients Details are provided in Table CC 2

Table CC 2
VISITOR STATISTICS FOR COCKPIT COUNTRY ADVENTURE TOURS
(January–July 1998)

	ADULTS	STUDENTS	TOTALS
LOCALS	45	209	**254**
FOREIGNERS	26	2	**28**
Countries of origin			
USA	10	2	12
Netherlands	8		8
Canada	5		5
United Kingdom	3		3
TOTAL VISITORS	**71**	**211**	**282**

The majority of local clients taking the tours were Jamaican students who participated in an educational program called Youth for the Environment' implemented by STEA in the summer of 1998 This program was funded by a grant from the Canada Jamaica Green Fund, which covered transportation costs, supplies, and labour (including a project manager for the duration of the program) to facilitate educational ecotours to over 200 students from 12 schools in the region Peace Corps Volunteers familiar with the tours and the area referred most of the other visitors to CCAT Two foreigners had seen the tours mentioned in a guidebook

Since the tours have only been available for a short time and marketing plans have not been implemented (for reasons explained in the section on marketing below), it is not surprising that the tours have attracted so few foreign tourists What is interesting is the relatively high number of locals who have taken these tours in the short time thev have been operating Given the educational value of these tours, it seems to be a very positive beginning for the business to be introducing the Jamaican youth to their natural heritage

Visitor satisfaction Each client or group leader, in the case of student groups, is asked to complete a fairly detailed evaluation form after taking a tour The evaluation solicits both ratings and remarks on the brochure and reservation services appeal and condition of the site, duration of the tour, performance of tour guides, including their knowledge and leadership ability, and food provided The form also asks for input on transportation (if provided) and Bed and Breakfast accommodations in the community

We examined all of the evaluations received from clients this year, and the results are discussed below But first, we present our own impressions For this study two of us were taken on the Burnt Hill Road Natural History Tour, an easy walking tour along a narrow, winding, little-used road through the mountains On the three-hour tour we met one vehicle whose occupants were two American herpetologists doing field research In our opinion our two guides were the highlight of the tour They were pleasant, professional, and enthusiastic about their work Their knowledge of the plants, birds and other species, as well as the folk uses of the plants, made the trip educational, interesting, and a good value

The site itself offered beautiful scenery and an abundance of wildlife, especially plants and birds However, it was not entirely the pristine forest that one might have been led to expect from the description on the brochure of "dense wet limestone forest criss-crossed with hiking trails " Although the general impression was one of forested hillsides, the impact of human activities was evident on all sides, from the illegal cultivation of yams on deforested hillsides to the jarring sound of a chain saw in the near distance The four of us on the walk collected two shopping bags full of litter, including more than two dozen spent shotgun cartridges, the residue of illegal bird shooting from the road

The walking conditions along the road were very pleasant, with a constant cool breeze coming up from the valleys to offset the heat of the sun We suggested that this tour would be more accurately described as a walk than a hike, which would appeal to a wider group of potential visitors, and keep expectations in line for those seeking a more difficult hike [22]

All of the evaluations of other visitors, without exception, were positive regarding the quality of the experience particularly the expertise of the tour guides There were almost no negative comments, but one overseas tourist expressed surprise at the degradation of the forest, and suggested that three types of tours be offered, focusing on [23]

- The rural life of the area, settlement patterns, and crops,
- Environmental impacts on the environment, using areas where the forest is interspersed with cultivation, and
- Natural history of the primary forest

Comments from the student groups included suggestions for slide shows on the natural history of the area, labelling of the flora on the trails more printed materials to be provided, such as guide booklets, and more information on the history of the area to be presented Some participants also expressed the demand for the tours to go deeper into the bush"

Revenue

In the first seven months of 1998 revenue from CCAT tour sales totalled JA $40,311 (approximately US $1 150) This figure does not include income from the Youth for the Environment grant, which was worth $113 000 Total revenue for CCAT was therefore $153,311 After subtracting expenses of $140,089, the net income to CCAT for January to July 1998 was $13,222 (see Table CC 3)

In its first few months of operation, CCAT managed to make a small profit ($13,222) while fulfilling its main goal of providing a new environment-friendly source of income for residents of southern Trelawny While this achievement was made possible by grant funding, we considered this a valid form of income generation for the services provided by the Youth for the Environment project

[22] The brochure has since been revised to incorporate this and other suggestions made in our evaluations

[23] These have been summarised from the visitor's lengthy comments

Table CC 3
INCOME OF COCKPIT COUNTRY ADVENTURE TOURS
(January-July 1998)

SOURCE OF INCOME	AMOUNT (JA $)	PERCENT OF TOTAL
Tour sales	40,311 00	26 3
Canada-Jamaica Green Fund grant for 'Youth for the Environment' project	113,000 00	73 7
Gross income	**153,311 00**	100 0
Expenses	– 140,089 00	91 4
Net income	**13,222 00**	8 6

Source STEA financial statements for 01/01/98 to 07/31/98 (rounded to nearest dollar)

Operating costs
Labour costs are by far the most significant operating costs of CCAT, representing 62 1% of the total expenses for the period January to July 1998 In contrast, site development costs for the same period were minimal at 3 1% of expenses, as were some costs related to follow-up guide training (1%) Transportation costs at 17 1% and supplies at 16 7% accounted for the majority of the remaining expenses Operating costs are summarised in Table CC 4

Table CC 4
EXPENSES OF COCKPIT COUNTRY ADVENTURE TOURS
(January-July 1998)

ITEM	AMOUNT (JA $)	PERCENT OF TOTAL
Labour	87,055 00	62 1
Transportation	23,960 00	17 1
Supplies	23,330 00	16 7
Guide training	1,400 00	1 0
Site development	4,327 00	3 1
Bank charges	17 00	-
Total	**140,089 00**	100 0

Source STEA financial statements for 01/01/98 to 07/31/98 (rounded to nearest dollar)

Constraints to revenue generation One of the constraints to revenue generation at this stage of the business is the fact that the tours are not yet licensed by the Tourism Product Development Company Limited (TPDCo) This is the main reason that marketing plans have not yet been put into effect Although STEA has been working towards acquiring a tourism licence, there are certain requirements that are proving difficult to comply with for financial reasons, one of these being the need to provide approved security services for tours Another hurdle is the fact that under the new NRCA Permit and Licensing Regulations, all ecotourism projects now require a permit from the NRCA There is a permit application fee of $1,000, and the company could be asked to submit an environmental impact assessment, which would be costly Furthermore, approved projects are required to pay a licence fee of $20,000 every five years (NRCA brochure on the Environmental Permit and Licences System, 1998)

Because this enterprise has not been properly tested in the "real" tourist market, there is some uncertainty about whether or not the tour prices are appropriate Although in the end we agreed that the Burnt Hill Tour was worth the fee, the price seemed rather high to us before the tour, and the same might apply to potential

visitors who would also have to pay dearly for transportation to get to the site We suggested that until visitation had reached the desirable level, a lower fee (and perhaps a shorter walk) might attract more customers We also recommended that CCAT make a point of informing customers how their fees are used for conservation by including such information on the brochure

Degradation of the sites is one very real threat to revenue generation, and the fact that the tours operate mostly on public lands raises the problem of resource protection Although STEA is seeking permission from the both the government and private landowners to develop and manage trails for their tours, the issue of stewardship of trails and sites has not been resolved Thus, STEA presently has no control over the external threats to the sites they use, and no guarantee that any investment in trail or site development can be protected

Marketing and promotion
To date very little market research has been carried out specifically for the purposes of CCAT One of the issues that needs investigation is the willingness to pay for these tours on the part of tourists Although a detailed marketing plan has not yet been produced, some target groups have been identified and a preliminary marketing strategy outlined CCAT plans to target independent travellers staying at hotels or villas, research organisations and educational institutions both in Jamaica and abroad, and local and foreign special interest groups such as conservation organisations

In addition to the natural history tours CCAT/STEA can arrange facilities and accommodations for field research and training programs, meetings, conferences and other events The setting is particularly appropriate for environmental events and training programs STEA has already begun to tap into this market by developing the Youth for the Environment project, hosting a meeting of the Cockpit Country Stakeholders group and providing a one-week community orientation program as part of the training for Peace Corps recruits Once they begin to market these kinds of services overseas, CCAT could see an increase in educational and research tourism

CCAT publicises its services in a brochure, on a website (under development), and by networking mainly within the NGO community in Jamaica The annual TrelawnyYam Festival that STEA organises is another means of marketing the Cockpit Country as an ecotourism destination and publicising the tour services offered by CCAT The Youth for the Environment project can be regarded as a creative means of marketing the destination itself as well as the services of the tour business Depending on the availability of funding for environmental education in Jamaica, projects such as this might become a regular source of business for CCAT

Employment
The main beneficiaries of CCAT are intended to be the trained tour guides, although there is also administrative work and casual labour for trail development Nine guides were trained, but eight are presently available for work The guide positions created have been part-time in the short period since the ecotourism program was started Unemployment is high among the youth of southern Trelawny, and even part-time work is welcomed

Tour guides are paid JA $800[24] to $1000 per day depending on the duration of the tour they lead The cooks who accompany the longer hikes are paid $500 to $800 per day, depending on group size One guide is provided for every four visitors taking the tour, while there is a cook for every eight people Tips from clients help to supplement the salaries

Income distribution Information about the programs and projects offered by STEA, including job opportunities, is circulated to members of STEA and made available on request to interested residents

[24] This is the same amount as the *weekly* minimum wage under Jamaican law

Participants for the CCAT guide-training program were selected by an objective process whereby the training opportunity was publicised throughout the region, and applicants who met the stated criteria were accepted into the program The requirement that candidates be literate was identified as a constraint to the participation of some interested individuals, but it was included to ensure that guides had at least a basic level of education and could themselves be effective educators

Indirect economic benefits (spin-offs)
STEA is actively seeking economic linkages between its ecotourism enterprise, CCAT, and local businesses Existing spin-offs named by locals in the interviews for this study include

- Craft sales
- Sales of farm produce
- Sales of specialty foods
- Hardware sales
- Restaurant trade
- Roadside food vending
- Accommodations
- Transportation services

Goods The perception of locals interviewed was that although there has been no sustained increase in business due to tourism, the demand for craft items and farm produce would improve as tourism increased in the area The annual Yam Festival, which attracts thousands of people to Albert Town, provides an opportunity for the sale of farm produce and other goods to visitors (mainly Jamaicans) One producer of homemade jams preserves, chutney, baked goods and pasta was optimistic that there might be a viable cottage industry in specialty foods for the tourist market (Buckle, personal communication) She also confirmed that locally grown coffee was very much in demand by the visitors she had encountered

Hardware was included in the list in connection with the renovation of the STEA office, and in anticipation of trail development needs Locally harvested materials such as bamboo are to be used for planned trail improvement and shelters

Goods purchased by STEA outside the local area include equipment such as lamps and helmets used for cave tours communications and office equipment, and office supplies, none of which were available locally

Services There has been sporadic business from tourists for the two restaurants in town and for the roadside food vendors The Yam Festival is a lucrative event for food vendors While the restaurants welcome the occasional tourist and may benefit from STEA-organised events, business was nevertheless described as "slow" by restaurant staff interviewed

In terms of accommodations, STEA has entered into a partnership agreement with 17 householders in the area to offer 'bed and breakfast' (B & B) lodging, and receives a 20% commission on any business booked through their office An approximate breakdown of revenue for groups booked through STEA was described as follows the B & B partners took in 60% of gross revenue, the guides made 20%, and STEA 20% The proprietor of one B & B said that although business was slow (only about nine guests since the start of the program), it was expected to improve Two of these guests were exchange students, who stayed for three months while three others were Peace Corps trainees who stayed for three weeks These extended visits helped to compensate for the low number of clients

STEA is working with its B & B partners to develop realistic guidelines, appropriate standards and acceptable rates for the accommodations, taking into consideration the anticipated needs of the typical ecotourist seeking a rural experience Once again, the issue of licensing arises, as some of the official bed and breakfast

guidelines and standards advocated by TPDCo are perceived as inappropriate or unrealistic for this kind of setting

It is difficult to estimate the benefits to the local transportation sector, as tourists normally charter transportation services in the resort centres to take them to Albert Town STEA does offer to arrange transportation services for tourists if necessary, and perhaps more of an effort could be made in this regard, thereby increasing benefits to the local transportation sector A formal partnership agreement with local taxi operators, as in the case of the bed and breakfast providers, might also be an effective way of making sure that tourists don't get "ripped off" by unscrupulous taxi operators from outside the area

Other community benefits

Infrastructure improvement The context in which CCAT operates is part of a broader approach to community development being pursued by STEA, and this approach has resulted in significant, tangible benefits to several communities in southern Trelawny Through the mechanism of public meetings attended by residents of more than 30 communities, STEA identified three major areas of community development needs water supply improvements, road repairs, and employment The need for watershed protection was recognised as a critical concern for the region where the majority of the residents practice hillside farming on steep slopes prone to erosion In response to these concerns, STEA raised funds to facilitate repairs to water supply systems in three communities, one of which had been without a water supply for four years STEA has spearheaded other infrastructure improvement projects such as the construction of a public sanitary facility for Albert Town the painting of welcome signs for several communities, renovations to community centres, and the development of playing fields and sports facilities

Soil conservation project In the area of watershed protection, STEA secured a grant to implement a soil conservation project targeting 300 farmers in southern Trelawny To date, 130 farmers have been trained in vegetative soil conservation methods and provided with *Calliandra* seedlings for cultivation as yam sticks, fuel wood and aids to soil conservation The results are encouraging, as 90 of the farmers trained (almost 70%) have employed the techniques A key factor behind the success of the program is education concerning the economic benefits of soil conservation

Recreational opportunities STEA also organises recreational activities that highlight local culture and traditions, for example the Trelawny Yam Festival which also helps to stimulate business for the local economy and raise funds for STEA itself Several youth clubs and citizens' associations in southern Trelawny have benefited from institutional strengthening and skills training programs offered by STEA

Costs associated with tourism

There is at present no evidence that tourism, which is in an embryonic stage in the region, has created inflation or other economic problems for residents

SOCIAL AND CULTURAL INFORMATION

Perceptions of the economic benefits of tourism

The people we interviewed demonstrated a generally high level of awareness of the variety of economic linkages with tourism, however modest the benefits may be at the present time The beneficiaries of income from CCAT seem fully aware of the limits to the economic potential of ecotourism, and they do not expect it to solve all of their employment problems The office staff and guides associated CCAT view ecotourism as just one of the avenues of economic development available in the region and not the main provider of benefits, which will continue to be farming

The B & B proprietor who was interviewed had a very conservative attitude towards the economic benefits from providing accommodations This business was clearly going to be secondary to her other economic activities She was reluctant to state the daily rates of her accommodations, because she sets the rates based on an estimate of the customer s ability to pay, and also because the rate guidelines are yet to be agreed upon by the B & B/STEA partnership group

Social and cultural impacts of tourism
Travel advice found in the Lonely Planet 'travel survival kit' for Jamaica (Baker, 1996, p 370) illustrates the pitfalls of one Maroon community's excessive economic dependence on tourism

> "Accompong exists on the largesse of tourists, and you may be hit up for money for the smallest excuse Local youth may accost you immediately to tout themselves as guides, and you may even be told that there's an entrance fee to the village, which is false "

The operators of CCAT are optimistic that these kinds of negative interactions between visitors and residents, commonly called tourist harassment in Jamaica, can be avoided in Albert Town For one thing, the residents of Albert Town do not expect that ecotourism will solve all their economic problems Secondly, ecotourism has been introduced in the context of a holistic approach to community development undertaken by STEA The organisation seeks the participation of community residents, who are welcomed as stakeholders in projects undertaken by STEA and kept informed of opportunities such as the tour guide training program The education of residents about all of the requirements of ecotourism, including the social and cultural setting, is considered essential for creating a hospitable climate for tourism and avoiding conflicts between visitors and residents For the record we encountered no harassment or "hustling" in Albert Town

Safety and security
Issues of safety and security for tourists are among the most important concerns of the tourism licensing and regulatory bodies CCAT provides safety equipment such as helmets, lamps and ropes for cave tours and has installed ladders with rope handrails for steep descents Guides are trained and certified in first aid and cardiopulmonary resuscitation (CPR) Safety will be a consideration in all planned trail development

Regarding security, the Albert Town area has a very low crime rate and STEA personnel have a good relationship with the local police CCAT operates on the principle that good community relations will help to ensure the security of visitors So far, there have been no threats to the security of clients taking the tours At this stage in the business the costs of formal security arrangements are considered prohibitive for CCAT, and this has been one of the factors preventing CCAT from fulfilling the requirements for licensing

ENVIRONMENTAL INFORMATION
The approach taken by CCAT in developing tours in the Cockpit Country is one of respect for the environment and sensitivity to the fragility of this unique ecosystem If this approach is consistently applied to future trail development and tours, the environmental impacts of tourism are likely to be minimal Unfortunately, the area used for the tours is significantly threatened by factors other than tourism, as described below If ecotourism is to be developed and sustained in southern Trelawny, a long-term conservation strategy involving residents of the area must be implemented

Resource inventories
Because of its extremely high biodiversity the Cockpit Country has been the destination for numerous field research expeditions, from as early as the 17th Century (Eyre 1995) The geography, geology and hydrology of the region are well documented (Fincham 1977, Sweeting 1958, Zans et al 1962, and others) Although

some biological inventories have been attempted (Asprey and Robbins 1953, Proctor 1986 and 1972, Lynn 1940 and 1949) and local and foreign scientists[25] are currently conducting field research in the Cockpit Country much remains unknown about the flora and fauna of the area There are thought to be hundreds of undiscovered species in the Cockpit Country, all considered threatened simply because this unique ecosystem is the only place in the world that they occur

Site development impacts
Very little trail development has been done by CCAT, as tours are conducted on existing trails or the Burnt Hill Road and no major interventions are planned for the sites Routine trail maintenance will be carried out, such as bushing to keep trails clear and perhaps terracing the steeper paths with bamboo As mentioned earlier, ladders and safety lines have been installed as a safety feature to assist in cave descents, these are bolted to the substrate a relatively minor impact Rustic shelters made of local materials are planned for the sites where visitors are provided with lunch Barbecue pits will also be constructed at these sites so as to prevent damage from cooking fires The impacts of site development on the physical environment and wildlife are therefore estimated to be minimal

Operational impacts
Visitor impacts Since the enterprise consists entirely of guided walking tours, the operational impacts of the tours are considered no different from visitor impacts Apart from our own tour experience, we were not able to observe any other tours within the time available for the study, partly because of the low rate of visitation However the carrying capacity policy combined with the measures used to control visitor impacts described below should prevent any significant environmental impacts of the tours offered by CCAT

Measures used to control visitor impacts The motto of CCAT reflects the environmental policy of the company ' Take nothing but pictures, leave nothing but footprints, kill nothing but time" (CCAT brochure 1998) Strict supervision by the guides is the way that this motto is put into practice According to the guides the training program taught them to be extremely conscious of the need to minimise visitor impacts, and they do not permit any littering or collecting of any kind, such as picking of flowers The tours do not generate non-biodegradable garbage, as reusable plastic tumblers and plates are used on the tours All waste is packed out and in fact, the tour guides helped to improve the site by picking up litter along the road left by residents

External environmental threats
Deforestation Deforestation is the single most serious threat to the Cockpit Country and surrounding areas Even though most of the Cockpit Country is Forest Reserve, illegal logging is a common practice and there has been progressive clearing of land from the edges inward The main agents of deforestation are the clearing of land for agriculture, the cutting of saplings for yam sticks, and logging Deforestation also results from the recreational use of certain sites in the area by local people, mainly youths, who prefer their surroundings to be free from ' bush " Although the actual rate of deforestation is a matter of much debate among environmentalists and government agencies responsible for forest management and watershed protection, all agree that it is unacceptably high

Yam production on the edges of the Cockpit Country increased from 170,000 tons in 1995 to 253 000 tons in 1996, creating a demand for an estimated nine million yam sticks per year (Dixon 1998, Cockpit Country Workshop) These are mainly purchased from middlemen who cut them from all over the island as well as from the fringes of the Cockpit Country Although the Forestry Department does issue permits for lumber extraction from forest reserves, including those in the Cockpit Country, it is believed that most of the logging being done here is illegal

[25] Local researchers include Eric Garraway entomologist Peter Vogel, herpetologist, Susan Koenig and Herlitz Davis, ornithologists Andreas Oberli, botanist

Pollution There is an obvious lack of proper solid waste management in the area Although garbage bins provided by TPDCo are placed at various locations throughout Albert Town, the streets and sidewalks are littered with garbage, mostly plastic bottles and bags and styrofoam food containers Unsightly piles of garbage were observed on the verges and in the gullies bordering the road Part of the problem, according to one person interviewed, is the illegal dumping of municipal waste by haulage contractors employed to Western Parks and Markets (WPM), the agency responsible for garbage collection in the region The issue of waste management is something that STEA intends to tackle as part of its sustainable community development agenda In the meantime, they have been lobbying WPM to improve its performance and control its contractors

What is not so obvious as the garbage problem is the pollution of rivers and water supplies by agricultural chemicals which is a major concern for residents (Dixon, personal communication) This is a more complex problem due to the heavy dependence on agriculture in the area, and probably the low literacy levels The main approach to preventing this kind of pollution will have to be education - basic education in literacy as well as informal education about environmental health

Other threats Other external threats to the environment named by members of the community were illegal bird shooting and the use of kerosene bottle torches in the caves by unofficial guides who sometimes escort tourists around the area Noise pollution from sound systems in the towns at night was mentioned as a possible threat to tourism

Environmental education and awareness

Current EE methods Information provided by the guides is the main method of environmental education employed From our observations and the comments from visitors, the guide training program was an excellent one Not only are the guides knowledgeable, they are enthusiastic about their knowledge and interested in communicating to their audience The guides are able to identify most birds and insects commonly observed in the area, as well as several roadside plants and trees, for which they provide ethnobotanical information They discuss conservation issues such as the causes and impacts of deforestation, and provide information about cultural and historic traditions in the Cockpit Country

In a broader context, the Youth for the Environment project is an innovative way to provide a field experience for young Jamaicans who might otherwise never have an opportunity to learn first-hand about the flora fauna geography and history of the Cockpit Country Based on the evaluations we reviewed, this experience has dramatically improved the environmental awareness and attitudes of many Jamaican students and their teachers These tours could be very useful in fostering a greater sense of appreciation for Jamaica's unique natural heritage If more Jamaicans could somehow be attracted to these tours, there might be increased public support for protecting forests, wildlife and other natural resources The same principle applies to foreign tourists, who might be persuaded to donate to local or foreign conservation organisations working to protect this important ecosystem

Changes in behaviour Although the ecotourism enterprise was mainly initiated to provide additional employment for local people, it has turned out to be a valuable tool for environmental education among some target groups It has certainly helped to change the attitudes and behaviour of the CCAT staff, and made a positive change in the behaviour of local youths who act as informal guides for visitors to the area [26] Prior to the education efforts, these youths would invariably clear all the vegetation from around scenic sites in preparation for taking visitors on tours, and would use kerosene bottle lamps, which blackened cave walls and disturbed the resident bats Now they have stopped "bushing out" the sites and using bottle lamps because they have been convinced that tourists prefer to see the natural vegetation and don't wish the bats to be disturbed

[26] These are mainly youths who did not meet the literacy requirement for the training program

Regarding waste management, the guide training program has definitely helped to instil in the guides the concept of waste reduction and proper disposal of trash However, this is not a lesson that the general population of the Albert Town area has learned

This study could not determine whether or not STEA's education efforts are fostering a sense of appreciation in the wider community for the forests and wildlife of the Cockpit Country and their importance for tourism And unfortunately, increased awareness might not translate into appropriate behaviour if alternatives to resource exploitation are not available This is one of the reasons why STEA, apart from educating people about the environmental requirements for ecotourism, has taken a holistic approach to environmental education in the region STEA maintains that the only way to change the attitudes and behaviour of the wider community is by a sustained, integrated effort targeting farmers, loggers, and other resource users STEA's soil conservation project is a good example of a long-term program to educate farmers about practical conservation techniques coupled with the provision of resources (seedlings) with which to apply the knowledge learned The success of this program, described earlier, demonstrates the value of STEA's holistic environmental education efforts outside of the specific area of ecotourism

The role of tourism in resource protection

One of the goals of CCAT is to instil in the people of southern Trelawny a sense of appreciation for forests and wildlife not only as part of their natural heritage but for their value in terms of being a source of long-term earnings from ecotourism We can say that this goal has been achieved for the guides and other residents directly involved in CCAT and to some extent the broader membership of STEA, four of whom have recently become Honorary Game Wardens With the exception of persuading informal guides not to destroy ecotourism sites, there is little other tangible evidence that CCAT has helped to increase environmental protection in the wider community For most residents, the reality of the economic situation is that more and more land is needed for cultivation, farmers need yam sticks, and people are seeking any available opportunities to make money Where there is no enforcement of forest conservation laws, illegal logging will occur

One of the constraints to resource protection – as well as revenue generation – is that without an institutional framework for conservation of the area, there is no practical mechanism to use funds generated by tourism to protect the resources By publicising the potential role of ecotourism as an economic alternative, STEA hopes to attract political support for the protection of the area as a national park, and encourage the enforcement of conservation laws At a recent political meeting in Albert Town, the Prime Minister of Jamaica used ecotourism as an example of an economic opportunity for the youth of the area (Wellborn[27], personal communication) Perhaps the increased activity of both local and foreign scientists and NGOs towards conserving the Cockpit Country will also help to persuade the government to make a tangible commitment to protect this valuable ecosystem

CONCLUSIONS AND RECOMMENDATIONS

In conclusion the goals and approach of CCAT to developing a viable ecotourism enterprise in southern Trelawny are sound and the enterprise fulfils many of the requirements for successful ecotourism Degradation of the natural resource base is the most serious threat to sustainable ecotourism in the Cockpit Country and CCAT is involved in efforts to deal with this problem Solving the licensing dilemma and putting the marketing plan into operation should generate the business needed to improve the chances of viability for this young company

Economic and community benefits

[27] Rebecca Wellborn, Peace Corps Volunteer assigned to STEA

The directors of CCAT have demonstrated an understanding of the nature and requirements of a quality ecotourism product, and are working to ensure that the people of the area are educated and prov ded with opportunities to participate in this venture It is clear from our visits that an atmosphere of hospitality is being cultivated in the area rather than one of exploitation of the tourist While economic benefits from tourism are somewhat limited here, the fact that the local people have a realistic perspective on the economic potential of ecotourism should help to avoid the pitfall of harassment problems associated with tourism

Income generation Apart from the tour fees and our meals, there were few opportunities at the site for contributing to the economy The sale of printed materials and other souvenir merchandise should be considered for income generation, along with the development of a range of local cottage crafts More emphasis is needed on informing prospective visitors that some of the proceeds of the tours go towards protecting the resources of the Cockpit Country

Resource protection

The setting for the tours is exceptionally interesting and diverse, rich in both natural and cultural resources, and potentially very attractive for ecotourism The infrastructure and operation of the tours are environment-friendly, to some extent the business has contributed to protection of the sites used for the tours A great deal of effort has been put into the education and training of guides, and this has definitely been a worthwhile investment that will enhance the viability of the business

STEA operates within a framework of strong partnerships with local groups, the national ENGO community and government agencies,[28] which it must use to mobilise stakeholder support to deal with external environmental threats and lobby for protected area status for the Cockpit Country Demands for the enforcement of environmental laws must be made to the appropriate authorities The problem of waste management which is one of national priority, must also be addressed By building on their success with the soil conservation project, STEA could apply a holistic, participatory approach to changing the attitudes and habits of the residents regarding waste management

Factors affecting ecotourism potential

There are four main areas of concern that must be resolved if CCAT is to realise its potential and become a viable ecotourism entity These are

- The external environmental threats
- The dilemma of the licensing requirements
- The need for an effective marketing strategy
- The need for more mechanisms to solicit income

External environmental threats Deforestation is the single most serious threat to Cockpit Country and surrounding areas, while inadequate waste management is evident in the communities adjacent to the area The 'bottom line' is that if ecotourism is to become a viable industry in this area, the major environmental threats must be controlled

Licensing requirements The difficulties that CCAT and other nature tour operators are facing in fulfilling all of the requirements for a tourism licence point to the inadequacy of the existing tourism policy to accommodate ecotourism in Jamaica, particularly tours visiting remote, publicly-owned sites Until a specific policy on ecotourism is in place and a strategy developed for dealing with issues such as security on tours perhaps an interim solution would be for TPDCo to take a more flexible approach to licensing innovative projects such as CCAT, even on a provisional basis

[28] These include citizens associations and youth groups, ENGOs such as the Natural History Society of Jamaica and BirdLife Jamaica (formerly the Gosse Bird Club), government and quasi-government agencies such as the Forestry Department, the Natural Resources Conservation Authority, the Rural Agricultural Development Authority, the Social Development Commission the Jamaica Cultural Development Commission, and the Coffee Industry Board

Marketing A tourism licence for CCAT would mean it could proceed with developing a comprehensive marketing and promotion strategy for the tours The preliminary marketing strategy as outlined appears sound Effective marketing, including market research, will be a key factor in realising the potential of the tour business

Case study # 5 CRANBROOK FLOWER FOREST

Description of attraction

Cranbrook Flower Forest is a nature attraction near Laughlands on the north coast of Jamaica It consists of landscaped gardens including large ponds stocked with African perch *Tilapia sp* for fishing, and a one-mile hiking trail which climbs through woodland along the banks of a small, picturesque river The trail culminates at a spring from which the river begins cascading down its narrow gorge, forming waterfalls and pools along its course A range of coastal hills forms a scenic backdrop for the gardens

The grounds of the attraction, which cover about 30 acres of the 150-acre property, have been planted with a wide variety of tropical flora, exotic as well as native species Prominent among the latter are many different kinds of palm trees, which are particularly impressive A large (one-acre) greenhouse shelters a collection of indigenous and exotic orchids and several species of anthuriums (a plant native to Central America) Extensive lawns provide areas for recreational activities such as volley ball and lawn croquet, while swimming and wading are permitted in natural pools in the river

Many species of birds can be seen in the gardens including waterfowl that have been attracted to the ponds and river There is a section of the garden especially designed to attract hummingbirds, with water sprinklers and native flowering plants such as *Russelia equisetiformis* (known locally as hummingbird bush) The riverside trail is also a good site for bird watching A small flock of peacocks has been introduced to the property and the birds can be seen wandering around the gardens

There are restrooms, a snack shop picnic areas and a large gazebo suitable for hosting events such as weddings and parties There are plans to open a gift shop, which will be housed in a picturesque 18th century cut-stone building that has been recently renovated

Geographic setting

The north coast of Jamaica is the island's most popular resort area, with its coral reefs, white sand beaches, lush vegetation, and a variety of popular tourist attractions, including the two most famous natural attractions in Jamaica Dunn's River Falls and Fern Gully The parish of St Ann, where Cranbrook is located, is rich in archaeological as well as historic sites Discovery Bay, where Columbus first came shore on the island in 1494, and Sevilla la Nueva (now Seville), site of the first Spanish settlement in Jamaica, established in 1509, are both within ten miles of Cranbrook, which is itself an archaeological site Pre-Columbian artefacts found here confirm that the area was the site of a Taino settlement

St Ann s Bay five miles east of Cranbrook, is a bustling market town and the parish capital It is also noted for being the birthplace of National Hero the Rt Hon Marcus Garvey The major resort town of Ocho Rios, 7 miles further east, has the highest concentration of hotel rooms anywhere in Jamaica (JTB 1998)

The coast road between Runaway Bay and St Ann s Bay runs along a fairly narrow coastal plain, passing through fields of coconuts and sugar cane, and pastures dotted with trees The land rises gently to meet a low range of hills, which are a patchwork of forest, pasture, crops and settlements Although most of the coastal plain has been under agricultural cultivation of one kind or another for the past 400 years, beachfront hotels and other resort developments have claimed the shoreline for tourism Further south in the interior of St Ann, bauxite mining competes with agriculture for the increasingly scarce land resources

Community setting
The nearest communities to Cranbrook are the small farming districts of Spicy Grove, Laughlands, Lewis, Mines Chester, and Mount Zion, all located within a few miles of the attraction Tourism does provide work for some inhabitants of these villages, but at the same time it attracts thousands of outsiders (mainly to the Ocho Rios area) and competition for tourism jobs is fierce Thus, farming remains the main occupation of the area

Cranbrook has long been an agricultural property, producing at various times in its history sugar cane, pimento (allspice) coconuts citrus, and other traditional crops Cattle and other livestock have been reared here, and more recently flowers have been grown here for export and for the owner's landscaping business The communities surrounding the attraction have traditionally provided the agricultural labour for Cranbrook property and continue to do so for the attraction The adjoining property to the west of Cranbrook is part of a large dairy farm, which also employs people from the area

Accessibility
Cranbrook Flower Forest is easily accessible from the major resort areas of the north coast It is located one mile inland from the main road along the north coast of Jamaica, about five miles east of Runaway Bay and 12 miles west of the major resort town of Ocho Rios Conspicuous signs for the attraction direct travellers to an access road that is narrow but newly paved, and there is adequate parking at the site

Management structure
Cranbrook Flower Forest is privately owned and managed by the owner himself, who is a landscape contractor by profession The attraction was developed by the owner in collaboration with a group of investors, however, the owner has recently purchased the interests of the other backers and assumed full control of the attraction Cranbrook Flower Forest is licensed as an attraction by the Jamaica Tourist Board

ECONOMIC INFORMATION

Entrance fees
The entrance fees for the attraction are US $5 50 or JA $200 for foreigners and JA $100 for residents of Jamaica If visitors engage in fishing in the artificially stocked ponds, there is a charge of JA $100 to $175 per fish caught (the visitor gets to keep the fish) The entire site can be booked for an event such as a wedding or corporate 'fun day The charge for this service is between JA $20,000 and $35,000 The fee structure was designed to be comparable to the fees charged by other attractions in the area (for example, Dunn's River Falls, which charges US $6 per person) Advice on the rates was also sought from local hotel managers

Reduced entrance fees are offered to some groups, particularly church groups, schools, and some hotels that bring guests to the attraction on a regular, scheduled basis The manager is considering establishing a weekly rate, as the site is popular with bird watchers staying in the area who visit early in the morning but do not wish to spend more than one or two hours at the attraction

Visitor statistics
Although the number of visitors is recorded each day, visitor statistics have not yet been collated and analysed on a regular basis The manager offered to collate and provide two months' worth of visitation data for this study but the data were not received prior to submission of this draft The countries of origin of the visitors are presently not recorded, but this is something that the management hopes to do in future The manager mentioned that a guest book was provided for visitors' comments, but this was not observed on any of the visits

According to the manager, the majority of visitors, about 75%, are residents of Jamaica, while foreigners make up 25% There are at present no scheduled groups from any of the major tour companies, but as explained below, this is expected to change An all-inclusive family resort in the area brings a group of about 40 visitors

once a week as part of their regular schedule of activities The hotel has negotiated a special group rate for these visits

Compared with the numbers of visitors that the attraction is designed to accommodate, visitation is low at Cranbrook Flower Forest However, the attraction was opened to the public in March 1998, and had only been operating for just over six months at the time of this study Visitation has increased steadily over this period and this trend is expected to continue as marketing and promotion efforts bear fruit

Visitors spend an average of three to four hours at the site, with locals tending to stay longer than foreigners Jamaicans coming from outside the area will often plan a day trip that includes other attractions such as the Green Grotto Caves near Runaway Bay, horseback riding at Chukka Cove, or a visit to the archaeological site and museum at Seville

Visitor satisfaction The results of the visitor surveys at Cranbrook are presented in Table C 1 Note that visitors # 7-21 were part of a group that came from an all-inclusive family resort and paid US $6 00 total for the outing Half of this fee went for transportation and half (approximately JA $100) went to Cranbrook Visitors in this group were asked to comment on the appropriateness of the current entrance fee of US $5 50, not their special package rate

The sample was too small to determine differences in preferences based on country of origin, as there were only two Jamaicans among the groups interviewed (As shown above, Jamaicans in fact comprise the majority of visitors) However, the results are interesting and show some clear trends, especially regarding visitors' appreciation of the experience and their willingness to pay for it

Seventeen of the visitors (81%) made positive comments about the experience, ranging from "OK" to ' wonderful" Three (14%) complained that the fishing was a ' rip-off" because they were charged US $5 per fish caught They felt that they had not been properly informed about this activity, and wanted only to catch and release the fish not keep them One visitor complained that the restrooms were too far from the recreational area Although no children were included in the interview sample, all of the visitors in the group from the family resort were accompanied by children It was quite obvious from observing this group that the attraction is an enjoyable place for children

The entrance fee was considered reasonable by 19 out of 21 visitors interviewed (90% of respondents) Two visitors from Ecuador were the only people who felt that the entrance fee was too high, in fact they complained that the entire package ($6) was too expensive but they did not say what they would have been willing to pay instead Eleven of the 19 (representing 52% of the total visitor sample) said that they would pay more, while seven (33% of the total) said that the current rate of US $5 50 was appropriate The average of all the figures proposed as entrance fees by this group of 19 is US $8 40 or about JA $300

Table C 1
VISITOR SURVEY RESULTS FOR CRANBROOK FLOWER FOREST

#	Country of Origun	Trans portai ton Costs	Entrance Fees	Entrance Fee OK?	Would Pay How Much	Demand for Products	Demand for Other Services	Comments
1	**CANADA**	US $50 car rental	US $5 50	Y	US $10	Jamaican food	None	Gravel on river bottom was a nuisance, swimming pool needed Otherwise great
2	**CANADA**	Came with #1	US $5 50	"	US $10	JA food, signs with plant names	"	Enjoyed it very much
3	**JAMAICA**		JA $100	'	JA $250 to $500*	JA food, patties	"	Wonderful Great way to spend an entire day *$250 for half day, $500 for full
4	**JAMAICA**		JA $100	'	JA $500	JA food, patties	"	Enjoyable
5	**USA**	US $40	US $5 50	"	US $7 50 to $10*	Species check-lists[29]	"	*Would pay more per person as size of group increased
6	**USA**	With #5	US $5 50	"	"	"	"	Agreed with above
7	**USA**	US $3	US $3	'	US $10	None	"	"
8	**USA**		'	'	US $5 50	Books	"	Enjoyable
9	**USA**			"	US $6 50	Nine	"	"
10	**USA**		'	'	US $5 50	Books	"	The fishing was a "rip-off"[30] Otherwise everything OK
11	**USA**		'	"	"	None	"	Enjoyable
12	**USA**	'		"	"	"	"	"
13	**USA**	'		"	"	"	"	"
14	**USA**		"	"	"	"	"	OK
15	**USA**	"	'	"	US $6	"	"	Fishing was a "rip-off" (see above)

[29] Birds, butterflies and plants found at the site
[30] They were charged US $5 per fish caught, but had just wanted to catch and release fish, not keep them

#	Country of Origun	Trans portai ton Costs	Entrance Fees	Entrance Fee OK?	Would Pay How Much	Demand for Products	Demand for Other Services	Comments
16	USA			'	US $10	"	"	"
17	USA	'	'	'	US $5 50	"	"	Nice
18	USA		'	'	US $10	"	"	Very enjoyable
19	USA	'			US $10	Souvenirs	"	Wonderful variety Liked river best
20	ECUADOR	'		N	No ans	None	"	Transportation cost too high
21	ECUADOR			N	"	"	Music	Restrooms too far from activities

Regarding the demand for additional goods and services, four respondents (19%) would have liked "Jamaican food" Another 19% wanted more information, whether in the form of identification signs for plants, species checklists or books One person (5%) would have been interested in souvenirs The rest (62%) could not think of any products that they would have liked to purchase Only one person named a missing service, and that was 'music'

Revenue

The manager has calculated that the break-even point for normal operating costs with optimum staff levels would be a visitation level of 85 adults per day, seven days per week, paying JA $200 each This would realise approximately JA $6 2 million per year However, according to the manager, the attraction is currently operating at a loss of approximately JA $150,000 per month, or $1 8 million per year

Visitation is currently below the level required for the attraction to be viable, and well below that desired by the manager Apart from the fact that visitation is low, the owner is also faced with the high cost of servicing the 10-year mortgage approximately JA $1 million per year (He mortgaged the property in order to purchase the interests of the other investors and repay their contributions towards the cost of developing the attraction)

Constraints to revenue generation The newness of the attraction and the fact that the marketing plans have not been fully implemented are thought to be the two main constraints to revenue generation at present Also, the summer period is traditionally very slow for tourism in Jamaica When approached with information about Cranbrook Flower Forest the major tour companies informed the management that their tour schedules are decided at least one year in advance, so that even for those companies interested in including Cranbrook there would be a year's delay in actual business

Cranbrook faces stiff competition from many other well known attractions and activities in the area Apart from the famous sites mentioned, there are at least four plantation tours[31] and two other botanical gardens[32] in the region, as well as a small private nature area [33] When they are not shopping, tourists can go river rafting or tubing, ride horses or watch polo at either of two equestrian centres They can sail, snorkel, scuba dive, play

[31] Prospect Sun Valley Lillyfield and Circle B Farm
[32] Shaw Park Gardens and Coyaba River Garden
[33] Sleepy Hollow Park

golf or go for a helicopter ride They can explore caves or visit Bob Marley's tomb Or – perhaps the most popular pastime – vacationers can lie on a beach and do nothing all day

One problem mentioned by the manager is the relatively high cost of transportation, which he says independent travellers frequently complain about In addition to the rates that they charge the tourists, taxi operators often demand a "head charge" from the attraction They have become used to handouts from Ocho Rios merchants who reward taxi drivers for bringing customers to their shops Taxi drivers who bring visitors to Cranbrook are not actually helping to market the attraction, as they have been chartered by people who already know where they want to go The management of Cranbrook does not intend to comply with the demands for head charges, which might cause some resentment among some people in the transportation business

Marketing and promotion

This attraction was originally planned as one of a series of botanical and historical theme parks to be established along the north coast In the early nineties the owner and a group of potential investors commissioned a feasibility study that examined (among other things) trends in tourism, including the growth of ecotourism, and the marketing options for these proposed parks[34] In the end, only one site was developed – Cranbrook Flower Forest – and it combined most[35] of the elements that had been planned for the entire series botanical gardens, greenhouse displays of anthuriums and orchids, recreational areas, and a hiking trail

To some extent the development marketing and promotion plans for this attraction have been guided by the recommendations of the feasibility study but the owner has also followed his own vision and ideas for the property The target clientele has been expanded from the original emphasis on overseas tourists to include an equal if not greater share of local visitors There is also a stated interest in attracting families and church groups, both local and foreign-based The owner is aware that preferences can vary greatly between the foreign and local target groups and also within these groups according to age and other factors In recognition of this fact, different areas of the site were developed to provide a variety of experiences, from recreational games played on spacious lawns to quiet nature study along a forested trail

The management is seeking to have the attraction marketed through the following channels

- Local and overseas travel agents
- Hotels on the north coast
- The Jamaica Tourist Board (particularly the Cruise Shipping Division)
- The Jamaica Hotel and Tourist Association (JHTA)
- The Jamaica Association of Villas and Apartments (JAVA)
- Tour companies (as many as possible)

Representatives of several of these entities have been brought to the site on promotional visits and their comments on the experience have been overwhelmingly positive Tangible results in the form of bookings and referrals are therefore expected for the winter tourist season of 1998-99

The management recognises the potential for developing marketing partnerships and joint tours with other attractions in the area, such as Green Grotto Caves, Chukka Cove (horseback riding tours), and the Seville archaeological site and museum A partnership arrangement with the JTB to organise a garden tour package for the area has also been suggested BirdLife Jamaica (formerly the Gosse Bird Club) has brought bird watching groups on field trips to Cranbrook and both the organisation and its members regularly recommend the site to visitors who ask about good birding sites on the north coast

[34] Portions of this report were made available to the researchers, but the first section containing the title, author's name and date were not in the possession of the manager

[35] The original plans also included the construction of a replica of an Arawak village

Cranbrook Flower Forest is currently advertised with a one-page flyer distributed to hotels and other tourism entities in the area An advertisement was also placed in *The North Coast Times*, a weekly newspaper A brochure is being developed that will feature the work of one of Jamaica's foremost photographers, Ray Chen It will be distributed mainly by the JTB Cranbrook is described in the JTB publication *Focus on Jamaica*, as well as in a newly published guidebook, "Jamaica's Practical Pocket Guide " The attraction is also mentioned on an Internet web page listing attractions in the Ocho Rios area

Operating costs
The current operating costs are approximately JA $4 million per year Due to the low visitation and large debt, the site has been forced to put staff on a shift system and introduce four-day weeks to reduce costs In addition, the payroll figures provided do not include a manager's salary, as the owner has not been claiming a salary from the attraction (although this may soon change, for accounting purposes) As mentioned above, a more realistic figure for the operating costs would be an amount in the region of JA $6 million per year

Labour is by far the greatest operating cost, as the site maintenance is extremely labour-intensive Payroll expenses account for about $1 9 million of the total, while $1 million goes towards the interest on the mortgage The remaining expenses include the cost of purchasing plants and agricultural supplies (fertilisers and pesticides for the greenhouse plants), infrastructure maintenance and incidental expenses

Employment
There are 20 full time permanent employees of the attraction (Some of these people were previously employed in the owner's landscape business, so tourism has not actually created all 20 positions) The average monthly payroll for the attraction is JA $160,000 Most of the salaries as described by the manager are commensurate with typical agricultural wages of the area, although there are a few supervisory positions that pay more Assuming that payroll taxes account for about 21% of the payroll[36], the net value of employment to the local communities is in the region of $127,000 per month, or just over $1 5 million annually

The work involved in the operation of the attraction requires the following positions apart from that of the manager

- Ticket office attendants
- Greenhouse attendants
- Grounds supervisors
- Lawn mower operators
- String cutter ("weed eater") operators
- Manual weeders
- Plumbers (to maintain irrigation system)
- Janitors
- Guides
- Security guards

The security guards are not employees of the attraction itself but of the company contracted to provide security services The manager s wife presently contributes the part-time work required in bookkeeping and accounting Some of the grounds staff have carpentry, masonry and plumbing skills, which are required from time to time

Additional benefits to staff In the manager's opinion, one of the main indirect benefits provided for staff is training The owner of the attraction makes a point of providing on-the-job training for local people, and has contributed to the cost of education for several young people from the surrounding communities

[36] Calculated using the same proportion of taxes to payroll total given for YS payroll figures

Income distribution The attraction mainly employs workers from the communities surrounding Cranbrook Although some of the employees interviewed had originally come from outside of the area, they had been residents of the area for a number of years

Indirect economic benefits (spin-offs)
Goods It is expected that locally produced crafts as well as other items will be purchased for sale in the gift shop that is planned The original feasibility study suggested that a range of merchandise with botanical themes be developed including jewellery, T-shirts and novelties So far, the attraction is featured on a promotional T-shirt, but neither this nor any other souvenirs are available yet

Services The concessions and planned concessions for the attraction are expected to be the main spin-offs in the service sector A snack shop is already in operation, although business has been slow so far due to the low numbers of visitors An elegant restaurant is being considered for the upper storey of the renovated cut-stone building This would probably attract business from the residents of towns west of Ocho Rios, where they now have to go to seek fine dining in an elegant setting

The transportation sector will also benefit from the operation of the attraction, especially when the tour companies have added Cranbrook to their schedules as indicated The attraction is not expected to increase demand for accommodations, as this sector is already well developed on the north coast and there is no shortage of hotel rooms

Other community benefits The owner/operator of the attraction has had a long and agreeable association with the surrounding communities Residents of the nearby villages are permitted access to the river to catch fish and shrimp and take water for their domestic use Some farmers from the closest community, Spicy Grove, have even been allowed to cultivate portions of the Cranbrook property free of charge And, as mentioned previously, the owner of Cranbrook contributes to the education (particularly higher education) of young people from the area

Five acres of the property have been leased at peppercorn rates (JA $1 per year) to a non-denominational Christian youth group which uses the land as a campsite for spiritual and educational retreats The group's members and campers have free access to the attraction while occupying the campsite Many other church, school and community groups have been offered reduced rates to visit the attraction, a deliberate effort on the part of the owner to provide educational and recreational opportunities for the people of Jamaica

Costs associated with tourism

There is no indication that the attraction will have any adverse effects on the local economy Its presence is not likely to lead to commercialisation of the area or cause inflation for residents

SOCIAL AND CULTURAL INFORMATION

Perceptions of the economic benefits of tourism
The five employees of Cranbrook Flower Forest who were interviewed for this study (apart from the manager) had positive views on the value of the employment opportunity, but did not name any other direct benefits of the attraction There was one employee who perceived a wide range of economic linkages, including the sales of plants and fish to stock the attraction and re-sell to visitors, and the hardware and supplies for the buildings, picnic benches and other infrastructure The others named relatively few indirect benefits or none at all The results of interviews with employees of the attraction are presented in Table C 2

Table C 2
PERCEPTIONS OF DEMAND FOR TOURISM-RELATED GOODS AND SERVICES
(Responses of employees of Cranbrook Flower Forest)

STAFF POSITION	DIRECT BENEFITS	INDIRECT BENEFITS (Demand for other goods and services)
Gardener	Employment	Couldn't think of any benefits except employment for staff
Gardener	"	• Transportation sector benefits
Grounds supervisor	"	• Sales of plants to stock the attraction, and plant sales by the attraction • Fish to stock the ponds, and sell to tourists • Hardware and supplies for benches and buildings • Demand for skills in masonry, carpentry and electrical work
Ticket office attendant[37]	"	• Snacks and Jamaican foods • Brochures • Books on flora and fauna
Security guard	"	• Maintenance supplies • Transportation sector benefits

Social and cultural impacts of tourism
The attraction has had a few incidents of local people crossing the river into the attraction and offering their services to guests as unauthorised guides However, this has not developed into a harassment problem, because the staff in charge of the park monitor the river and discourage this practice The manager reported no other social or cultural conflicts, and the staff of the attraction interact very well with the visitors

Safety and security
So far there have been no accidents, and no incidents that have jeopardised the security of visitors at Cranbrook (The only security problem has been the theft of plants by the visitors themselves!) However, we had some safety concerns regarding the traffic on the well-travelled parochial road that runs through the property Some vehicles passed through the reception area of Cranbrook at what seemed an excessive speed The management has considered placing speed bumps in this area, but because it is a public road such interventions would probably not be permitted by the Parish Council

Regarding security, the attraction complies with JTB licensing requirements by providing an approved security guard during the hours of operation The nearest Police Station is at Runaway Bay, five miles away, and the attraction has cellular telephone service

ENVIRONMENTAL INFORMATION

Site development impacts
During the 17 years that the property has been in the hands of the present owner, he has been working to replant trees and other vegetation on the site, especially along the river, as the land had long ago been cleared for agriculture Immediately prior to the development of the attraction, the site consisted mainly of sparsely wooded pastures, with larger trees and fairly dense vegetation along the banks of the river Although the development of

[37] Answers are based on actual visitors' requests

the attraction has altered the site considerably, it has not involved the destruction of primary forest or removal of the original natural vegetation

Landscape The development of the site as an attraction has involved replacing sparsely wooded pastures on the banks of the river with lawns, flowering plants, trees, and ferns (including tree ferns) Shrubs have been planted in neatly bordered flowerbeds as well as in broader, less defined areas, giving a more natural prospect Some areas have been excavated to form ponds, which have been stocked with fingerlings of *Tilapia* for recreational fishing as well as decorative species such as *koi* for viewing

Buildings The entrance complex consists of a small, unobtrusive concrete ticket office near the parking area and, across the narrow road, another concrete block building that houses the spacious restrooms Adjacent to this is the old cut-stone building that is to be used as the gift shop and possibly a restaurant A round, wooden, shingle-roofed gazebo has been constructed about 100 yards inside the gardens, near the entrance Although it is quite picturesque, the gazebo does not match the square style of the 18th century cut-stone building

There are two greenhouses on the site, a relatively small mesh-roofed enclosure across from the parking area (where plants are for sale in connection with the landscape business), and the other a large (one-acre), shingle-roofed display area for orchids, anthuriums and other showy plants A rustic old shed is located along the path leading to the display greenhouse

Trails and Paths Gravelled paths lead visitors through the gardens, and in some areas wooden boardwalks have been constructed There is a small wooden bridge over a channel connecting two ponds An existing path alongside the river has been widened and modified for safety reasons and also to prevent erosion Gravel has been added to some places and cut logs used to form terraces and steps In general, the trails and paths are visually appealing and do not detract from the natural setting

Signs and Fixtures Conspicuous signs for the attraction are located on the main coast road facing both east and west The parking lot is clearly signposted with 'in' and 'out' signs There is a small but clearly painted sign indicating the restrooms situated near the ticket office Signs to guide the visitors to different sections of the grounds are planned but not yet installed The manager recognises the need to provide information about the plants and other features of the attraction, but has not yet decided on the type of signage to be used

There is an irrigation system which channels water from the river through the grounds The river is not the source of the piped water system for the buildings, which is derived from a separate spring with a sealed entombment Therefore, swimming in the river and its source spring does not affect the water for human consumption

Impacts on Wildlife Impacts on the wildlife can only be estimated, as no inventories or environmental impact assessments were made prior to the development As mentioned, the site had been radically altered from its original natural state by centuries of agricultural use Although some natural vegetation was destroyed in order to create lawns and gardens the net effect has been an increase in both the density and variety of plant species In fact the establishment of the site as an arboretum for native species of flora was one of the manager s goals in developing the attraction However many exotic species have also been introduced to the site, which are of horticultural interest but not part of the indigenous flora that would constitute a truly ' natural" attraction Unless any of these exotic plants are species regarded as potentially invasive pests (which to our knowledge they are not), they should not pose a threat to the indigenous flora

The introduction of exotic species of animals, on the other hand, may pose a disease threat to the wild fauna of the area Peacocks have been introduced to the site, and the ponds have been stocked with non-native species of fish The manager plans to bring imported domesticated ducks and geese to the attraction as well Populations of domesticated birds pose the threat of transmitting airborne avian diseases to wild birds, similarly, farm-raised

fish can transmit waterborne diseases to wild fish There is no practical way for the management to prevent or detect such transmission, because there can be long incubation periods for the disease vectors, during which no symptoms are visible The best way to avoid the possibility of introducing diseases to wild bird and fish populations would be to keep the grounds free of introduced species

Operational impacts

Maintenance of the site Routine maintenance of the site consists mainly of manual cultivation methods, as no agricultural chemicals are used on the grounds New plants are continually being added to the site, so the variety of vegetation is increasing We were somewhat concerned about the fact that fertilisers and pesticides are used for the anthuriums in the greenhouses Although they are not used outside of these areas, and there is a deliberate policy to use the least toxic products, there is the possibility that these chemicals might be leaching into the ground and reaching the river, and eventually the sea The manager said that it was mainly the anthuriums that required the chemicals, and he was thinking of discontinuing their cultivation because of the high cost of inputs

Waste management All of the organic waste such as clippings and leaves raked up from the lawns are put on compost heaps and used as natural fertiliser for the grounds Leaves that fall onto the paths are simply raked underneath the shrubbery alongside the path On the river trail, leaves are allowed to remain where they fall

One significant problem that the management needs to address is the accumulation of non-biodegradable waste at the site Visitors are allowed to bring picnics but then the management is stuck with the garbage they leave behind Plastic drink bottles make up the majority of waste generated by visitors Since these bottles are recyclable the manager has been separating and storing them, but has not been able to arrange for their collection by the company supposedly committed to recycling them

We advised the manager to prohibit the sale of drinks in plastic containers by the snack shop concessionaire, as is done at YS Falls (with excellent results) Visitors could also be asked to take away their own garbage, but that might lead to the problem of illegal dumping on the roadside The opening of the proposed restaurant would be the best way to reduce the waste generated by picnics and other events, as long as the restaurant were not to use disposable containers for food and drinks

Regarding sewage disposal the restrooms are sited as far away from the river as possible, and there are sealed septic tanks to contain the waste

Impacts on wildlife Some maintenance of the site is accomplished with equipment such as lawn mowers and string cutters, which generate noise that might affect wildlife temporarily On the other hand, an effort has been made to attract wildlife to the site by planting species attractive to birds, for example, the hummingbird garden as described above Other than these, the operational impacts of the site on wildlife consist primarily of visitor impacts, described below

Visitor impacts Apart from the generation of waste, described above, the most significant visitor impact so far has been the theft of plants Because the grounds are so extensive, it is not possible for the security personnel to monitor all visitors at all times Several valuable orchids have been stolen, and other plants dug out of the flowerbeds Often, people simply break off a piece of a plant as a cutting to propagate at home They do not seem to consider this as stealing, nor do they realise the collective impact of this practice by many visitors

A small amount of litter was observed on the paths However, there were no garbage bins in place on the paths or trails As a first step in preventing littering, garbage bins should be installed and signs posted asking visitors not to litter Some other possible visitor impacts such as trampling of vegetation and trail erosion may not become significant until visitation increases

Measures used to control visitor impacts Apart from the removal of vegetation, the visitor impacts described above are not significant at the present level of visitation These impacts can be reduced by the provision of garbage bins, signs stating the rules of the site, and increased surveillance by the staff There are two people employed as guides to provide information for visitors and help with monitoring their behaviour

If the attraction were to become extremely popular, a carrying capacity policy would have to be implemented in order to prevent serious visitor impacts from trampling, theft, littering, and possibly disturbance of wildlife There would also be a need for increased visitor monitoring by guides, security personnel and site attendants

In our opinion the grounds are large enough to accommodate 100 people in the gardens and up to 30 on the river trail at any given time without seeming crowded If visitors spend an average of three to four hours at Cranbrook as estimated by the manager, the attraction could probably admit 200 visitors daily without exceeding the social carrying capacity required for those seeking quiet enjoyment of nature If those 200 visitors were to arrive and leave throughout the day in small groups, there would be an average of 25 per hour passing through Visitation during peak hours would have to be monitored and perhaps limited to 100 people if the grounds, greenhouses or riverside trail seemed too busy

External environmental threats

Deforestation The size of the surrounding property (150 acres in all) helps to buffer the attraction from external environmental threats, but does not eliminate them The wooded hillside on the western side of the river part of a dairy farm, is now being cleared at a rapid rate for reasons unknown to the manager of Cranbrook This is expected to lead to erosion of the hillside and increased turbidity of the river during rainy periods Further up in the hills above Cranbrook, trees are being harvested for lumber and land cleared for cultivation Erosion caused by deforestation has contributed to the turbidity of the river The long-term effects of deforestation include loss of biodiversity and reduced stream flow

Pollution Although the stream emerges from the base of a cliff on the property, it is actually the continuation of a river whose origin is much further south The water is not polluted at present, but the potential exists for pollutants from external sources further upstream to affect the water quality One pollution problem that we actually observed on the site was the washing of clothes in the river by people with access to the river from its western bank Not only were they using detergent, but they had bottles of bleach at hand as well These pollutants are harmful to aquatic life as well as affecting the quality of the water for swimming

Environmental education and awareness

Current EE methods Education and information services, which would greatly enhance the visitor's experience, have not yet been developed at this attraction However, the need for these services is recognised and a visitor information centre planned as part of the gift shop There is currently a one-page flyer describing the attraction and its location, and there are identification tags on some of the plants in the greenhouses We were not able to assess the quality of information offered by the guides, as neither was on duty when we visited the site

Changes in behaviour While the attraction itself is not yet providing EE services, an excellent example of sound environmental management is being demonstrated elsewhere on the site by the group that operates the campsite Happy Hills The directors of this youth group, New Generation did not want their use of the site to degrade the environment in any way, especially as the site is adjacent to the river The group has installed (with environmental donor funding and other contributions) a state-of-the-art composting toilet in conjunction with a biogas digester This impressive unit is the first of its kind in Jamaica and the campsite has already become a demonstration site for practical, environment-friendly technologies for alternative waste disposal and energy conservation

Future EE plans The manager acknowledges the need for a variety of information and education components to be added to the attraction, such as signage to identify the flora and fauna, and printed materials to be made available in the planned gift shop He plans to seek the assistance of BirdLife Jamaica and other NGOs in developing educational materials and activities at the site

The role of tourism in resource protection

The owner s vision in developing this property for tourism is to preserve the land in a more or less natural state while generating an income Tourism was seen as the only practical way to achieve this goal Agriculture has become less and less profitable over the years, and the owner does not wish to convert this beautiful rural area into a housing development (although this would probably be a lucrative way to utilise the land)

The owner s vision of conservation goes even further he would like to reforest the remaining 100 acres as a watershed- and wildlife protection area, which would ideally be managed by a non-profit environmental organisation and used as a field site for environmental education He is presently investigating mechanisms for funding such a project and seeking collaboration with interested NGOs

CONCLUSIONS AND RECOMMENDATIONS

Attempting to assess Cranbrook Flower Forest as an ecotourism attraction was a difficult task Clearly, the objectives of the enterprise include using tourism to protect natural resources, but only a small part of the site fits the expected model for an ecotourism site – a relatively intact natural ecosystem For the most part, the development of the attraction has involved the creation of an entirely new landscape in an area that had been significantly degraded by human activity This new landscape, although visually beautiful and full of variety, is nevertheless an artificially created hybrid of indigenous and exotic flora and fauna

Having said that, we still have to conclude that Cranbrook Flower Forest has great potential for attracting business from people who would consider themselves ecotourists, if such people were specifically targeted in marketing efforts (which is not happening at present)

The manager commented that many visitors are content to just sit and enjoy the gardens, and never explore beyond the first pond However, the trail along the river with its beautiful old trees and bird life would probably be enough to attract a significant number of birders and other nature lovers As one of the visitors commented, the place has "something for everyone "

Economic and community benefits

Although not yet established as a profitable entity, the attraction is providing income foi residents of several nearbv communities and hopefully will provide more jobs as business picks up Employment at the site will continue to be the main benefit for local people, as few are likely to be providers of the kinds of goods and services that the employees named as potential spin-offs (for example, maintenance supplies and transportation)

Cranbrook Flower Forest has the advantage of being a large, privately owned and managed area located in a rural setting This serves to reduce social conflicts such as harassment, which are more evident in urban resort areas and government-operated attractions The management's good relationship with the people of the surrounding communities also helps to ensure an atmosphere conducive to ecotourism

One problem we observed is that Cranbrook at the present time lacks sufficient mechanisms to solicit income Allowing tourists to fish for their dinner is one, but evidently there are problems with the concept and management of this aspect of the enterprise If tourists go away feeling "ripped off" because they had to pay for

something they didn't want and didn't know they were getting, the bad impression will cost a lot more in the end than the revenue from the activity

Cranbrook Flower Forest has fulfilled all of the tourism licensing requirements and received a licence This in itself is a significant battle won, as many nature attractions are struggling with policy and standards issues and finding it very difficult to get a licence to operate The expense of hiring security guards is a major problem faced by all aspiring ecotourism attractions, and not all of them will be able to afford it

Resource protection For the most part the attraction is operated in an environment-friendly manner, although there are some concerns that need to be addressed The site is undeniably attractive, despite being an obviously manipulated environment Its function as an arboretum for rare indigenous species adds to the site's credentials as an ecotourism destination, and this is something that should be communicated to visitors The vision of establishing a larger protected area for watershed management and wildlife conservation will, if achieved, help to reduce threats from external environmental forces as well as improving the tourism product of the existing attraction If this vision is to be achieved, it needs to become a plan then a process

Environment-friendly infrastructure There are a number of ways that the attraction can reduce the environmental impacts associated with its presence and activities, and become more "green" Mechanisms must be sought to reduce or eliminate non-biodegradable waste and control visitor impacts such as littering and stealing plants In this regard, environmental education would be a valuable tool The use of chemicals in the greenhouses is another concern, but this may soon be resolved by the elimination of anthuriums as a greenhouse plant If Cranbrook is to specifically target ecotourists the decorative but exotic birds and fish might be regarded as out of place

Environmental education The lack of visitor information and environmental education materials and/or displays is disappointing but hopefully this situation is temporary and due to the recent start-up The attraction can not be said to be increasing environmental awareness until it addresses this need

A visitor information centre with displays and printed materials would be a definite asset to the attraction, and would provide an opportunity for income generation Tourists are interested in learning about the flora and fauna of the area and would appreciate guides trained to provide such information Many would be willing to purchase printed materials such as species checklists or books on wildlife

This site could be extremely valuable for the environmental education of Jamaicans It provides many of the features popular with locals, such as recreational areas and games, and can accommodate fairly large groups Thus, it could attract a large clientele who could then be exposed to EE materials and displays

Factors affecting ecotourism potential The main constraints to the viability of this attraction are the current low visitation rates and the high cost of servicing the debts for the development and operation of the site The degradation of adjacent lands may possibly affect the attraction, but is apparently not an immediate threat We offer some suggestions below for marketing and improving mechanisms for soliciting income

Marketing strategy In order to realise its ecotourism potential the attraction must provide high quality environmental information about the site and get the message out to the appropriate sector of the tourism market As a start the manager could enlist the help of BirdLife Jamaica to compile a checklist of bird species found at the site, and include this in promotional materials sent to nature tour operators both in Jamaica and abroad The extensive plant and tree collection deserves a similar effort

Cranbrook's biggest marketing opportunity is also its biggest challenge the large number of tourists that are already coming to this area, whether as stopover visitors or cruise ship passengers In 1997, Ocho Rios had the highest number of bed/nights sold (1,872,667) of any resort area in Jamaica, and received more than 70% of the

share of cruise passengers to the island (JTB, 1998) The fact that they are here is a good opportunity – after all, they're only 12 miles away instead of 1,200 It is the reason they are here that is the challenge tourists come to Ocho Rios for sun, sand, sea, and a host of other attractions, and none of these (so far) is Cranbrook Flower Forest Unless this attraction can successfully compete with the established attractions such as Dunn's River for the mass market tourists, it will have to make more of an effort to seek alternative target groups By emphasising the attributes of the site that would appeal to ecotourists, Cranbrook may attract a significant number of visitors who want to avoid the crowds at Dunn's River or the challenges on the streets of Ocho Rios

Mechanisms to solicit income A well-stocked gift shop and a place to enjoy a good meal at a reasonable cost would definitely enhance the attraction and provide additional income Merchandise such as booklets and checklists on the flora and fauna of the site itself could provide income and help to promote the attraction In the meantime, however, Cranbrook needs to find more ways to increase income in the short term More information should be sought on the appropriateness of the entrance fee before changes are made, but the visitor survey conducted for this study suggests that an entrance fee of US $7 50 or JA $250 would not be out of line with tourists' expectations

Furthermore, if tourists were informed about Cranbrook's role in resource protection they might be persuaded to contribute to specific funding needs (for example, helping to reforest the remaining 100 acres of the site, or contributing to a collection mechanism for recyclable plastic bottles) Right now they are not even being asked

Finally, the manager should examine wavs to cut costs He should carefully evaluate his investment in products or services that might not enhance the attraction, and reduce or eliminate them as needed

CASE STUDY # 6 ROARING RIVER PARK

Introduction

The main reason for including Roaring River Park in our list of sites to study was the fact that the site has been developed, operated and marketed as an ecotourism attraction by the Government of Jamaica However from an early stage in our investigations, even before we arrived at the site, we became aware that the attraction was experiencing serious problems with tourist harassment and was therefore not likely to be an ideal candidate for this study which sought to investigate examples of successful ecotourism The case study is presented in an abbreviated form (lacking detailed economic information) mainly in order to document the social conflicts associated with this attraction

Description of the attraction

The brochure for Roaring River Park describes it as a 'heritage and nature attraction' and traces the ownership of the property from the late 17th century to the 1940s The property consists of eight acres of land straddling the Roaring River which wells up from the ground as a shallow pond in a field of tall grass, before flowing noisily through a narrow channel and over a series of rocks and falls The access road parallels the river and continues through the adjacent settlement of Roaring River On the opposite side of the road from the river there is a landscaped compound with a bar and restaurant, a few small buildings that house the office and gift shops and a play area for children with a wading pool that is no longer in use A stage is being constructed to facilitate events for community entertainment A small footbridge takes visitors over the river to a concrete path and steps leading up to a cave Visitors are taken into the cave by the official guides for the attraction Unauthorised access to the cave is prevented by an iron grill door that is kept locked except when a group is inside

Although the brochure mentions various cultural offerings such as craft making, storytelling, traditional dance and music, none of these were available during our visit It was interesting to learn that although a few of the traditional skills were indigenous to the community, most of the performers had been trained by TPDCo which operates the attraction

Apart from the ominous chain-link fence around the compound, the setting of the park itself is quite pleasant The small buildings are designed in the style of traditional rural cottages and tall trees border the compound The river and falls are pretty, though not at all spectacular in comparison with the YS Falls and river Unfortunately the walls of the cave are defaced with graffiti and all the formations within easy reach have been broken off or damaged during the years of unauthorised visitation prior to the current operation This damage is a symptom of one of the most striking features of this attraction the large number of youths that converge on the site aggressively offering their services as guides and presenting a rather intimidating barrier to the unprepared tourist

Geographic and community setting

The attraction is located near the village of Petersfield in Westmoreland and is reached by rough dirt roads through cane fields on the Frome sugar estate (For visitors expecting an unspoiled natural attraction, the approach to Roaring River is quite a shock Dusty encounters with tractors and other farm vehicles are common, and we saw unsightly piles of garbage by the roadside) The nearest resort areas are Montego Bay and Negril, both about 25 miles away The fishing port and market town of Savanna-la-mar is 6 miles to the southwest

The community of Roaring River is a small settlement stretching north from the attraction for about a mile, beginning with a series of vendors' stalls lining the road in the vicinity of the attraction There is another

privately owned and less formally managed attraction further up the road – the Blue Hole and Ital Gardens – with which the Roaring Park is often confused Although we did not conduct interviews with community residents other than the staff of the park, it is obvious that farming and work on the surrounding sugar estate are the main economic alternatives to tourism in the area

Management structure

Roaring River Park is leased to the Government of Jamaica and operated by the Tourism Product Development Company Limited (TPDCo) in its current role as supervisor of the properties of Jamaica Attractions Development Company (JADCo) The administrative staff consists of a manager, secretary, accountant, restaurant manager, and cashier

ECONOMIC INFORMATION

Entrance fees

Entrance fees are US $10 for foreigners and JA $300 for local residents The fees include a guided tour of the cave Special rates are often given for school groups and local events

Visitor statistics

No figures were available on visitation, but there was a guest book with numerous entries by tourists from all over the world as well as Jamaica

Visitor satisfaction The majority of the comments in the guest book are positive, particularly with regard to the services of the official guides We found the guide to be friendly and polite, but not particularly knowledgeable He expressed an interest in learning more about the flora and fauna of Jamaica, and said he is frequently asked questions that he is unable to answer

In our opinion the park is not an ideal environment for an ecotourism attraction, as the area has been almost completely altered from its natural state by human activity Even the hillside where the cave is located has been partially denuded of vegetation by 'bushing' organised by the management itself, and non-native flowering plants have been planted in the flower beds of the compound The poor access roads, the unfortunate condition of the cave and the numerous touts loitering outside the chain-link fence are among the negative factors affecting this attraction Nevertheless, the park itself is a pleasant setting for outdoor recreation and community events, and is likely to be in local demand for such activities

Revenue and operating costs

Detailed financial information was not obtained for this attraction, which had been operating in its present form for just over a year However, the manager expressed the view that if the harassment problem could be eliminated the attraction would definitely become a viable business

Marketing and promotion

The attraction is marketed to both locals and foreign tourists Local target groups include schools, churches and other community organisations, mainly in Westmoreland, St James and Manchester Brochures are distributed in resort areas through the Jamaica Tourist Board and TPDCo

Employment

In addition to the five administrative staff members listed above, Roaring River Park employs 25 other people

- Cave tour guides (12)
- Hostess (1)
- Supervisors for the grounds and cave (4)
- Gardeners (2)
- Office attendants/cleaners (2)
- Chef for the restaurant (1)
- Scullion (1)
- Waitresses (2)

There are typically three security guards on duty, contracted from a security company Two police officers were also present on the day we visited the site

Income distribution With the exception of the administrative staff and security guards, none of whom are from the area, the employees of the attraction are residents of the nearby communities The management of the attraction works closely with the local citizens' association, through which all the official guides were selected for training and employment by the attraction

Indirect economic benefits (spin-offs)

Goods The craft shops were not open when we visited the attraction, but we learned that they are run by concessionaires who pay a monthly fee of $250 for use of the facilities No information was obtained on the souvenir trade conducted by local vendors outside the property Most of the meat and provisions used in the restaurant are purchased from the local community or grown in the attraction's own vegetable garden, although other supplies are obtained from outside sources

Services Apart from local labour and spin-offs to the transportation sector, there are few services that can be directly related to tourism at the attraction The attraction itself offers refreshments at reasonable rates, and there is ample lodging in the two major resort centres and other coastal towns nearby A number of local youths apparently derive an income from guiding tourists through the village and it is suspected that some are involved in selling illegal drugs to visitors

Other community benefits

The manager and supervisors of the attraction meet monthly with the citizens' association and are involved in planning and hosting events at the park to raise funds for community development projects These events, such as the Roaring River Craft Cultural Fair, are offered at special rates and attract large numbers of people from the region, providing opportunities for residents to show and sell their goods Training opportunities associated with the attraction have benefited mainly the young people of the area The attraction also participates in the neighbourhood watch program of the district

SOCIAL AND CULTURAL INFORMATION

Perceptions of the economic benefits of tourism

We did not follow up our initial visit to this site with community interviews, but based on our discussions with the manager hostess and guide at the park we can say that these people have a realistic view of the economic benefits of tourism They realise that there are limits to the employment opportunities associated with the attraction and also recognise the threat to the attraction's image posed by tourist harassment Obviously the people doing the harassment, as described below, have unrealistically high expectations of tourism – at least for the long term – although to some extent their demands are being met or else they would not continue to behave in such a manner

Social and cultural impacts of tourism

Of all the sites visited during the course of this study, Roaring River was the only one where signs of social and cultural conflict were obvious We heard from the operators of restaurants, guesthouses and other attractions in the area that the tourist harassment at Roaring River was extremely bad Their guests had told of being intercepted as thev approached the attraction by touts on motorcycles insisting that they pay money to proceed to the attraction, where they would have to be accompanied by these men as guides (for another fee of up to US $50) It was also reported that motorcycle riders stop tourists driving along the main south coast road whom thev think might be heading for other attractions such as YS Falls and Black River, telling the tourists that the roads to these attractions are impassable The riders then lead them to Roaring River (the village, not the Park), where the riders insist on being hired as guides

In some cases visitors who refuse to purchase the informal guide services are surrounded by youths threatening them and demanding money in order to be allowed to drive away from the area These men sometimes block the road with their motorcycles until they are paid off to let the frightened visitors depart One visitor to YS Falls said that he had paid a young man US $50 to guard his car while it was parked in the village of Roaring River but had returned to find no guard – and no battery in his car Having been warned about this situation, we made sure to park inside the fenced compound of the TPDCo attraction, ignoring the gestures and orders of the men gathered outside to park along the roadway

In discussing the harassment problem with the manager of Roaring River Park, we learned that TPDCo has made several attempts to assist these youths by offering training and help with the formation of an association of village guides complete with uniforms and clearly defined rates for tours Although the youths attended some of the community meetings to which thev were invited, it became clear that they have no desire to have their guide services be regulated in any way They obviously prefer the lucrative short-term gains from 'ripping off' naive tourists to the legitimate long-term benefits for the entire community of a successful, popular attraction

Safety and security

Regarding safety the supervisors, the security guards and several of the tour guides have been trained in CPR and First Aid, and the attraction has fulfilled all the standard safety requirements for licensing

While the compound of the Roaring River Park is effectively guarded and policed, the presence of the unofficial guides described above poses a definite risk for the safety and security of visitors who venture out on their own into the village of Roaring River This is a major concern for TPDCo , which has been in discussion with senior members of the Tourism Liaison Office of the Police force on the matter of strategies to deal with the harassment problem Having failed to persuade the youths to adopt a more sustainable form of guiding, TPDCo is now looking to protect its significant investment in the Roaring River Park by

increased enforcement of the recently introduced anti-harassment laws of Jamaica The nearest police station is at Whithorn, about two miles away, and the attraction has cellular phone service

ENVIRONMENTAL INFORMATION

Natural resources

The manager was not aware of any inventories of the flora and fauna of the attraction, although she mentioned that there were plans for an archaeological assessment by the University of the West Indies The river, spring, falls and cave are the main natural resources that comprise the natural attractions at the site As noted above, there are some large, handsome old trees on the property, but very little remains of the indigenous vegetation at the site, both on the compound and on the hillside where the cave is located

Site development impacts

Development of the attraction has involved landscaping a site that was already much altered from its natural state The buildings are relatively small appropriate for the setting, and incorporate local materials and styles Electric lighting has been installed in the cave to eliminate the use of kerosene torches, which was common up until about a year ago The imposing fence and the grill across the mouth of the cave must be regarded as necessary evils

Operational impacts and measures used to minimise them

Apart from the waste generated by the restaurant, there are few environmental impacts associated with this attraction Although there is no policy on avoiding disposable packaging and containers, organic waste is put on a compost heap that provides fertiliser for the attraction's own vegetable garden The rest of the garbage from the site is removed to the municipal dump by an independent contractor hired by TPDCo Sewage goes into sealed pits which are emptied regularly and the contents disposed of at a sewage treatment plant at Llandilo five miles away

In terms of carrying capacity no more than ten persons at a time are taken into the cave (although this is provision is mainly to ensure the comfort of the guests in that confined space) Monitoring by the guides ensures that there are no additions to the graffiti on the walls of the cave Kerosene torches are no longer allowed in the cave, and the local musicians' who used to serenade visitors by banging on the few remaining stalactites have been persuaded to cease this practice

External environmental threats

The main threat to the attraction is probably pollution of the water from surrounding households and agricultural activities, although these impacts were not investigated It was reported that a few years ago the Government constructed several dry (composting) toilets to replace pit latrines formerly used by residents of the village above the source of the river This was in response to an outbreak of typhoid fever in the region, which is served by water from this river (a treatment plant is located a few hundred metres downstream from the attraction)

Environmental education and awareness

Except for the brochure no printed information was provided about the resources of the attraction, and as mentioned, the guide was not familiar with the flora or fauna of the area It appears that very little is offered in the way of environmental education here, although this may be as a result of the newness of the attraction Time did not permit a discussion of environmental education plans

The role of tourism in resource protection

Although the natural resources of the area are far from pristine, the management of the site by TPDCo is helping to protect the cave from further degradation The presence of the attraction is also likely to ensure that the government continues to pay attention to protecting the water quality of the river The area surrounding the attraction is relatively free of litter, probably as a result of the influence and efforts of TPDCo , although the attraction could do more to reduce the amount of inorganic solid waste generated by its own restaurant

CONCLUSIONS AND RECOMMENDATIONS

For most of its visitors a tour of the Roaring River Park and cave is an enjoyable and worthwhile experience, but for others their trip turns into an unpleasant and frightening confrontation with aggressive, demanding youths There are a number of suggestions we could make for improving the natural and cultural features of this attraction along the same lines as we have done for the other case studies However, it is clear to us and to the operators of the attraction that its viability will ultimately depend on the success or failure of the efforts to address the problem of tourist harassment by members of the local community Only when this untenable situation is eliminated will it be worthwhile for additional resources to be put into developing this site as an interesting heritage and nature attraction

CASE STUDY # 7 BLUEFIELDS AND ENVIRONS

Introduction

Bluefields Bay in Westmoreland is a picturesque fishing village located between Black River and Savanna-la-Mar on the southwest coast of Jamaica Although it has a popular beach and pleasant scenery, Bluefields does not offer any specific tourist attractions that are currently being marketed as ecotourism attractions The main reason for including Bluefields in this study is that this area is at the centre of plans for a model ecotourism development project initiated by a community organisation based here, the Bluefields People's Community Association (BPCA) Although the ecotourism project is in the early stages of implementation, the remarkable vision and comprehensive approach taken by BPCA merit this report

Mission and activities of the BPCA

The mission of the BPCA is "to provide a range of community development services toward advancement of the social, economic and cultural upliftment of the people of Bluefields and its environs, in harmony with the environment" (Morgan 1995) Since its inception in 1989, the organisation has helped to establish a community resource centre (including an office, library, and conference room/lecture hall), a plant nursery, a women s craft collective and a community radio station

The BPCA's sphere of influence stretches along the coastline from Paradise to Whitehouse, and includes a few interior villages as well The organisation has involved residents of the area in education programs in permaculture, coral reef conservation, and other environmental subjects, as well as basic schoolteacher training, adult literacy and numeracy, and foreign languages In the summer of 1998 the organisation conducted a 2-week environmental summer camp for 45 children aged eight to twelve

The Twelve Guiding Principles of the Bluefields People's Community Association

★Go to the people
★Live among the people ★Learn from the people ★Plan with the people
★Start with what the people know ★Build on what the people have
★Teach by showing ★Learn by doing
★Not a showcase but a pattern ★Not odds and ends but a system
★Not piecemeal but an integrated approach
★Not relief but release

Existing ecotourism initiatives of BPCA

In terms of its involvement in ecotourism development to date, the BPCA has established a one-mile nature trail along a narrow strip of private beachfront land whose owner has agreed to its use for this purpose The land has been cleared of all alien species of plants, and interpretive signs will be added in the future BPCA has also constructed a wooden boardwalk (with interpretive exhibits) leading visitors on a loop through a mangrove forest adjacent to its headquarters These facilities are neither advertised nor marketed as tourist attractions, but are available at no charge to residents and visitors alike The organisation provides an informal

reference service for local fishermen willing to provide boat rides and fishing trips, by helping to put visitors in touch with them

In response to requests from tourists staying at resort villas in Bluefields and its environs, the education co-ordinator of the BPCA has hosted periodic activity camps for children The activities include nature walks to learn about Jamaica's wildlife, storytelling, songs and games reflecting Jamaica's cultural history and folklore, and craft making The two-week camps are held for a minimum of five children per group, for three hours per day, five days per week, for a fee of US $5 00 per hour per child [38] There appears to be a continuing seasonal demand for these camps, which provide income for BPCA as well as an educational and enjoyable experience for tourists, particularly children The lesson plans developed for these activity camps can also be used in other educational contexts

The Bluefields Community Ecotourism Development Project

The Government's thrust towards developing the southwest coast of Jamaica for tourism was further accelerated by the preparation of the South West Coast Development Plan (UDC, 1993) In response to perceived external pressures for development, the BPCA decided to put together a development plan indigenous to the area a plan that would reflect the needs and concerns of the residents themselves, and allow them to have a stake in tourism development in the area At a planning workshop in June 1995 the idea of a hospitality industry as a 'key business idea' was articulated by members of the BPCA (Morgan, 1995), and the proposal for a Bluefields Community Ecotourism Development Project was subsequently drafted (IIT, 1996a)

The decision to "develop implement and promote a community-based concept of tourism (hospitality) unique to Bluefields" was based on an assessment of the physical, ecological, historical, cultural and social resources of the area (Morgan 1995) The Bluefields Community Ecotourism Development Project is being developed in the context of a comprehensive business plan for the community, as well as a clear understanding of the meaning of ecotourism (see BPCA's definition of ecotourism in the box below)

The business plan Under the business plan for the community, a holding company called the Bluefields Area Sustainable Industries Corporation (BASIC) was established in March 1998 with four main divisions

BPCA'S Definition of Ecotourism

Ecotourism is the use of tourism as a tool to obtain funds needed to finance the conservation and protection of nature, local natural resources and the environment
Ecotourism should allow direct participation of local communities while facilitating the education and awareness of both locals and visitors about the importance of nature
Sustainability must be a fundamental goal of ecotourism if natural resources are to serve future generations

agribusiness, sales and consumer division, horticulture, and tourism marketing An important feature of this company is that it allows for ownership of shares by its employees under the recently passed ESOP Law (employee share ownership plan) of Jamaica (1995)

In the business plan's first phase, a number of subsidiary companies will be set up within BASIC to produce and market goods and services under the Bluefields brand name, which is expected to gain recognition as a symbol of high quality, environment-friendly products associated with the community's sustainable development initiatives The second phase of the business plan includes the establishment of a venture capital company to provide loans for environmentally sustainable enterprises, and the third phase will see the founding of a land trust to facilitate conservation and sustainable development of the landscape of Bluefields

[38] With a minimum attendance of five children a two-week camp would bring in revenue of US $750 00

The Bluefields Area Product Development and Marketing Company will be the first subsidiary of BASIC and will focus on developing and marketing nature tourism programs and specialty agricultural and horticultural products It will also operate as a licensing body – granting the Bluefields 'seal of approval' to local products that meet its criteria This will be business arm of the BPCA's ecotourism development project One of the goals of the project is to 'use flowering plants, shrubs and trees to enhance the Community proper and to create a distinctive ecotourism image of Bluefields as a destination within Jamaica" (IIT, 1996a, p 2)

Phases of the Bluefields Community Ecotourism Development Project Without replicating the plan itself, we wanted to provide an outline of its main elements as a model for community-based ecotourism planning The project is being developed in five phases, listed below with examples[39] of their main objectives

1 Strategic plan
- Assessment of resources (natural, cultural, historic, and social)
- Assessment of infrastructure
- Analysis and selection of markets
- Identification of business opportunities
- Definition of policies and operational requirements
- Development of master plan

2 Product development
- Assessment and planning for facilities such as attractions, restaurants, and accommodations
- Human resources needs assessment
- Education and interpretation requirements
- Refinement of master plan

3 Promotional and sales plans
- Image development
- Public relations plan
- Cost analysis and pricing
- Promotional and community events

4 Definition of operational systems and procedures
- Definition of product standards and quality of service
- Identification of carrying capacities for attractions
- Establishment of operational conditions and guidelines for sites and tours

5 Monitoring of implementation
- Observation of ecotourism enterprises to ensure proper interpretation and application of the policies, plans, standards and guidelines established by the previous four phases

Implementation of the Project As part of the strategic planning phase, the BPCA obtained the assistance of the Interamerican Institute of Tourism (IIT) to conduct a preliminary assessment of the ecotourism potential of Bluefields and its environs, which was done in December 1995 The team concluded that there was good potential for ecotourism in the Bluefields area, which could be viewed as a combination of four main spatial 'attraction elements' the bay, the beach (including the wetlands), the community, and the hills The consultants emphasised the need for a comprehensive and detailed master plan for ecotourism development to guide the many changes that would be required for the project The main recommendations were for additional research on the resources of the area, continued communication and collaboration between all

[39] Condensed and paraphrased from IIT (1996a)

parties involved in the project, and the strengthening of environmental education and conservation efforts in the community [40]

Progress towards the implementation of the Bluefields Community Ecotourism Development Project has been slow but steady, as the BPCA works towards their broader vision of sustainable development through the BASIC group of enterprises and their other community programs Much effort has been put into the agribusiness division of BASIC, which has leased some property, allocated plots to farmers, and started cultivation of peppers culinarv herbs and other crops A community radio station has also been launched, and this is expected to become an important information and marketing tool for local tourism-related businesses

CONCLUSIONS AND RECOMMENDATIONS

The Bluefields Community Ecotourism Development Project is another example of an NGO-driven, holistic concept of tourism, but one with a vision and plans for community development that go far beyond those of any other organisation encountered during this study The comprehensive, phased business approach to ecotourism as a means of generating income for the community is being taken with a clear commitment to use some of that revenue to finance resource conservation for sustainable development

BPCA shares with Valley Hikes and its business partners an awareness of the importance of the image of an area for marketing it as an ecotourism destination The BPCA approach to developing a wide range of nature-based products associated Bluefields and its environment-friendly image is similar to the "Jampark" concept of merchandising that has emerged from NGO-driven efforts to identify financing mechanisms for protected areas in Jamaica [41] The emphasis on local investment and tourism benefits for residents should help to ensure a genuine atmosphere of hospitality in the area, rather than an aggressive contest to capture visitors' money Despite the BPCA's innovative product ideas and desire for authenticity, the importance of market research prior to product development can not be understated

As is tvpical for most of the other sites investigated, environmental problems are among the main threats to the ecotourism potential of Bluefields However, because of the exceptionally high level of community involvement and the admirable success rate of their chosen projects, the BPCA should be an ideal vehicle for stimulating the improvements in environmental management and infrastructure that are needed to make Bluefields a safe desirable ecotourism destination

[40] A number of environmental and social threats to tourism were identified by this team as well as BPCA dynamite- and spear fishing inadequate solid waste management, water pollution, noise, and crime (particularly the drug trade)
[41] The "Jampark" concept is articulated in the companion document to this study (Boo and Lee, 1998)

CASE STUDY # 8 WINDSOR AND ENVIRONS

Introduction

The small community of Windsor in Trelawny is one of the main access points to the Cockpit Country and its exceptional flora, fauna and landforms [42] Windsor is also the site of the principal entrance to one of Jamaica's largest and most interesting caves, the Windsor Cave, which extends underground for seven miles to another opening at Bamboo Bottom With increased attention being paid to the proposed establishment of the Cockpit Country National Park (or whatever form legal protection might take), the possibility of Windsor becoming a centre for ecotourism development has been raised This report presents some of the issues concerning the ecotourism potential of Windsor and its environs

Geographic and community setting

Windsor is located in a narrow, steep-sided valley on the northern edge of the Cockpit Country, about 12 miles south of the coastal town of Falmouth The settlement of Windsor has only about 30 residents although the nearby village of Sherwood Content has a much larger population (probably several hundred, according to one resident) Subsistence farming is the main occupation of the inhabitants, who cultivate a variety of food crops such as bananas, yam and other ground provisions Cash crops of coffee and sugar cane are also grown Due to the lack of alternative economic opportunities in this rural area, most of the young people (especially girls) move out of the area after leaving school

Apart from the natural attractions of the wildlife and the landforms of the Cockpit Country, the region south of Falmouth has some managed tourist attractions rafting on the Martha Brae River, the historic Good Hope Great House, operated as a hotel and restaurant, and the Long Pond sugar estate which offers guided tours of its refinery The town of Falmouth, which is gaining prominence as a heritage tourism destination, is renowned for its Georgian architecture and historical importance as a thriving port for commerce in sugar, rum and slaves during the heyday of the sugar plantations Montego Bay (35 miles away) and Ocho Rios (55 miles away) are the nearest resort centres

Existing tourism initiatives at Windsor

For many years Windsor has enjoyed what could be called 'research tourism', as scientists carrying out mainly biological research in the Cockpit Country and Windsor Cave usually make Windsor their temporary base of operations while in the field There are three existing facilities that cater to research groups, offering rooms and campsites

1 The Windsor Great house
2 The Last Resort
3 The Windsor Sanctuary

Researchers typically employ local people to assist with fieldwork and act as guides to the forest and the cave The dense forest is criss-crossed by a network of little known, overgrown tracks and one larger trail that connects Windsor with the community of Troy, about ten miles to the south These trails were historically used by the Maroons and are possibly of Taino origin In

[42] The natural and cultural resources of the Cockpit Country are described in Case Study # 4 Cockpit Country Adventure Tours

recent years the Windsor area has been recommended in guidebooks to Jamaica as a good place for hiking and bird watching (for example, the Cockpit Country is one of only a few localities where both species of endemic Jamaican parrots, *Amazona agilis* and *A collaria*, can be seen) The popularity of the area as a research site and nature tourism destination is increasing, and a select few of the local guides have become well known and derive part of their income from tourism During the winter season visitors come to the cave at a rate of about one to three cars daily, although not all of the occupants enter the cave [43]

Stakeholders in the ecotourism potential of Windsor

Perspectives on the ecotourism potential of Windsor revolve around two primary concerns the need to conserve the biological diversity of the Windsor Cave and Cockpit Country, and the need for additional economic opportunities for the people of the area [44] The main players interested in the ecotourism potential of the area generally fall into the following categories

- Operators of existing facilities for accommodating visitors
- Potential operators/employees of tourism facilities in the area
- Local guides
- Local politicians
- Other residents of Windsor and Sherwood Content
- Scientists (local and foreign) with research and conservation interests in the area
- The Forestry Department
- The Natural Resources Conservation Authority (NRCA)
- The Tourism Product Development Company Limited (TPDCo)
- The Jamaica Conservation and Development Trust (JCDT)
- Other Jamaican ENGOs

While the interest and participation of the individuals listed above are self-explanatory, the involvement of the various organisations requires clarification

The Forestry Department is the government agency responsible for managing lands designated as Forest Reserves Most of the Cockpit Country is so designated Permits for the extraction of any forest resources on Forest Reserves must be obtained from this agency, which is also charged with enforcing the Forest Act

The NRCA is officially responsible for protecting the natural resources and wildlife of Jamaica Regarding their involvement at Windsor, the NRCA is particularly concerned with the five species of bats that inhabit the Windsor Cave At least one of these species is endemic to Jamaica and found only in two caves, the Windsor Cave and the St Clair Cave in St Catherine Permission must be obtained from NRCA for any research to be conducted on the bats in the cave, and collecting of wildlife specimens requires a special NRCA permit No permits have been issued in the last year or so because the population status of the bats is under investigation

[43] Reported by a local guide at a community meeting in March 1998

[44] Our field work at the site was limited to an interview with the owner of the Windsor Great House, Michael Schwartz who shared his personal vision of the ecotourism potential of the Windsor area but also made an effort to inform us of other contrasting views on the matter We also had access to the minutes of a public meeting convened by the Jamaica Conservation and Development Trust (JCDT) at Windsor in March 1998 to discuss the protection of the Windsor Cave and the Cockpit Country

TPDCo is the government agency responsible for overseeing tourism product development, standards and licensing TPDCo has an interest in promoting the development of nature- and heritage-based attractions, of which the Windsor Cave is a potential example, and ensuring that attractions meet standards for visitor safety and other specific criteria

The JCDT is part of the scenario because the Windsor Cave and several acres of land surrounding the entrance have been donated to the Worldwide Fund for Nature (WWF) by Dame Miriam Rothschild and the WWF has in turn delegated responsibility for the management of this property to the JCDT

Other Jamaican ENGOs such as the Natural History Society of Jamaica and BirdLife Jamaica are particularly concerned about the need to conserve the biological diversity of the Cockpit Country, Jamaica s largest and most diverse wilderness area, which has been recommended for designation as a World Heritage Site [45] Many members of these ENGOs are also scientists with research interests in the area

Resource conservation issues and perspectives

The individuals and agencies primarily concerned with resource conservation hold the view that because the area s unique and rare ecosystems and wildlife may be disturbed or threatened by increased human activity, visitation to this site should be limited in order to minimise adverse impacts The use of the cave for large-scale tourism is not considered appropriate for two main reasons (1) the fragility and sensitivity of the cave ecosystem, especially the resident bat populations, and (2) the known presence in the cave of the microbes that cause histoplasmosis, a serious respiratory disease Tourism also poses threats to the forest ecosystem, such as trampling and removal of vegetation and disturbance of the nest sites of endangered Jamaican parrots

The NRCA is concerned that any activity in the cave would disturb the bats, and that lights would be particularly detrimental [46] This position is generally supported by biologists, who also warn of possible harmful impacts on the bats of increased carbon dioxide levels and humidity Some residents of the community share this view, and feel that access to the caves should be restricted to "special interest tourists who appreciate the natural environment " [47]

The responsibility of managing the Windsor Cave has been granted to JCDT with a proviso from the WWF that the cave must not be physically altered in any way The area may be used for scientific and educational purposes but visitation will have to be limited and strictly monitored The JCDT has proposed the following management measures for the cave A member of the local community will be contracted to provide guiding services to visitors Hand held electric lights are to be provided as an alternative to kerosene bottle lamps, which will not be allowed in the cave No permanent lighting will be installed No decision has yet been made about establishing visitation limits, but this matter will have to be addressed Regarding environmental education, a notice board will provide educational information on the cave system and the need to conserve it The JCDT hopes to use visitor fees and research charges to finance management costs, which are presently being estimated Part of the funding required will come from the WWF

[45] ENGO involvement in conservation efforts for the Cockpit Country is described in Case Study # 4

[46] The NRCA is also concerned about environmental threats not specifically related to tourism, such as the use of pesticides that pollute the water and kill flying insects that are an important food source for some bat species

[47] All quotations are from the Minutes of the Public Meeting, March 23, 1998, unless otherwise cited

Economic issues and perspectives

There is a definite polarisation of stakeholders' views regarding the economic potential of tourism in the Windsor area Disregarding what they feel as unwelcome intervention by environmentalists, some of the residents are eager for the Windsor Cave to be 'developed' as a tourist attraction There are many different views on how this could or should be done, and the various types of tourists who would constitute the target groups for such an attraction

If the cave ecosystem is maintained in its original natural state, as proposed by the conservationists, the cave with its "ticks, mosquitoes and histoplasmosis" might not attract anyone other than 'hard core' nature tourists or scientists On the other hand, there are local expectations that if the cave were made safe, comfortable and accessible to tourists, it could provide "an economic base for the region" According to TPDCo, the safety standards for operating the cave as an attraction would require installing lighting, handrails and paved walkways in the cave, all of which are prohibited under the Terms of Reference specified by the WWF for the management of the cave

The JCDT is proposing a compromise whereby access to the cave would be limited but interpretive exhibits and signs would augment the experience However, the idea of limiting visitation does not appeal to those who feel that "it is necessary to allow what is naturally here to attract visitors" and that "all developments must be done in a way that all people interested can be involved"

The operators of the existing facilities that cater to visiting researchers and nature tourists say that the demand for accommodations and other tourism-related services is not enough to support any additional tourism development in the Windsor area The limited carrying capacity of the resources means that large-scale tourism should not be promoted in the area These residents warn that it is unrealistic to expect that nature tourism on a scale required for sustainability will create many jobs or solve the economic problems of the community

Mechanisms for balancing tourism with conservation needs

Michael Schwartz a local farmer, building contractor and owner of the Windsor Great House, provided a number of suggestions for integrating tourism with resource conservation in the Windsor area He believes that the value of the Cockpit Country for scientific research and education could provide long-term benefits for residents of the area if tourism is properly planned and managed

Schwartz would like to see the Cockpit Country and Windsor Cave designated as scientific reserves, with visitation allowed by permit only Visitors could perhaps purchase access to the area on a weekly or monthly basis, particularly in the case of long-term field studies User fees for research and other specified activities would help to finance the conservation and management of the reserve, which would provide employment for local people as rangers, guides and field assistants Schwartz advocates payment of set fees to guides for services such as locating nest sites or specimens of flora and fauna sought by researchers, and assisting with handling of wildlife This system would ensure that local people attached a value to the presence of wildlife in the forest and community, and would help to deter poaching

He recommends a holistic approach to improving the local economy, for example by diversifying the agricultural base of the area as well as seeking creative opportunities to benefit from tourism He commented on the lack of authentic souvenirs of the area, and suggested that the area could

develop a woodcarving industry based on the sustainable cultivation of the trees native to the area The wildlife and landforms of the Cockpit Country could be the inspiration for some of the woodcarvings and for other forms of local art

Another interesting possibility for the area suggested by Schwartz was the notion of butterfly ranching which was discussed at the Workshop on the Cockpit Country (March 27-28) at the University of the West Indies [48] Butterfly farms have become extremely popular and lucrative attractions around the world They contribute directly to the conservation of butterflies through the cultivation of their host plants and the release of the majority of hatchlings into the wild Butterfly farms also generate income from the controlled sales of perfect specimens (which are readily distinguishable from wild-caught, poached butterflies) and a host of merchandise with butterfly themes A butterfly farm featuring the endangered Giant Swallowtail Butterfly could be a major attraction, providing income from tourism without the adverse impacts of visitation to fragile natural ecosystems and helping to finance conservation needs such as habitat protection

For Schwartz the necessity of limiting visitation to the forest and cave would mean that any additional tourism development in the area – including the proposed butterfly farm – should not come any closer to Windsor than the community of Sherwood Content Sherwood Content is a scenic rural village within easy access of the managed attractions of the region The village could develop its own brand of community tourism without the need to develop the Windsor cave for mass tourism

Two requirements identified by Schwartz as important for local tourism are the need for guidelines for the environment-friendly development of tourism accommodations and related services and the need for enforcement of environmental laws In particular, he mentions the urgent need for the Forestry Department to regulate the use of portable sawmills, which are facilitating illegal logging in the Cockpit Country

Conclusions and recommendations

In our opinion, the Windsor area has potential as a nature tourism destination, but local benefits will be short-lived unless the importance of resource conservation is recognised and accepted by the entire community The lack of a common vision for ecotourism development will be a serious impediment to the long-term management of the resources of the Cockpit Country and Windsor Cave for the benefit of local people Unfortunately, our impression from reading the Minutes of the public meeting on March 23 is one of local resistance to conservation and a bias towards sacrificing the long-term benefits of low impact, scientific research tourism for the unknown value and inevitable damaging impacts of mass tourism

There is confusion about the attractiveness of the area and its resources to tourists, which points (once again) to the need for market research before any further expansion of tourism facilities is undertaken This is especially relevant because of the extremely sensitive nature of the resources in question The natural resources are not just threatened by visitation, but by a number of other environmental impacts that could in turn affect the tourism potential of the area These include illegal logging, destructive agricultural practices and the poaching of parrots and other species of wildlife

The recommendations made by Michael Schwartz for balancing tourism and conservation seem practical and feasible We agree that diversification of the local economy is a more promising

[48] More information about this workshop can be found in Study # 4

route to economic growth than an unrealistic dependence on tourism We add here a couple of our own suggestions for income generation We see a likely market for books and other printed materials such as field guides and checklists of the flora and fauna of the Cockpit Country This area would also be an ideal site for establishing an indigenous plant nursery as an outpost of the Plant Conservation Centre (a project of the National Arboretum Foundation to conserve indigenous and endemic Jamaican flora)

The fact that JCDT has initiated public discussion regarding the management of Windsor Cave and environs is a positive step, as is the decision of the community to establish a local committee to examine development options We hope that the JCDT will receive the cooperation of the community as it tries to execute its mandate to conserve the biological diversity of the Windsor Cave As long as there is dialogue between the stakeholders there is the possibility of resolving differences and designing a plan to take advantage of tourism opportunities while conserving the unique natural resource base of the area

Ecotourism Planning and Management Study Tour:

August 20-29, 1998

FINAL REPORT

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Introduction

The Development of Environmental Management Organizations (DEMO) Project is a joint initiative of the United States Agency for International Development (USAID) and the Government of Jamaica (GOJ) The DEMO Project was designed to strengthen the Natural Resources Conservation Authority (NRCA) and Jamaica's environmental NGOs to effectively manage the island's environment and natural resources The DEMO Project has helped the NRCA to develop strategic planning capabilities and to formulate policy and guidelines for the expansion of Jamaica's protected areas system NGOs play a critical role in environmental education and management particularly through community outreach and the DEMO project has assisted several local NGOs in this effort Importantly, under NRCA's protected areas management guidelines the management of protected areas will be delegated to these same NGOs with various responsibilities to be shared with NRCA

In 1995, the NRCA completed a draft government policy, or Green Paper, on the establishment of a national system of parks and protected areas The policy was approved by the Jamaican Parliament in November 1997 The National System of Protected Areas Policy is an expression of Jamaica s commitment to protecting its environment and resources that are of recognized national and international importance An integrated system of parks and protected areas is crucial to maintaining the island's extraordinary biological, scenic and cultural diversity Careful management is needed to sustain these resources while providing benefits for local residents and for Jamaica s economy

In early 1998 the NRCA, with technical assistance from the DEMO Project, developed a series of parks and protected areas management guidelines The management guidelines state that *Tourism in protected areas should include the provision of opportunities for people to experience and benefit from the natural cultural historic and recreational environment of Jamaica* Furthermore, the guidelines call for the NRCA to identify priorities, regulations, responsibilities possible partnerships, funding needs, cost-sharing opportunities, eco-enterprise opportunities as well as mitigation measures needed to reduce adverse impacts According to the ICUN, the primary purpose of nature-based tourism (eco-tourism) should be the study and enjoyment of ecological, historical, and cultural values of the area, with emphasis on the use of facilities and practices that have minimum residual impact on the environment

Linking Ecotourism and Conservation

Realizing that there is an inherent connection between ecotourism and conservation, in mid 1998 the DEMO project, planned two activities that would assess the impact of current and future plans for ecotourism activities in and around existing and planned protected areas and areas of environmental importance in Jamaica The first was an assessment of ecotourism attractions throughout the island The primary goal of this activity was to get a sense of the prevailing practices and impacts of ecotourism enterprises operating in Jamaica The second activity was an ecotourism planning and management study tour

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Executive Summary

After consultation with NRCA staff, environmental NGO representatives and tourism planning and management professionals, it was decided that a study tour would be a good method for training selected individuals in the relationship between ecotourism, conservation and economic development for the following reasons

- The NRCA had developed several policy and regulatory documents for managing protected areas A study tour would give NRCA and protected areas staff a real-world view of how similar policies and regulations were being implemented elsewhere
- NRCA protected areas guidelines call for NGOs to co-manage existing and planned protected areas A study tour would offer NGO staff and community leaders an opportunity to see how tourism in protected areas impacted on local communities and learn ways in which local communities are managing natural resources
- A study tour would also be useful to The Ministry of Tourism, which is writing a five-year plan for sustainable tourism
- Because many different organizations play a role in ecotourism planning, a study tour would not only give policy makers and stakeholders an opportunity to better understand their own role in the planning and management of ecotourism, but also to understand the role of others

The primary goal of the study tour was to provide participants with an opportunity to learn first hand about the development of integrated management strategies for promoting and maintaining environmentally-responsible economically viable tourism Ten specific objectives were identified for the Study Tour The ten objectives were

- developing effective ecotourism policies and infrastructures,
- developing licensing and concessions regulations to ensure that protected areas benefit from ecotourism,
- developing ecotourism management plans for protected areas,
- the importance of making park personnel the primary information resource for the flora and fauna of the area,
- constructing facilities with minimum negative impacts on the environment,
- mitigating negative effects of ecotourism on the local environment and communities,
- developing profitable community eco-enterprises,
- ensuring community participation in developing ecotourism projects,
- marketing the ecotourism product,

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- developing guidelines for assessing ecotourism attractions and operations

Participants

Participants were chosen from a cross section of public and private organizations working in the tourism, conservation and community development sectors (see Participant List) One key criterion for selection was each individual's ability to implement change – their ability to make a difference Participants were asked to complete a needs assessment survey which was then used to develop the itinerarv After careful consideration, Costa Rica was chosen as the destination for the study tour because it has a long history as a country with good environmental management and conservation practices, it is one of the premiere nature tourism destinations in the world and because of its proximity to Jamaica

Site Selection

Unlike Costa Rica Jamaica's tourism industry developed in the absence of a strong national focus on conservation or environmental issues Furthermore, for many years large hotels and resorts have dominated Jamaica's tourism industry with a strong emphasis on sun, sand, and sea Only within the last few years, has there been a growth in small nature based attractions Given these differences and also differences in the cultures and history of the two nations, it was decided that very careful attention should be paid to site selection in order to find sites most similar to the Jamaican context and which could give the participants a well rounded and balanced understanding of how the successful ecotourism industry operates in Costa Rica and, by example the direction it could take in Jamaica Meetings were scheduled with representatives from several organizations including government agencies, non-governmental organizations, educational institutions and private and public research facilities The group also visited several national parks, private reserves and community operated eco-enterprises

Orientation Session

Participants had an opportunitv to meet each other, become familiar with the objectives for the Study Tour and share their personal goals and objectives at an orientation session held the day before departure Costa Rica s ambassador to Jamaica addressed the group He shared with participants the history of Costa Rica's conservation movement, the establishment of the national park svstem and the development of the country's tourism industry The group leader, representing the Technical Assistance Contractor (TAC) provided the group with an extensive briefing on the global ecotourism industry and the ecoturism market

Daily Group Discussions

Regular group discussions were held during the study tour These discussions served two purposes First to foster an exchange of ideas and stimulate learning among the group Participants, primarilv those representing NGOs and CBOs were asked to share there with the group how their organization developed, its goals, accomplishments and weaknesses Second, the daily group discussions helped the group relate what they were learning to the Jamaican context

Participants' Debriefing Session

During the pre-departure orientation session, the participants were told that upon their return to Jamaica they would be asked to share lessons learned with an audience of their peers and other environmental management and tourism professionals The decision was made to have this type of follow-on because experience has shown that one drawback to study tours is the failure of participants to share information gained with a larger audience

During the post studv tour debriefing session the major themes of the study tour and lessons learned were presented and the audience was given an opportunity to ask questions of the panel The main activity of the day was the practical application of lessons learned using the community of Port Royal, Jamaica as a model Port Royal was selected for the case study because it is in the process of being declared a protected area by the Jamaican government and because a major tourism development is being planned for the area Two participants, representing private sector and community interests in Port Royal, were asked to give a background of the specific conservation, tourism related and social issues facing the community of Port Royal Individual study tour participants were then asked to address these issues applying lessons learned from the study tour

Thematic Analysis

In order to help the group filter what they were learning in Costa Rica for application to the Jamaican context, participants were required to meet for daily discussion and analysis of each day's activities and to identify lessons learned

During the final group discussion, it was decided that the ten individual objectives that were identified before departure from Jamaica could be merged into seven over-arching themes These seven themes are discussed in the following section They are

1 Effective national ecotourism policies and regulations
2 Eco-tourism in Protected Areas
3 Ecotourism and the Environment
4 Scientific Research and Ecotourism
5 Community Participation in Ecotourism
6 Marketing the Eco-Tourism Product
7 Training Park Personnel and Tour Guides

This section provides a thematic analysis of the participants' observations Selected meetings have been chosen to give support to each thematic observation

THEME #1 *EFFECTIVE NATIONAL ECTOURISM POLICIES AND REGULATIONS*

National governments play a critical role in the development and growth of successful ecotourism It is the national government that must implement policies and structures that enable or at the very least permit the development of successful ecotourism sectors within a country For example, the agency responsible for the management of national parks and protected areas determines the scope and level of recreational activities allowed in a protected area The national government is often responsible for designing the infrastructure that allows national parks and protected areas to collect user fees and channel revenues from those user fees into supporting the protected areas system By adopting sound and appropriate ecotourism management policies, the central government can maximize the benefits and minimize the negative impacts associated with ecotourism

The group was interested in learning how the Costa Rican Government has developed effective policies for regulating the ecotourism industry, especially guidelines for private attractions and hotels as well as concession permitting schemes within parks and protected areas The group learned that Costa Rica does not have a separate set of regulations or policies governing the operation of nature tourism enterprises because the majority of Costa Rica's tourism industry is ecological or nature related This is contrary to the current Jamaican approach, which seeks to develop seperate and specific ecotourism guidelines In Costa Rica, Tourism developments must

(1) respect the environment,
(2) be economically viable, and
(3) respect the community and local culture

❖ *The Costa Rican Institute of Tourism (Instituto Costarricense de Turismo - ICT)*

Costa Rica does not have a Ministry of Tourism, instead the ICT (Instituto Costarricense de Turismo) a division of the Ministry of Economy, is responsible for guiding the development and growth of the tourism industry Mr Melchor Marcos Hurtado, Director of Planning at ICT, explained that the decision was made to put ICT in the Ministry of Economics because the national government believed that tourism was an important means of providing economic development opportunities to Costa Ricans The ICT works closely with the private sector and the Ministry of Environment and Energy to set policies for sustainable growth of the country's tourism industry While ICT sets policy for guiding the growth of the tourism industry, attractions and hotels are not required to obtain licenses in order to operate

Despite the absence of strict government control and regulation, the tourism products and allied services are of a very high quality Many business owners told the group that they take the initiative to improve their products to remain competitive The ICT has developed a sustainable tourism program to encourage tourism business to adopt environmetally sound operating practices ICT hopes that companies will view the program as a selling point to attract clientele and eventually generate widespread participation by the hotel industry The program encompasses a broad range of activities including socially beneficial as well as environmentally friendly behavior rather than operational requirements for "ecotourism"

attractions Although hotels are not required to obtain ICT certification in order to operate there are certain benefits in having ICT certification such as being included in official ICT marketing and promotional materials

- ***The National Tourism Chamber of Costa Rica (Camara Nacional de Turismo de Costa Rica - CANATUR)***

CANATUR is an association of privately owned tourism companies and hotels Its main objective is to assist private tourism interests develop better practices and gain social and political support for tourism CANATUR has been working with the Central American Business Administration Institute (Instituto Centroamericano de Administracion de Empresas - INCAE), to develop a plan for bringing greater competitiveness to the tourism sector

The organization values community involvement and strives to encourage community participation in the sector CANATUR believes that if communities understand and accept the tourism sector, visitors will be able to move around the country with greater ease CANATUR advocates keeping accommodations small and tourists mobile to avoid the development of mass tourism centers They were instrumental in adopting national building codes restricting structures to only 10 rooms per acre In fact, eighty percent of all rooms available in Costa Rica are in hotels with less than 40 rooms

Over the last 5 years tourism has become the main generator of foreign currency Despite this fact it was the feeling of the CANATUR representative that the government still viewed the tourism industry as a passing fad and continued to support traditional industries such as agriculture and timber The private sector is now working to impress on the government the importance of the tourism industry to the national economy

While CANATUR is working to attract tourists to Costa Rica, they want to be careful that tourism develops in a manageable way that does not change social or cultural aspects of Costa Rican life They also want to control and mitigate negative impacts on the environment

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THEME # 2: ECO-TOURISM IN PROTECTED AREAS

Ecotourism usually occurs in and around protected areas These areas are highly attractive vacation destinations for locals and foreigners alike For many parks and protected areas struggling to operate on small and often inadequate budgets, ecotourism can provide needed income to aid in natural resources management, enforcement, community outreach, and education efforts However, the risks of environmental degradation associated with ecotourism can be in direct opposition to a protected area's primary mission, which is the conservation of natural resources Park and protected areas personnel are challenged to find strategies that will maximize the benefits and off-set the costs associated with ecotourism

Although ecotourism can provide substantial income for protected areas, without sound management plans and revenue collection systems, fees collected from protected areas can end-up in the national treasury instead of being used by the protected areas to support conservation efforts

The group visited several national parks and protected areas as well as privately-owned reserves such as the Monteverde Private Reserve While there are no privately-owned protected areas in Jamaica participants felt this type of approach could be a way to manage ecologically significant areas in Jamaica Participants agreed that ensuring the financial sustainability of protected areas over the long term was a complicated matter that required almost as much work as the actual day-to-day management and operation of the area

Financial benefits provided by ecotourism may be direct such as when tourist fees are earmarked for the protected-area budget They may also be indirect For example the protected area may be allocated a larger budget than would otherwise be the case in recognition of the contribution made by fees that go the general government treasury' [1]

- *The National System of Conservation Areas (Sistema Nacional de Areas Conservaciones-SINAC)*

Costa Rica's protected areas system began in 1966 as an initiative of the Costa Rican Government During the 1970s and 80s, Costa Rica received assistance from foreign donors to expand and improve its system of protected areas The government is now attempting to lessen the impact of decreased funds from foreign governments by diversifying the economic base of its protected areas system The government collects fees from tourism and various other activities taking place in and around protected areas National parks charge entrance fees, 70% of which are turned over to the central government for managing the country's national system of protected areas A portion of this income is remitted back to each locality Some national parks have begun to retain income gained on site from other types of user fees such as equipment rental and purchases at gift shops located within the parks

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Lindberg C and Enriquez J An Analysis of Ecotourism's Economic Contribution to Conservation and Development in Belize Volume 1 Summary Report, World Wildlife Fund[1]

SINAC derives income from various activities taking place in and around protected areas Ecotourism is of course one such activity Others include taxes and fees for using the natural resources found in national parks For example, hydro-electric cooperatives must pay for using water from the national parks SINAC has an exclusive agreement with a local biodiversity research organization the National Institute on Biodiversity (INBio) to extract samples from the national parks Furthermore, if the samples extracted from the national parks are eventually developed for commercial use, INBio must pay SINAC a share of the profits Agreements are negotiated on a case-by-case basis and depend on the projected or potential value of the sample

The government also encourages local communities to provide certain services to the park system such as lodging, guiding and transportation SINAC provides permits to business to provide these services In Cahuita National Park, located on Costa Rica's Caribbean Coast, a local group manages 2 km of the beach They solicit contributions from visitors, which are used to meet operating costs Profits from any concessions, equipment rental, etc within that area go directly to the organization

❖ ***The La Amistad-Caribbean Conservation Area***

The group visited Cahuita National Park and Gandoca-Manzanillo Wildlife Refuge two of the protected areas within the La Amistad-Caribbean conservation area Cahuita National Park was created to protect terrestrial flora and fauna, coastal wetlands, coral reefs and a number of marine ecosystems Visitors to the park can hike along the trails, picnic along the beach, swim, surf or enjoy other water sports

The park rangers at Cahuita National Park report that thev were having problems with illegal fishing and poachers Although they have the power to arrest perpetrators, they are not trained to make arrests so they requested and received training from the national police in arrest techniques

Since park rangers onlv have power to apprehend environmental criminals within parks they work with the national police force to monitor the main road leading to the park This partnership has proven very effective in aprehending prepetraturs of environmental crimes Motorists are not required to stop for park personnel outside of the parks but they must stop and allow national police to search their vehicles

❖ ***The Monteverde Cloud Forest Reserve***

The Monteverde area in the Central highlands, is one of the most popular destinations in Costa Rica Located at an altitude of 5,000 feet, the area is home to many species of plants and animals and is a favored destination for birdwatchers and hikers The Monteverde Conservation League operates the Bajo del Tigre Trail within the Reserve In addition to this trail, tour companies often offer organized tours for birdwatchers and hikers

Throughout the Study Tour participants observed that parks and protected areas made money in a variety of ways All of the sites we visited received income from many different sources The Monteverde Cloud Reserve, a privately-owned reserve, was the best example of this practice The Reserve receives funds from many different sources, including user fees and concessions, commission arrangements with local tour operators, research fees, and several types of international donations

Established in 1986, The Monteverde Conservation League (MCL) is a non-profit organizations primary objectives are (1) conservation, protection and rehabilitation of the area around the Monteverde Cloud Reserve and (2) to maintain and protect the physical, biological and cultural environment of the Monteverde Areas

MCL has a land-acquisition program that allows it to purchase land that is crucial to the protection of wildlife that migrates seasonally from the cloud forest to lower elevation forests In the beginning, the MCL received funds from schoolchildren in Sweden and other nations to purchase lands From the efforts of these children, the Children's Eternal Rainforest or (The Bosque Eternal de Los Ninos - BEN) was created Today BEN has grown to more than 42,000 acres in size

Today, MCL's has three major divisions each with distinct functions
(1) Management and Protection This includes acquisition of new land, protection against illegal hunting and resource harvesting and maintaining trails, fences and other physical features in the Monteverde Cloud Reserve and BEN

(2) Environment and Human Development This division of the MCL is largely responsible for ecotourism and environmental education activities within the local communities

(3) Research & Applied Technology The objective of the research and applied technology division is to acquire knowledge through scientific methods of research in order to understand more about the natural processes of tropical forests Examples of activities include analyzing the behavior and history of a particular species, conducting biodiversity inventories, and educating farmers on alternative methods of reforestation using native trees, and furnishing field stations with laboratory equipment Theyalso work to establish relationships and collaborate on research projects with national and foreign organizations

MCL has six separate principal income categories fundraising projects, payments for environmental services sales, services, financing, and administrative services For the year ending September 30 1997 MCL had a total income of $97, 596(USD)

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The Children's Eternal Rainforest

It all began the first week of school when Eha Kern, from the Fagervik School, in the Swedish countryside, showed her 1st and 2nd grade students pictures of hot, steamy jungles near the Equator She read to them about monkeys and leopards and sloths, about strange plants that might hold a cure for cancer and about the great trees that give us oxygen to breathe and help to keep the earth from becoming too hot

And then she told them that the world's rain forests were being destroyed at the rate of 100 acres per minute In the past 30 years she said, nearly half the world's rain forests have been cut down The children were horrified They begged Mrs Kern to help them think of something they could do to rescue the creatures of the tropics And then one afternoon during a music lesson, one student asked suddenly, "Can't we just *buy* some rain forest?"

Mrs Kern had no idea how to find a rain forest for sale But, soon afterwards, she was introduced to an American biologist, who had been working in a rain forest called *Monteverde*, or "Green Mountain" in English When Mrs Kern told the biologist of the mission that her students had given her, she expected the biologist to laugh Instead, she said "Oh, please buy mine"!

And so it started The students began to think about ways to raise money "Pony rides " "Dog washing " "How about a rain forest evening at school?" "Yes!!"

Two weeks later, more than a hundred people crowded into an old schoolhouse to learn about the rain forest Students collected 10 crowns (about $1 50) from each person Then they sold rain forest books and poems The evening's total came to about $240, or enough to buy 12 football fields worth of rain forest!

The more they used their imaginations, the more money they raised By midwinter, they'd raised $1 400, and sent it to the Monteverde Conservation League They received a letter in the mail two weeks later showing them the area that had been bought with their money

The next spring the students performed at the Swedish Children's Fair, which led to several national TV appearances Soon schools from all over Sweden were sending money to Monteverde And, inspired by the students the Swedish government gave a grant of $80,000 to Monteverde On Christmas day that year the school children proudly presented a check for $25,000 to the Monteverde Conservation League They said it was a holiday present for all the children of the world

The League used their gift, and funds that had been donated by other children, adults and organizations to establish what is known as *Bosque Eternal de los Ninos*, or Children's Eternal Rainforest, a 42 000-acre private reserve It is a living monument to the caring and power of young people everywhere

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THEME #3: ECOTOURISM AND THE ENVIRONMENT

Ecotourism can have significant positive impacts on the environment However, without proper planning management and monitoring, ecotourism can result in degradation of local environments In **Ecotourism Boom Planning for Development and Management**, Elizabeth Boo notes that "Growing populations and deteriorating economic conditions in many countries are causing more and more development activities mining, and intensive, agriculture in and around protected areas " Protected areas officials and development specialists realize that local communities must be involved in any efforts to protect natural resources Furthermore, national governments must see natural resources as a valuable economic resource providing a stream of income through tourism if maintained in their natural state, not simply as exportable commodities or raw materials to manufacture goods

Ecotourism can provide an alternative source of income for local residents that will either replace or lessen dependency on traditional uses of natural resources For parks and protected areas, ecotourism can generate income needed to achieve conservation goals

One of the main priorities of the study tour group was to understand what steps Costa Rica has taken to lessen the negative impacts of tourism on the environment This was of interest to the group because there are distinct "tourism centers" in Jamaica These areas are experiencing many adverse effects because of tourism These include impacts such as destruction of coral reefs, unplanned congestion, and marginalization of local residents

❖ *SINAC*

Each national park protected area and wildlife refuge is required to have and adhere to carrying capacity limitations Additionally, SINAC uses satellite mapping at 150 scale to monitor environmental changes in protected areas The maps are updated every few years to determine the impacts of tourism and other activities on an area as well as to measure and evaluate the effectiveness of conservation efforts This information is used to adjust carrying capacity as needed

❖ *The ICT and CANATUR*

The ICT and CANATUR are encouraging small-scale tourism development by supporting tourism activities throughout the country These efforts focus on community-based tourism and sound sustainable growth of the industry Objectives include lessening of localized negative environmental and social impacts and helping to ensure that the benefits of tourism reach the wider population

According to CANATUR statistics, visitors to Costa Rica travel in small groups usually, 3-4 people, and tend to be very mobile, spending an average of only two nights in each location they visit Therefore, communities and protected areas do not receive high volumes of visitors at

once It should be noted that the representative form SINAC reported that some parks close to San Jose receive very high volumes of visitors and are finding it hard to adhere to carrying capacity limitations

CARRYING CAPACITY

Carrying capacity is an important concept in protected areas management and ecotourism planning The central principle of carrying capacity is "how much use an area can tolerate before there are undesirable/unacceptable changes to the area" (Boo) Carrying capacity can be broken into two categories, **Biological Carrying Capacity** and **Social Carrying Capacity** Biological carrying capacity refers to affects on the natural resources such as deterioration of coral reefs or disturbing wildlife habitats Social Carrying Capacity refers to the overall experience of visitors and/or local communities Establishing carrying capacities is essential to maintaining a desirable level of tourism in a specific area and mitigating negative impacts on the environment

In Costa Rica protected areas, private reserves and research stations, conduct carrying capacity assessments and adhere very closely to them The group saw several methods of enforcing carrying capacity limitations At La Selva Biological Research Station, only two organized tours were given per day In Manuel Antonio National Park, a boat was used to transport visitors from the park entrance to the trail, thus limiting the number of visitors that were allowed to go on the trail at any one time Only 150 visitors were allowed in the park each day and this is strictly followed, even if it meant the members of large groups were separated Widely disseminated information about the times of tours and hours of operation helps to ensure that visitors do not become disgruntled if they miss a tour time or arrive too late to their destination

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THEME #4 **SCIENTIFIC RESEARCH, CONSERVATION AND ECOTOURISM**

Costa Rica's ecotourism product developed out of a long standing relationship between research and the environment In fact for many years before the development of a tourism industry in Costa Rica, the country was a popular destination for international scientists and researchers attracted to its high level of biological diversity, large number of endemic species, an active conservation movement, and economic and political stability, among other factors Because researchers needed services such as lodging, food, transportation, local assistants and guides, an entire support indusrty grew to provide these services Given the nature of their work, these researchers were often located in rural areas throughout the country, which developed in a trend toward small, basic, often family-owned facilities Consequently, Costa Rica became a popular destination among environmentalists and conservationists looking for "better" tourism alternatives

In Costa Rica, SINAC continues to conduct research in all protected areas throughout the country In addition to the research efforts of the government, there are also numerous local and international private research institutions This ongoing research has many benefits, not only to the scientific community but also to the tourism industry Most research facilities offer tours or seminars and some even have lodging facilities for visitors

The study tour participants believed that there was a direct correlation between research activities and the sophistication and quality of the nature tourism industry in Costa Rica

- ***The National Institute of Biodiversity (Instituto Nacional de Biodiversidad - INBio)***
  INBio is a private NGO working with the Ministry of Environment and Energy to catalog Costa Rica s estimated 500,000 species of plants, animals and microorganisms INBio makes its research and findings available to the schools, universities and the general public The staff at INBio visits local schools as part of the organization's biodiversity outreach and education program They also offer guide tours, lectures and courses in environmental interpretation and protected areas management to local and international groups

  INBio trains biodiversity officers who collect and monitor species in the field These biodiversity officers, or parataxonimists, are residents of local communities who undergo six months of training and a period of apprenticeship Many parataxonimists go on to become part-time or full-time tour guides

- ***The School of Agriculture in the Tropical Humid Regions (Escuela Agricultura de la Region Tropica Humeda - EARTH)***
  EARTH is a four-year college offering residents of Latin America and the Caribbean an opportunity to understand the importance of the humid tropics' to the global environment To capitalize on interest in the school and its mission, EARTH offers tours of the preserve to student groups and tourists for a fee While EARTH has no official educational program

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(i e classes or lectures) for visiting students or tourist groups, they offer half and full day tours of the campus and reserve The tour includes hiking in the college's nature reserve, a visit to the banana farms and other agricultural projects, the banana paper and recycl ng plant and the student operated botanical garden

- ***La Selva Biological Station***

  La Selva Biological Station is operated by the Organization of Tropical Studies (OTS), a consortium of international universities and research institutions Like all OTS stations, La Selva is a research center providing international researchers and students an opportunity to studv all aspects of rainforest ecology La Selva obtains revenue for its operations from many different avenues including the World Wide Web, direct solicitations, fees paid by researchers, and ecotourism La Selva operates natural history guided tours for tourists twice daily From time-to-time, La Selva offers half-day "microcourses" for individuals and groups Overnight accommodations are available for visitors and 'microcourse" participants The station has a cafeteria, a learning center and a library La Selva also offers a half-day birdwatching course Local residents are employed as field assistants and tour guides at La Selva

- ***SINAC***

  Eleven separate conservation areas have been created throughout the country These conservation areas consist of different types of protected areas including, national parks, forest reserves biological reserves, protection zones, and wildlife refuges SINAC is in the process of creating biological corridors by linking several large areas of ecological significance

  Each protected area has its own set of unique functions some, such as forest reserves, are set up strictly for conservation purposes Recreation and tourism activities are prohibited within forest reserves The national parks were created primarily for the conservation of natural resources However, all national parks have recreation areas and allow tourists and visitors to enter The principal activity in the biological reserves is research, although limited tourist and recreational activities are allowed in some biological reserves While the biological reserves focus on flora as well as fauna research, the wildlife refuges are responsible only for research and management of animals Wildlife refuges are the only type of protected areas that allows private land ownership within their boundaries Private land owners within wildlife refuges are provided with certain economic incentives if they leave 30% of their land undisturbed

THEME #5. COMMUNITY PARTICIPATION IN ECOTOURISM

Local communities are often dependent on the natural resources that attract visitors Excluding communities from the development process and prohibiting them from receiving some benefits to offset their loss of access to the natural resources may result in competition with the tourist industry for the use of natural resources Locally-owned and managed eco-enterprise allows communities to derive direct and indirect benefits from ecologically friendly activities

"Community-based ecotourism implies that a community is taking care of their natural resources in order to gain income through operating a tourism enterprise and using that income to better their lives It involves conservation, business enterprise and community development "[2]

Costa Rica's tourism industry is characterized by decentralized, small-scale developments Most local communities seem to be quite involved in the development and management of eco-enterprises The emphasis on "small scale" tourism in Costa Rica has made it much more feasible for communities and small enterprises to participate in the tourism industry The study tour group felt that the natural cooperation between small business operators in local communities was very important to the success of these eco-enterprises This is in sharp contrast to Jamaica, where large tourist developers manage attractions and hotels concentrated in a few areas

- ***Santa Elena Biological Reserve***

  Adjacent to the Monteverde Cloud Reserve is the Santa Elena Reserve, which is operated by the Santa Elena High School The government leases the land to the school for US$3,000 per year The reserve was originally intended to be a "living laboratory" for Santa Elena's students and the site for a certification program in applied ecology Within a short time of being established school and community officials realized that there was a great potential for generating income through ecotourism activities at the reserve Using the land to secure loans and with the help of community and international volunteer organizations, trails, a learning center and other facilities were built Entrance fees, commissions from tour operators, and sales from the gift shop are the reserve's main sources of revenue They are projecting revenue of US$80,000 for calendar year 1998 The reserve has a staff of six full time employees

  Mr John Perez, the director of the reserve told the group that because Santa Elena is the only community-operated reserve to operate under a land-lease model, it appears that the Ministry of Environment is very nervous that other communities will want to follow the Santa Elena Model The Ministry of Environment believes that if the government operated the reserve, it would be able to collect entrance and other user fees

[2] "Community Based Ecotourism Development Identifying Partners in the Process" by Keith W Sproule

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Unlike national parks and most protected areas, Santa Elena does not have a problem with poaching and other illegal activities Mr Perez believed that this was a result of a sense of ownership on the part of the community Community members see a direct relation between the success of the park and improvement in their children's educational opportunities

The group saw potential applications for this in Jamaica where NGOs will be in charge of managing protected areas

- ***La Catarata Ecological Lodge***

La Catarata Lodge is a good example of a local enterprise that is wholly owned by community members Seeing the economic potential in ecotourism, six families started the lodge in 1994 with 6 rooms, a restaurant, and a small organic farming operation Today they also operate a butterfly farm a medicinal herb garden, and they raise pacas, a large rodent native to Costa Rica, for sale commercially All of the produce used in the restaurant is grown in the organic garden They also produce lotions, shampoos and other products from plants grown in the medicinal herb garden These products are for sale at their gift shop While the facilities are very basic, the owners strive to provide excellent service to their clients and positive environmental and social benefits to the local community The Lodge has a bulletin board on which local eco-enterprise advertise their products and services La Catarata Lodge receives a fee for clients refferd to other eco-enterprise owners This type of informal referral system was seen in other areas in Costa Rica as well

The manager of the lodge, Dona Rosa Bonilla, believed that the success of the lodge and other eco-enterprises was largely dependent on the support of the community She conceded that it was not easy to gain the support of the local community She said that at the start-up there was a feeling among community members that tourism was "only for the rich" and that no one would be interested in the basic accommodations and services that La Catarata was planning to offer

The study tour group commented that although La Catarata was a small venture, the management seemed to have a keen understanding of their market niche and was constantly working to improve existing services and products and identify new ones The lodge is developing a website and they are featured in The Lonely Planet Guide, an alternative travel guidebook They have requested and received technical assistance from the ICT, SINAC and other government agencies not only to train their own staff but also to train community members as guides

- ***The Talamancan Association of Ecotourism and Conservation (ATEC)***

People are more interested in conserving if they are making money' – Mel Baker, Executive Director (ATEC)

Residents of Puerto Viejo, Manzanillo and surrounding areas who were concerned about the growth in tourism and the potential threats to the environment and the local way of life founded ATEC in 1990 The Talamanca area lies within the La Amistad-Caribbean

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Conservation Area and is adjacent to the Gandoca-Manzanillo Wildlife Refuge and Cahuita National Park ATEC has three primary goals

(1) Promote the development of ecological and socially responsible tourism in Talamanca,

(2) Promote ethnic and cultural expression among the indigenous Afro-Caribbean residents and,

(3) Promote the initiation and management of locally-owned business and tourist services

The study tour group met with Mr Mel Baker, ATEC's Executive Director, at ATEC's main office in the town of Puerto Viejo Mr Baker characterized ATEC as a bridge between tourist and locals ATEC offers a communication center to put visitors in contact with experienced native naturalists and guides who offer a variety of interesting educational field experiences The guides pay a 10% commission to ATEC for each client ATEC refers to them Maps, guidebooks gifts, stamps and other items are on sale at ATEC's office Internet and fax services are also provided for a small fee ATEC also offers packaged and individualized tours of the surrounding areas

Through community outreach and training in cooperation with the conservation area, ATEC is trying to find ways to provide income opportunities to local residents Mr Baker believes that "people are more interested in conserving if they are making money "

The study tour group was amazed that ATEC was actually able to operate without financial assistance from the government or other donors The organization is able to meet its operating costs and support its community outreach programs with profit gained from sale of goods and services Many participants thought that Jamaican NGOs should operate in a more businesslike manner, along the lines of ATEC, in order to be self-sufficient and more effective

- ***National Consortium of Ecotourism Cooperatives (COOPERENA)***

COOPERENA is a national consortium of eight agricultural cooperatives that are engaging in ecotourism activities The cooperatives are made up of low income farming families who have managed to combine their strengths and search for alternatives that improve their way of life The groups aim to use their lands productively, conserve their natural resources, generate employment and derive some socioeconomic benefits COOPERENA was created to help generate new ways of rationally using the resources of the cooperatives to define and organize tourism products, and to train cooperative members in different areas related to tourism services

COOPERENA encourages multiple use of forestry and farmland thus enabling tourism to not only complement ongoing activities but also to act as a catalyst, bringing opportunities for development to each of the cooperatives Women and children participate in managing and operating the projects and have been instrumental in the development of the cooperatives' ecotourism services

It is the aim of COOPERENA to unite small eco-tourist projects run by communal groups, associations and micro-businesses, into a national and regional-level ecotourism network offering an unusual tourism option to facilitate and channel the diverse community level projects related to tourism and assist with the organization, capacity building, marketing and commercialization of tourism products COOPERENA offers training for community members to be tour guides It also offers courses in business administration and hospitality

It should be noted here that cooperatives in Costa Rica are very well established and can be found in many sectors through out the country The agricultural coops started about 30 years ago when the government purchased land from private landowners and redistributed the land to untenured people for token amounts Although cooperatives are not widespread in Jamaica, some participants noted that an important lesson to be learned from the COOPERENA model was the need for community cooperation and mutual support among eco-enterprises

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THEME # 6 – MARKETING ECOTOURISM

Nature tourism is a rapidly growing sector of the global tourism market It is estimated that as much as 60% of all travelers participate in some type of nature based activities According to the Ecotourism Society, the average nature tourist is between the ages of 34 and 54 well educated and come from the USA, Canada, the UK or Northern Europe

Ecotourism researcher, Craig Lindberg has identified four categories of ecotourists the hardcore ecotourist, the dedicated ecotourists, the mainstream ecotourist and the casual ecotourist, which are characterized as follows

- **The hardcore ecotourist** will tend to travel for scientific or research purposes or as a member of a tour specifically designed for educational or training
- **The dedicated ecotourists** will take trips specifically to see protected areas or to understand local natural or cultural history
- **Mainstream ecotourists** seek out unusual or exotic destinations because these destinations are socially trendy or popular
- **Casual ecotourists** will usually participate in nature-based activities incidentally as part of a broader trip

Although research has indicated that a major portion of the total tourism market is potentially interested in nature travel and many travelers participate in several different types of activities during their lifetime or even during one trip it is important to identify and understand the motivations of specific market groups in order to develop packages and sell the best ecotourism products and services Market segmentation allows tourism planners protected areas managers tour operators and travel agents to target individuals and groups that would be "naturally" attracted to their products

Costa Rica's marketing and promotional programs appear to be very well developed and targeted to specific groups including students, researchers, environmentalists, ecotourists and adventure travelers Many small eco-enterprises and accommodations such as COOPERANA and SERTICO have come together to market as groups These companies use the Internet for the bulk of their advertising Almost all of the groups we met advertise on the World Wide Web either through their own website or through other sites

❖ ***National Consortium of Ecotourism Cooperatives (COOPERENA)***

COOPERENA was originally created as a marketing vehicle for a group of agricultural cooperatives that were also operating ecotourism ventures The organization has clearly worked to define its target market In fact they continuously collect demographic data on visitors to their facilities Eighty percent of COOPERENA'S tourists come from the USA The majority of them are young adults from the United States COOPERANA has established partnerships with a number of tour companies that market on college campuses throughout the United States

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They also offer special programs for students who want to live with a local family and learn Spanish

❖ ***Tourist Services of Costa Rica (Servicios Turisticos de Costa Rica - SERTICO)***

In La Fortuna, participants met Mr Jorge Eduardo Soloranzo Vargas, a member of the Costa Rican Chamber of Tourism Microenterprises (CANAMET) SERTICO was created as a clearinghouse for reservations and promotion for CANAMET SERTICO allows tourists to make lodging reservations at many small family and community owned establishments in Costa Rica via the Internet telephone or fax Additionally, tourists can arrange ground transportation and activities such as hiking, horseback riding, cycling, kayaking, surfing and other activities through SERTICO

SERTICO has targeted its marketing efforts to focus on tourists who are looking for a unique, authentic travel experience SERTICO's promotional materials clearly state that although the organization does not offer *luxury facilities* , cleanliness and good service more than make-up for the simplicity of infrastructures" Participants thought that this type of target-marketing resulted in higher customer satisfaction, because customers knew exactly what to expect before they arrived

❖ ***Informal Community Referrals***

Throughout the study tour, participants observed that there seemed to be an informal system of referrals within communities In fact, a tour guide in Puerto Viejo said that all of his clients were referred to him through ATEC or other community members Essentially, his marketing efforts were done on the ground Many lodges and community organizations such as ATEC had arrangements with local tour guides and tour operators in which the tour guide or tour operator agreed to pay the lodge or organization a commission for each client they referred This practice was encountered throughout the study tour

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The Global Sustainable Tourism Market

During the study tour orientation session, a presentation was made on the tourism market to give participants an opportunity to become familiar with the characteristics of the major global nature tourism market segments The presentation was designed to show participants the importance of market segmentation and designing targeted marketing strategies Mass marketing can result in vacation packages, fares and fees that are not attractive to potential travelers It is particularly important that nature based tourism follow a process of market segmentation and target marketing which will result in well designed products, promotions and higher customer satisfaction

ECOTOURIST MARKET PROFILE

Based on data collected from a survey North American travel consumers, The Ecotourism Ecotourism Society has constructed the following ecotourist market profile

- **Age** 35 - 54 years old, although age varied with activity and other factors such as cost
- **Gender** 50% female and 50% male although clear differences by activity were found
- **Education** 82% were college graduates a shift in interest in ecotourism from those who have high levels of education to those with less education was also found indicating an expansion into mainstream markets
- **Household composition** no major differences were found between general tourists and experienced ecotourists **
- **Party composition** majority (60%) of experienced ecotourism respondents stated they prefer to travel as a couple with only 15% stating they preferred to travel with their families, and 13% preferring to travel alone
- **Trip duration** the largest group of experienced ecotourists (50%) preferred trips lasting 8-14 days
- **Expenditure** experienced ecotourists were willing to spend more than general tourists the largest group (26%) stating they were prepared to spend $1,001- $1,500 per trip
- **Important elements of trip** Experienced ecotourists top three responses were (1) wilderness setting (2) wildlife viewing (3) hiking/trekking
- **Motivations for taking next trip** Experienced ecotourists top two responses were (1) enjoy scenery/nature (2) new experiences/places

** Experienced ecotourists = *Tourists that had been on at least one "ecotourism" oriented trip Ecotourism was defined in this study as nature/adventure/culture oriented travel*

Source The Ecotourism Society
www ecotour com

THEME # 7 TRAINING QUALIFIED PARK PERSONNEL AND TOUR GUIDES

Having well trained and technically qualified protected areas personnel and tour guides is important because ecotourists tend to be well educated and usually have some basic knowledge of the area they are visiting This is becoming increasingly common with the growth of the World Wide Web and increased use of the Internet Tour guides therefore must be able to not only share information that is not widely available, they must also be able to accurately and competently answer questions from visitors

The study tour group saw two major benefits of having a well-developed guiding industry in Jamaica The first one was to provide economic opportunities to community members The second was to encourage study of natural sciences, history and related subjects among college and university students

❖ *SINAC*

SINAC requires that Park Rangers have at least a two-year degree from a nationally accreditedprogram Additionally park rangers must undergo the National Park Service s (NPS) own training program and attend continuing education courses designed by the NPS and the ICT If personnel in a particular park or protected area identify a need for training, ICT and NPS will work with them to design a course or series of courses to address their training needs For example, park rangers are required to take poachers and other offenders into custody, the rangers at Cahuita National Park received training in detention methods from the National Police through the ICT

❖ *National Educational System*

The group was impressed with the highly qualified tour guides and protected areas personnel they met throughout the tour including our own guide Costa Rica s reputation and history as a research destination for many scientists from Europe and North America has resulted in the avalaibility of a vast quantity of research data to the local population Park and protected areas personnel and professional tour guides are highly trained and have access to ongoing training and research Natural history and ecology are taught in the public schools and many of the national universities and technical colleges offer degree programs in natural history and certification programs for tour guides

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LESSONS LEARNED AND RECOMMENDATIONS FOR JAMAICA

The following are key lessons learned as identified by the participants on their study tour evaluation forms

Effective national ecotourism policies and regulations

1 The group felt that the combination of a strong commitment to conservation and the adoption of sustainable tourism practices by the central government have been critical to the success of Costa Rica's ecotourism industry Close cooperation between the government and private sector ensures that tourism development takes place in a manageable fashion Some participants felt that tourism development must take into consideration the social and environmental carrying capacity of the country and that the tourism sector in Jamaica must work closely with the Natural Resources Conservation Authority (NRCA), NGOs and other agencies responsible for natural resources management as well as those agencies responsible for urban and rural planning and development

2 Costa Rica's national tourism policy is based on three main principles economic sustainability respect for the environment, and respect for local cultures and communities The Costa Rican government through the ICT tries to encourage tourism development that is sustainable and environmentally and socially responsible The Jamaican Office of the Prime Minister (Tourism) is currently in the process of developing a new Master Plan for Sustainable Tourism The Master Plan aims to incorporate guidelines for sustainability into national tourism policies Participants felt that in order for Jamaica to develop a sustainable and successful ecotourism industry, the national government must adapt guidelines and policies that will allow ecotourism and eco-enterprises to be viable at the community level Additionally participants felt that there needed to be greater cooperation and sharing of information between government agencies and educational institutions

3 Through out the study tour it was apparent to the group that many different government agencies were cooperating to ensure the success of the tourism industry The National Police helped park rangers to enforce laws in and around the national parks, SINAC worked closely with INBio and other research organizations to catalogue the country's biodiversity, and the Ministry of Environment and Energy had an initiative to train the judiciary on environmental matters to encourage judges to punish environmental crimes The group felt that many more Jamaican government entities such as the judiciary, the national police force, and the education ministry needed to be involved in tourism development and management, in addition to traditional agencies such as Ministry of Tourism and its agencies and the NRCA Additionally, participants suggested that donor agencies and national foundations should move away from the traditional grantmaking role toward a soft loan system that encourages entrepreneur and self-sufficiency among CBOs and NGOs

Ecotourism in Protected Areas

1 In Costa Rica conservation and ecotourism are linked in an almost symbiotic relationship where the protected area is the attraction and tourism provides the funding to manage and operate the protected area Proceeds from entrance and other user fees from national parks provide a steady source of income for SINAC to operate forests reserves and other types of protected areas in which tourism is prohibited SINAC also allows communities to benefit, both directly and indirectly, through permitting and concessions arrangements as well as from tourism activities in and around protected areas

The group felt that they had a better understanding of how protected areas could be used as a tool for research conservation, and income generation Costa Rica provided a "working model ' on the study tour

2 Carrying capacity restrictions are followed strictly by both public and privately owned protected areas in Costa Rica Even in cases such as La Selva and the Monteverde Reserve where the trails were paved, the carrying capacity restrictions were accepted and respected because protecting the environment is necessary if the facility was to survive and continue to make money One park ranger at Cahuita National Park said " we could disregard the carrying capacity limitations, but in five years no one would want to visit us " The group felt that Jamaicans needed to have a better understanding of the impacts of overuse and high volume visitation on the environment Some participants felt that effective management of Jamaica's protected areas could be achieved only through research and outreach to communities developers and even government

3 Local communities play an important role in managing the natural resources and the tourism industry in Costa Rica Participants agreed that encouraging an entrepreneurial spirit on the part of local communities would be essential for conservation of natural resources and the development of a sustainable system of protected areas in Jamaica

Scientific Research and Ecotourism

1 Costa Rica s protected areas system is actively engaged in scientific research and monitoring and information is shared among government and private research institutions SINAC uses findings from its own research and research from other sources to evaluate and upgrade its protected areas management plans The group felt that although research had been done and information collected regarding Jamaica's natural resources and biodiversity, a national system for disseminating this information has not been established Therefore, schools, private sector and the general population are not able to benefit from this research

2 The educational system in Costa Rica has access to all the research conducted throughout the country This has resulted in strong environmental programs at all levels from elementary to the college level The study tour group felt that this resulted in a population that was highly aware of the environment and the importance of conservation Some participants felt that such a high level of environmental awareness could only be attained over the long term In the interim, the group felt that directly linking conservation to economic development through ecotourism and other eco-enterprises was the method to adopt in Jamaica

Community Participation in Ecotourism

1 The group was very impressed by the effectively managed eco-enterprises they observed in Costa Rica They noted that all of the organizations they visited used ecotourism as only one means of generating income At La Catarata, each of the families that owned the eco-lodge continued their traditional farming practices The same was true with the agricultural cooperatives that came together to form COOPERENA At La Catarata, there were several different types of activities and only a few of them were purely for ecotourism including lodging a restaurant, and a hiking trail The group felt that the Jamaican government should expect ecotourism or eco-enterprise development to be seen as a panacea for Jamaica's many social and economic problems

2 ATEC, a Costa Rican NGO, received much of their income from services they provide to tourists and tour operators The group felt that if Jamaican NGOs operated in a more business like manner they could become more self-sufficient and less dependent on donor support

3 Throughout the study tour, the group observed that in many communities micro-enterprises had developed an informal referral system It seemed that community members realized that the success of their business depended on the success of other small businesses in the community

Marketing the Eco-Tourism Product

1 There seemed to be a high level of cooperation between tourism enterprises on all levels from the large attractions, represented by CANATUR, and small attractions represented by CANAMET to informal community referral systems such as the services provided by ATEC in Puerto Viejo ICT and CANATUR handle international advertising through mass media in the United States, Canada, and Europe as well as on the Internet Due to limited resources COOPERENA and SERTICO marketed primarily on the Internet and domestically Attractions operators, hotel owners and lodge owners seemed to have a good understanding of their market group and have targeted their services and fees to meet the needs and preferences of these groups

2 The group felt that there was a need to include this type of market focus in Jamaica in addition to traditional marketing methods Unlike the sun, sand, sea focus of Jamaica's tourism market the nature tourism market is a lot less homogeneous Market studies have shown that nature tourists are more willing to pay a premium to see natural attractions than to pay for luxury accommodations Therefore, Jamaica's emerging nature tourism industry should not seek to copy existing marketing strategies, but rather create their own more targeted strategy The group generally agreed that the Jamaica Tourist Board (JTB), the agency in charge of promoting Jamaica's tourism industry would be a good vehicle for marketing the emerging ecotourism industry JTB has the infrastructure and systems in place to reach markets worldwide JTB would also be able to assist with market research and the Tourism Product Development Company (TPDCo) would be able to assist with product development

Training qualified Park Personnel and Tour Guides

1 Well-trained and technically qualified park personnel and tour guides are critical to the ecotourism industry They are the interpreters of the local environment and culture Ecotourists will usually arrive at their destination with some previous knowledge about the natural or cultural history of the place, park personnel and tour guides must be able to impart more that cursory or superficial information to tourists They must be able to answer any questions posed to them with ease and accuracy

2 The group saw two major benefits to a well-developed guiding industry in Jamaica The first one was to provide economic opportunities to community members The secondwas to encourage study of natural sciences, history and related subjects among college and university students The group thought that many students chose a to undertake their education in "practical" field such as business, because there are limited opportunities to pursue careers in natural and social science

Conclusion

The group agreed that the study tour had met or surpassed all of the objectives of the study tour Most participants also felt that their personal and/or organizational goals were met and that the information gained on the study tour was directly relevant to their professional responsibilities The group found the daily discussion sessions helpful not only for filtering and for processing what they were learning on the study tour but also they were able to learn from each other

The organizations and sites chosen provided the group with a balanced view of Costa Rica's tourism industry and a good understanding of the policies and regulations governing the industry's development and growth Many participants felt that the visits to protected areas and private reserves illustrated the importance of effective management and monitoring policies, and the need for protected areas to be financially self-sufficient In addition to income from tourists and recreational activities in the protected areas, SINAC, the national protected areas management authority, also collects fees from other activities such as hydroelectricity and bioprospecting

Participants learned that good, on-going research is critical to the success of a protected areas system and a strong ecotourism industry Some participants pointed out that research must be ongoing and it must be shared between research institutions, universities and the private sector They observed that in Costa Rica this free-flow of information resulted in highly specialized guides and tour packages

The group was particularly impressed at the high level of community involvement in conservation and tourism Many participants were encouraged to see that local residents and community groups were actually making money from eco-enterprises while working to conserve the natural resources around them

For many participants, the most significant outcome from the study tour was getting a real-world view of ideas and policies that they were encouraging in their individual professional capacities Several participants stated that they felt encouraged to continue in earnest the work that they had been doing While none of the participants saw ecotourism or eco-enterprises as a panacea for fixing Jamaica s social and economic problems, they did agree that it could be a good tool for sustainable economic development and natural resources management

Many participants felt that one important and unexpected benefit of the study tour was having an opportunity to meet others who are working toward the same goals as themselves Many participants were encouraged by the successes of other organizations and felt sure that they had new allies to overcome any challenges they face

At a debriefing session held at USAID/Kingston shortly after the study tour, the Study Tour Coordinator the DEMO Project Manager and a participant had an opportunity to share lessons learned from the Study Tour with the Mission Director, the "ONRAD' Director and several other members of the USAID/Kingston staff The group, lead by the DEMO Project Officer, who participated in the study tour, emphasized the need for the mission to support programs that encourage ecotourism enterprise initiatives at the community level The group also shared with

DEVELOPMENT OF ENVIRONMENTAL
MANAGEMENT ORGANIZATIONS (DEMO) PROJECT
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LESSONS LEARNED THROUGH A STUDY TOUR OF PARKS AND PROTECTED AREAS IN FLORIDA AND BELIZE

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INTRODUCTION

The Government of Jamaica places high priority on the establishment of a national system of parks and protected areas In support of this effort, USAID, through the Development of Environmental Management Organizations (DEMO) Project, sponsored a study tour of Parks and Protected Areas (PPAs) in Florida and Belize The primary objective of this study tour was to expose Jamaican government and non-government environmental management and planning organization personnel to projects and programs in other countries that display successful examples of

- revenue generation/financial sustainability,
- establishment of protected areas,
- PPA management (including co-management) practices,
- enforcement practices,
- conservation partnerships,
- public outreach/public consultation (participatory planning),
- alternative income-generating activities for local communities,
- nature tourism,
- interpretation/environmental education

PPAs in Florida and Belize were selected based on the degree to which their programs displayed a commitment to the above-mentioned topics The Florida Keys area was chosen because several PPAs and related programs would provide exposure to PPA and general environmental management strategies in a developed country context. The area also has ecological characteristics similar to Jamaica's Sites in Belize were selected because Belize shares many ecological and socio-cultural characteristics with Jamaica and provides excellent examples of PPA establishment and management in a developing country context.

Sixteen environmental managers from governmental, non-governmental, and community organizations participated in the tour, which took place from March 16 – 27, 1997

This report contains three main sections The first, "Site Summaries", provides brief summaries of the specific sites visited The second, "Thematic Site Analysis", draws on group discussions held during the trip This section provides an in-depth analysis of points that the group felt were of particular interest. The third section, "Lessons Learned and Recommendations" also draws on group discussions, but focuses on points that the group felt had specific and critical relevance to Jamaica. This section examines examples of projects and programs that the group felt should be implemented in Jamaica. The Annex, "Summary of Evaluations", is a compilation of evaluation forms completed by participants on their return

SITE SUMMARIES

SITE SUMMARIES

The following are short descriptions of the sites visited during the study tour

FLORIDA

John Pennekamp Coral Reef State Park

The first park in the U S to encompass both terrestrial and marine resources, it is heavily used by both national and international visitors Established in the 1950s in response to degradation due to widespread coral collecting, the park originally covered only the reef areas off Key Largo During the 1960s, as land-based development increased, scientists began to note that impacts on the land, particularly the cutting and filling of mangrove wetland, were negatively impacting the health of the reef system In response, the State extended the park boundaries to the foreshore During the 1970s and 80s, however, development of Key Largo increased substantially, and the environment of the area surrounding the park was substantially degraded To deal with the increasing pressure on the area's natural resources, in the late 1980s the State began to develop what they call a "whole ecosystem" management approach The park, which in the past had been looked at as an island-like unit, began to be considered as an area that was key to maintaining both the ecological and economic integrity of Key Largo

By this time park visitation had increased dramatically, and state and local government began to recognize that the health of the resources that were attracting those visitors was critical to the long-term economic well-being of the greater Key Largo area To protect and secure this resource, the state developed more stringent guidelines for prospective developers, a comprehensive enforcement program, and a land acquisition program The park's economic importance has been a key factor in raising local awareness of the necessity of conservation

John Pennekamp Coral Reef State Park places heavy emphasis on revenue generation The most lucrative park in the Florida state system, it makes several million dollars a year Most income is derived from entrance fees (average of US$5 per/vehicle), campsite rental (US$25/night) and a percentage of the John Pennekamp Concessionaire's revenue The concessionaire, which runs all snorkeling, diving, canoe/kayaking, and gift shop activities, has an agreement with the park by which it pays the park, on a monthly basis, 12 5% of gross revenues or $25,000, whichever is greater That John Pennekamp Coral Reef State Park's ability to generate revenue far exceeds its budget is important because the excess revenue is used to subsidize other, less lucrative parks in the state system

The group met with Roger Wilhelm, Park Superintendent.

Florida Keys National Marine Sanctuary (FKNMS)

Encompassing 2800 square nautical miles of marine ecosystems surrounding the Keys, it is the second largest marine sanctuary in the U S The Florida Keys National Marine Sanctuary and Protection Act, signed by the President in 1990, established the sanctuary in response to rapidly deteriorating ecological conditions due to poor water quality and increased human activity in the area. The Act called for the National Oceanic and Atmospheric Administration (NOAA) to prepare a comprehensive management plan for the sanctuary in consultation with the public and with federal, state, and local government authorities In order to facilitate the process, an Advisory Council that is representative of all public and private stakeholder interests was formed to assist in the drafting of the management plan

Over the past six years, planners, marine resources management experts and the public have been involved in the drafting of a comprehensive management plan that addresses critical issues through ten separate action plans Channel/Reef Marking, Education/Outreach, Enforcement, Mooring Buoys, Regulatory, Research and Monitoring, Submerged Cultural Resources, Water Quality, Volunteer, and Zoning Since the Sanctuary is a national protected area, the federal government retains management responsibility for the area Management, education, and enforcement are accomplished through a cooperative agreement with the State of Florida Department of Environmental Protection and partnerships with local, regional, and national NGOs

The sanctuary provides an excellent example of what can be accomplished when government agencies, non-governmental conservation organizations, and private sector groups work together Over 15 agencies and organizations have been major players in the establishment and implementation of the protected area These partnerships have enabled the sanctuary to cultivate broad-based local, regional, and national support for the protected area.

The group met with Mary Enstrom, Director of Marine Conservation, Dave Holtz of the Center for Marine Conservation, and Alysson Simmons and Kelly Jones of the State of Florida Department of Environmental Protection

The Florida Marine Research Institute

The South Florida Department of Environmental Protection's Marine Research Institute is involved in the study and conservation of commercially important marine species such as conch, lobster, and finfish The Institute monitors populations and conducts species rehabilitation programs Using groups of volunteers, the Institute has increased its ability to monitor populations, work with commercial fishermen, and conduct public awareness campaigns

The group met with Bob Glazer and Tom Mathews, Biologists

Crane Point Hammock

Crane Point Hammock is a small protected area managed by the Florida Audubon Society primarily for educational purposes Consisting of a museum and interpretation center, a series of hiking trails, and a small shop, it is visited by tourists and locals alike It also hosts a large number of school field trips

The group met with Captain Ed Davidson, Chairman of the Florida Audubon Society

Biscayne National Park

Biscayne is a 180,000 acre national park that consists of mangrove wetlands, shallow bay habitat, 42 small islands, and the northernmost living coral reefs in the hemisphere The park's budget is maintained through federal government allocations and, at present, it charges no user fees Federal funds, however, are dwindling Recognizing that the park must become more sustainable, Biscayne personnel are developing programs such as charging mooring fees at two of the more popular island destinations within park boundaries It is hoped that these steps will help create sustainability over the long-term. Biscayne National Park is a good example of a federal protected area that is changing in the face budget cuts

The group met with Richard Curry, Chief Science Officer and Rob Shanks, Chief Interpreter

BELIZE

The Forestry Department

A department under the Belize Ministry of Natural Resources, the Forestry Department is responsible for ensuring the conservation and wise use of Belize's natural resources The department controls and manages the utilization of timber throughout the country In 1992, the Department established a Conservation Division to oversee all parks and protected areas (PPAs) that fall under the Forestry Department's jurisdiction The Conservation Division is presently responsible for the sound management of nearly all of Belize's terrestrial parks and protected areas The division delegates PPA management authority to NGOs when it sees fit, and has done so in several cases, but is ultimately responsible for any and all successes or failures

The Forestry Department's primary mandate at present is to establish new protected areas This is due to the Government of Belize's (GOB) commitment to protect over 1/3 of Belize's terrestrial surface in formal parks and other protected areas To date, over 35 PPAs have been formally established, and the Forestry Department is working to quickly provide legal protected status to the remaining areas that are slated for protection This focus on protected area establishment reflects the GOB's standing that the country's natural resources are a key cornerstone of its long-term economic development plan

The group met with Richard Belisle, Chief Forestry Officer, and Rafael Manzanero, Head of the Conservation Division

Protected Areas Conservation Trust (PACT)

PACT is a national trust fund that was established as a "trust for the protection, conservation and enhancement of the natural and cultural resources of Belize for the benefit of all Belizeans and visitors" The Trust generates revenue through an exit tax of US$3 75 which is levied on all visitors to the country It receives additional funding through a mechanism that distributes 20% of all protected area entrance fees to the fund In addition, through the affiliated PACT Foundation, the Trust is able to receive grant funding from donor organizations It is Belize's hope that the PACT will be able to support its national protected areas system The Trust, however, is still in its initial stages of development. PACT, in order to gain further support, distributes pamphlets to every person leaving the country so they understand that a portion of the exit tax that they pay will contribute to the conservation of Belize's natural resources

The PACT is seen by many as a symbol of Belize's commitment to protecting its natural heritage Dedicating a portion of a national exit tax to conservation of natural resources is a highly unusual step that demonstrates a deep national dedication to developing a viable system of protected areas

The Coastal Zone Management Programme (Fisheries Department)

This project, funded by the UNDP's Global Environment Fund (GEF), serves within the structure of the Fisheries Department to assist in the coordination of conservation and development activities in Belize's coastal areas, arguably the richest and most diverse in the hemisphere The Programme's objective is to ensure the sustainable management of Belize's coastal resources by supporting the institutionalization of integrated coastal zone management practices

The Fisheries Department, with support from the Coastal Zone Management Programme, is presently working to strengthen and expand Belize's system of marine protected areas through a variety of means Much like the Forestry Department, the Fisheries Department is charged with establishing the far-reaching marine component of the national system of protected areas To this end, the department has established comprehensive research, education, training, and participatory planning programs that support the establishment and sustainable management of marine protected areas

The group met with Janet Gibson, Program Coordinator

Programme for Belize (PFB)

PFB, a nongovernmental organization that manages the 300,000 acre *Rio Bravo Conservation and Management Area (RBCMA)*, raised the major part of the funding necessary to purchase the land and is responsible for all expenses associated with its management. The NGO has instituted many programs whose objective is to generate revenue for park maintenance and development as well as for the economic well-being of neighboring communities while ensuring the integrity of local ecosystems Specific programs include sustainable production of hardwood lumber and the sustainable harvest of chicle and other forest products In addition, PFB hosts groups of scientists, archaeologists, and tourists in order to both increase knowledge of the area and raise funds for operating and maintenance costs PFB is constantly exploring new to raise revenues

Since PFB purchased the land that comprises the protected area with private funds, it is not formally part of the national system of protected areas However, PFB has an agreement with the Government of Belize that the land is being held in trust for the people of Belize If PFB ever fails to manage Rio Bravo properly, the Government of Belize can appoint another organization as steward

Crooked Tree Wildlife Sanctuary

Crooked Tree Wildlife Sanctuary is a terrestrial protected area that encompasses a large lake with an extensive island It is managed by the Belize Audubon Society (BAS) However, BAS has allowed the local community (the town of Crooked Tree is situated on the Island) to play a primary role in the management process Crooked Tree is known as one of the premier bird watching sites in Central America. Its wetlands and dry tropical forests are host to hundreds of bird species, both migratory and year-round, including the Jaibiru Stork Other wildlife found in the area includes paca, howler monkeys, crocodiles and jaguars and other cat species

Crooked Tree is unique among the protected areas that we visited because it was truly run by the community The Sanctuary was established in 1984 In 1985, a ranger/visitor station was built. Facilities are limited to the ranger station, but the local community provides lodging and guided tours which generate substantial income for residents

The group met with Donald Tillet, Sanctuary Manager, and several members of the Village Council

Hol Chan Marine Reserve

Hol Chan was Belize's first marine park. It was established in 1987 as a community-based initiative arising out of concern over unregulated exploitation of this area's fisheries resources and uncontrolled visitation of its coral reefs The park is remarkable in that it has been divided into

several special use zones that denote specific types of protection Local fishermen, crafts vendors, and hotel/restaurant operators benefit substantially from the protected area by providing tours and services to visitors

University College of Belize (UCB), Marine Research Center (MRC)

UCB has been working to establish a Marine Studies Programme and an associated research station since 1989 In 1990, through a grant from USAID and in partnership with the University of Montana, it started a natural resource management program In 1994, UCB signed a Memorandum of Understanding with the Government of Belize and Coral Cay Conservation (a UK-based, non-profit marine conservation organization) to establish a Marine Research Center on the Turneffe Islands atoll This Center, which was opened in 1995, is called the Calabash Cay Field Station and is the only marine research center owned and operated by Belize

The MRC's field station provides facilities for scientific monitoring, research and environmental awareness programs with an immediate focus on shallow-water tropical marine ecosystems The MRC's main objectives include 1) the establishment of a financially self-sustaining field facility which will compliment UCB's programs, 2) the development of UCB's technical capacity to independently provide training, research and education on coastal issues to students, teachers, Government of Belize and NGO staff, 3) the provision of training in coastal/marine science-oriented field work in Belize and improvement in environmental awareness amongst Belizeans and visitors, 4) support of the Coastal Zone Management Programme's (UNDP/GEF-funded project) activities to ensure the conservation and sustainable integrated management of the biodiversity and natural resources of the entire Turneffe Islands atoll including the designation and implementation of a protected areas strategy, 5) the establishment of collaborative links (including educational and data exchange agreements) with regional and international research and educational agencies

THEMATIC SITE ANALYSIS

THEMATIC SITE ANALYSIS

Over the course of the tour, the group held periodic discussions to examine what had been seen and learned During these discussions, the group singled out the aspects of each site that it felt were most significant and examined them in-depth This section, which is organized by subject area, summarizes the group's observations regarding examples of successful programs relevant to Jamaica

REVENUE GENERATION/FINANCIAL SUSTAINABILITY

Revenue generation is a major focus for many of the protected areas visited on the tour In the face of increasingly difficult economic times, many of the PPAs visited have developed creative means of raising the funds necessary for sound operations and maintenance and development

In Florida, John Pennekamp Coral Reef State Park displayed the most developed revenue generation strategy encountered by the group In this park, the state of Florida has seemingly exploited every possible avenue for generating funds The park's revenues far exceed its budget, which enables the state to use the excess funds to subsidize other, less lucrative protected areas

In Belize the group noted that the Government of Belize is highly committed to establishing a viable national system of protected areas To that end, it has provided the agencies charged with managing protected areas and their NGO partners with the authority to charge entrance fees to protected areas and to market goods and services such as t-shirts, posters, and ecotours The agencies and organizations are empowered to retain the majority of these funds for management purposes and are encouraged to exploit any and all revenue-generation strategies as long as they do not compromise the ecological integrity of the protected areas In addition, the GOB has recently established the PACT, a protected areas trust fund whose major source of funding is derived from a portion of the national airport exit tax

John Pennekamp Coral Reef State Park

John Pennekamp is managed as an efficient business Profit margins are high and revenue generation goals are set and achieved. This management strategy, which exploits every possible revenue generation angle, has developed over a number of years due to the need to operate in an increasingly difficult economic climate The state of Florida, faced with issues such as crime and poverty, has been forced to decrease support to PPAs In response, the state park system has developed management strategies that help the system to support itself to the greatest extent possible

Under this regimen, certain parks, such as John Pennekamp, which are heavily visited, have been developed into "cash cows", whose capacity to earn revenue has been exploited to the fullest extent These "cash cow" parks are critical to the park system because the revenue earned in excess of their budgets supports other, less lucrative parks This strategy has drawn criticism from many sectors, primarily because there is a perception that John Pennekamp and similar "cash cow" parks are not being managed to conserve resources, but rather to make money It seems, though our host did not admit it, that the state of Florida has made a conscious decision to allow and even promote this in order to support the park system.

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This strategy of compromise or sacrifice seems to be effective, because it allows Florida to maintain an extensive system that includes many PPAs that are managed strictly for conservation purposes and do not generate revenue However, if the "cash cow" parks deteriorate from overuse to the point that they no longer attract a high volume of visitors, the system will not be sustainable over the long-term

The remarkable thing about the revenue generation methods employed at John Pennekamp is their comprehensiveness Every possible angle has seemingly been exploited. *Entrance fees, gift shops, snack bars, snorkeling/diving training and tours, and canoe/kayak rentals* generate huge sums of money for the park system Even the visitor center, though it is free (covered by entrance fee), has a donation box by the door that collects several thousand dollars a year which is used to upgrade office computer equipment

The most lucrative arrangement for the park is a concession that it leases to a private company that runs all activities in the park (snorkel/dive training and tours, canoe/kayak rental, glass-bottom boat tours) Under this arrangement, the concessionaire must pay the park, on a monthly basis, 12 5% of its gross receipts or $25,000, whichever is greater

John Pennekamp's creative, business-like approach to park management has paid dividends Its instrumental, "cash cow", role in supporting the whole park system is a concept that is being replicated in other states The issue of management for long-term *environmental* sustainability of John Pennekamp, however, does not seem to have been addressed sufficiently

The Government of Belize and the Forestry and Fisheries Departments

These departments, which are responsible for the management of all terrestrial and marine PPAs in Belize, recently began to collect (and allow their NGO agents to collect) **entrance fees** in its PPAs This step was taken because the Government of Belize (GOB) recognized that although it was committed to establishing and managing protected areas to conserve biodiversity and attract tourists, it could not subsidize their establishment and management. Allowing entrance fees to be charged was a logical step in helping PPAs to become self-sufficient. Other key steps taken by the GOB to promote PPA sustainability include allowing and encouraging its NGO agents to produce and market merchandise (T-shirts, posters, jewelry) and develop tourism programs that generate revenue in support their efforts, and the establishment of the PACT

The GOB's support for PPA self-sufficiency is critical By giving the agencies and organizations that manage PPAs the tools they need to strive toward financial sustainability, the government is creating a win-win situation that is crucial to Belize's economic development. If protected area management organizations can generate sufficient revenue to sustain, develop and market their PPAs as interesting nature tourism destinations, visitation increases and so, in turn, does economic opportunity and foreign exchange

Richard Belisle, Chief Forestry Officer, perhaps expressed this win-win situation best by saying *"The GOB sees tourists as golden eggs and protected areas as golden geese By giving the caretakers of the geese the tools they need to care for them, it ensures a steady supply of eggs "*

Protected Areas Conservation Trust (PACT)

The PACT's support to Belize's national system of protected areas has not yet begun, but it is hoped that the PACT's funding level will be significant. The Government of Belize, by establishing the PACT, has demonstrated its serious commitment to PPAs The commitment of a

portion of the airport exit tax to the PACT, in particular, shows deep national support for the system

A key aspect of the PACT is the manner in which its success (which translates into success of PPAs) is directly tied to the tourism industry The tourism industry, though it initially resisted the use of exit tax to support the PACT, finally recognized, after a lengthy public consultations process, that the success of the industry is indelibly tied to the success of protected areas (and Belize's natural resources in general) and gave its approval and support

The PACT's reliance on tourists entering and exiting the country provides an extra incentive for all PPA management organizations to promote tourism as a means to generate revenue for the PACT In addition because 20% of all entrance fees from PPAs are transferred to the PACT, this may provide an incentive for PPAs to increase visitation so they can in turn receive those funds in the form of project grants

The PACT may be considered a symbol of the GOB's commitment to a viable system of protected areas A step as bold as dedicating a portion of exit tax to the establishment and management of PPAs indicates that the GOB truly considers them to be a legitimate and even integral part of the country's economic development strategy

Programme for Belize (PFB)

PFB is an aggressive, innovative organization It is critical to note that PFB considers itself a business In that spirit, PFB is constantly looking for new ways to market itself, generate revenue, and access international funding Revenue generation and financial sustainability is its first priority In its early stages, PFB has relied heavily on international donor support Recognizing that competition for donor funding is rapidly increasing, PFB is developing programs that it hopes will eventually result in 100% financial sustainability

One of PFB's primary management objectives is to "produce sufficient cash return from sensible utilization of the [protected] area to pay for its perpetual care " Examples of revenue generation projects that PFB has instituted to support this objective include

- PFB has an innovative arrangement with Wisconsin Electric, a large US utilities company The US government has established a program called the Carbon Sequestration project Under this project, US firms can acquire pollution credits by setting aside tracts of forest. Wisconsin Electric donated US$2 million to PFB to assist in the purchase of additional lands for the protected area.
- Tourism accounts for a high percentage of PFB's income At La Milpa field station, the group has rustic but impeccably-run accommodations for groups and individuals Nature tourism is the main draw
- Student groups provide a mainstay for PFB PFB hosts groups of students throughout the year that attend a basic course in tropical ecology Course fees and room and board charges provide PFB with a steady stream of income
- Researchers not only contribute to the body of knowledge on the ecology of the area, but also pay for room and board
- PFB is beginning a micropropogation project. The EU has funded establishment of a lab in which orchids and other native and non-native ornamental plants will be produced for export If successful, this project could generate substantial revenue for the NGO
- PFB is experimenting with the sustainable use of non-timber forest products Chicle, or natural latex, is harvested and sold for the manufacture of organic chewing gum The sabal

palm, which is used extensively for thatch-roof houses, is sustainably harvested from the protected area and sold on the coast An effort to establish a program of sustainable mahogany harvest is underway All of the profits from these activities accrue to PFB and/or neighboring communities

Initiatives such as these will eventually allow PFB to operate in a self-sufficient manner In the meantime, PFB is continuously writing grant proposals to support the development of more revenue generation initiatives Donor agencies have provided PFB with support that has enabled it to develop into an effective environmental management organization By using donor funds to build programs that increase its self-sufficiency, PFB has built a reputation for effectiveness, accountability and creativity, which in turn has enabled it to cultivate even wider national and international support

It is important to note that PFB does not, and has not ever, depended on the government for funding Since its inception, it has tenaciously pursued funding opportunities and used a majority of funding received to develop programs that support its goal of self-sufficiency This heavy management emphasis on revenue generation, however, is complemented by a total commitment (unlike the scenario in John Pennekamp) to the preservation of the RBCMA's environmental integrity This comprehensive management focus on sustainability, both financial and ecological, has formed the cornerstone of PFB's success

PFB is not without its detractors, however Individuals from other NGOs express that PFB is almost ruthless in its drive for success and is out-competing other NGOs for funding Many in the group felt, however, that this aggressive, competitive attitude was positive It was stated that if this business-like attitude has contributed the PFB's obvious success, then more NGOs should emulate PFB's attitude A telling statement by Joy Grant, an economics and finance specialist and Executive Director of PFB, may explain the reputation that it has earned "This a business, and I am its CEO Our business is conservation and we do it better than anyone else"

Hol Chan Marine Reserve

Hol Chan Marine Reserve's method of collecting user fees is unusual and effective By only allowing diving and snorkeling activities in a small area of the reserve, park rangers can simply moor their boats in a central location and collect fees as tour boats come in This innovative practice allows rangers to collect fees and oversee use simultaneously All revenue (less the percentage that goes to the PACT), is placed in the reserve's trust fund and subsequently used for O&M and facilities development.

PROTECTED AREA ESTABLISHMENT

In both Florida and Belize, tour participants were exposed to strategies employed in the establishment of protected areas Interestingly, in both Florida and Belize, the major thrust of the protected area establishment process is to elicit stakeholder input in the planning of areas as well as in the subsequent drafting of the management plans This "people-centered" focus of protected area planning has paid dividends in both Florida and Belize in that the protected areas that encouraged stakeholder participation at the planning stage now enjoy popular support.

Although PPA personnel promoted the participatory planning paradigm, several individuals warned that it is important to define process objectives beforehand in order to avoid stakeholder domination of the process to the detriment of conservation objectives

Florida Keys National Marine Sanctuary (FKNMS)

The recently established FKNMS employed an immense range of strategies in an unprecedented effort to involve stakeholders in the establishment of the sanctuary and the drafting of its management plan The public outreach/participatory planning process targeted all sectors of society The process used was remarkable for its comprehensiveness (see the *Public Outreach* section) Sanctuary employees, their NGO and private sector partners, and volunteers all worked together using the media, workshops, and a host of other methods to build support and awareness of the need for the sanctuary The process, which took six years, culminated in the drafting of a comprehensive management plan for the sanctuary

The efforts of sanctuary staff and their partners paid dividends in that community awareness and acceptance of the sanctuary is much higher than when they began Although there are still some detractors, it seemed that local residents recognize that the sanctuary, if successful, will contribute to the conservation of the area's natural resources and thus yield long-term economic benefits for local communities

Sanctuary staff members credit the sanctuary's success to the level of community involvement that their public outreach efforts have inspired They expressed that six years of intensive effort to involve people in the process has been difficult and even harrowing at times They feel, however, that since community support for the sanctuary is so critical to its long-term success, the effort to conduct a truly *participatory* protected area planning process has been worth it.

Crane Point Hammock

Captain Ed Davidson, Chairman of the Florida Audubon Society, criticized the participatory process employed by sanctuary staff in establishing the FKNMS He felt that the six-year participatory process employed to establish the sanctuary was overly long He also felt that the final result of the process, the management plan, was not as restrictive as it should have been because the process resulted in a number of compromises He stated that participatory planning is important to a point, but that goals and objectives should be clearly stated *before* embarking on the process His main point was that if an organization is going to establish a protected area, it must have a reasonably clear idea of what kind of results are wanted and how the public will contribute If not, the stakeholder community can begin to *run* the process rather than just contributing to it He warned that it is easy to "fall in love with the process" and lose sight of critical goals and objectives

Belize Forestry and Fisheries Departments

Recognizing that the environment is a critical economic resource, Belize has made the establishment of a national system of protected areas a top priority Since the Forestry and Fisheries Departments are responsible for establishing and managing protected areas, the Ministry of Natural Resources has mandated that the two departments establish as many protected areas as they possibly can They have taken the mandate seriously, and to date over 35 protected areas have been established and many more are proposed for establishment

In many instances, due to lack of resources, a management plan cannot be drafted for these PPAs The GOB feels, however, that the simple act of declaring a protected area gives a certain level of legislative control and secures the lands from development interests, even though resources may not be available to manage it

That the GOB is setting aside lands in protected areas so quickly, even though, at present, they do not have the funds or manpower to manage them, is significant They feel strongly that protected areas are playing a critical enough role in the country's development to warrant setting aside vast tracts of land as quickly as possible Even if they cannot manage them, the lands are safeguarded from development to a certain extent.

Richard Belisle (Chief Forestry Officer) stated that although "paper parks" are not ideal, they are much better than no parks at all

Marine Parks

The planning and establishment of marine PPAs has proven to be more difficult than terrestrial PPAs Terrestrial parks in Belize have, for the most part, been established on GOB lands in unpopulated or sparsely populated areas For this reason, the GOB has not had to consult with user groups or other interests that might oppose PPAs when establishing terrestrial parks

Efforts to establish marine PPAs, on the other hand, have encountered some resistance from traditional users, primarily fishermen Although many Belizeans are cognizant of the need for and benefits of protected areas, the Fisheries Department has found it necessary to involve resource users, through workshops and other means, in the planning of marine protected areas As evidenced by the success of Hol Chan and other marine PPAs, involving resource users, particularly fishermen, at the planning stage has paid off

At Hol Chan, for example, many of the fishermen, who before the reserve was established felt that the area was *theirs* to exploit and resisted the idea, now feel even more ownership toward the resources The same fishermen who initially resisted the idea of restricting certain uses in certain areas (most of whom are now tour guides) now actually help to enforce the regulations because they recognize that the resources are key to their livelihoods This sense of protective ownership may not have developed if these resource users had not been involved in the protected area planning process

PROTECTED AREAS MANAGEMENT

The tour provided participants with the opportunity to examine several distinct PPA management styles In Florida, the John Pennekamp Coral Reef State Park provided the group with an excellent example of a protected area that is managed primarily as a money-making venture, to the purported detriment of its natural resources but also to the gain of the protected areas that are subsidized by its excess revenue In contrast, Programme for Belize places major management focus on revenue generation, but all revenue generating activities must support the organization's overarching goal of maintaining the ecological integrity of the Rio Bravo Conservation and Management Area.

Belize also provided examples of functional co-management arrangements The Government of Belize, through the Forest Department, has a formal agreement with the Belize Audubon Society that delegates management authority to the NGO A critical component of this co-management partnership has been the GOB's willingness to allow BAS to generate and retain revenue from entrance fees and the marketing of PPA-related products and services This has in turn allowed BAS to develop management partnerships with local communities such as Crooked Tree, who can benefit from marketing products and services to visitors

John Pennekamp Coral Reef State Park

As discussed in the *revenue generation* section above, Pennekamp's management focus is heavily slanted toward revenue generation rather than conservation When asked how the park establishes carrying capacity thresholds, the park manager simply stated that the number of parking spaces available was the main limiting factor for the park When asked if the carrying capacity of the natural resources was taken into account, he evaded the question

Pennekamp is managed for maximum economic gain Although it is clear that economic, not ecological considerations are the guiding management principles, it seemed to be a conscious trade-off between conservation and revenue generation By generating high revenues at Pennekamp, the Florida State Park System is able to subsidize other, less lucrative parks around the state This "cash cow" management strategy has helped the park system increase self-sufficiency in the face of decreasing economic support The long-term sustainability of this strategy, however, is questionable because the reefs, which draw visitors, are being degraded by overuse

The Forestry Department

The Forest Department has delegated management authority for seven protected areas to the Belize Audubon Society (BAS) Through this agreement, the Forest Department has been able to ensure their effective management. "Terms of Agreement", signed by the Forestry Department and BAS, outline the roles and responsibilities of each organization and gives the Forestry Department the authority to revoke BAS's management authority if it does not fulfill its responsibilities

Key aspects of the Terms of Agreement stipulate that.

- the GOB and BAS will jointly develop management plans for protected areas,
- the government will provide assistance to BAS such as tax exemptions on equipment,

- the government authorizes BAS to collect entrance fees and market products and services in order to raise the revenue necessary to manage and develop the areas,
- BAS and the Forest Department shall jointly manage the areas for a period of twenty-five years, with an option for renewal after expiration of the period

The GOB's co-management arrangements with the Belize Audubon Society (BAS) have been successful Richard Belisle stated that without help from BAS, the level of management that has been attained in the jointly-managed PPAs would not have been possible BAS has fulfilled its duties with very little support from the government Through grants from international donors, entrance fees, and merchandising, BAS has been able to generate a level of revenue sufficient to manage the PPAs that it has been delegated

Critical to the success of this co-management arrangement has been the mutual support between the GOB and BAS The GOB, recognizing that if BAS is to manage PPAs effectively, it must have the tools to generate the necessary resources As discussed in the *revenue generation* section above, the GOB's commitment to sharing management authority with NGOs is evidenced by the support and encouragement it has provided to its NGO partners in their development of revenue generation programs

Programme for Belize (PFB)

PFB's management regime is predicated on the "need to balance the interests of conservation of a site of substantial environmental importance with those of local and national socio-economic development" This has resulted in the development of management strategies that strive to develop programs that are "sustainable in the long term and deliver economic return, but are compatible with conservation of the cultural heritage, biodiversity and environmental values of the area."[1] PFB has developed guidelines for economic development in the RBCMA. These guidelines allow for what PFB calls an "adaptive management" regime which promotes development of economic activities that are "based on retention of natural habitat, so conserving its environmental values while allowing for economic return " PFB initiates new activities on a "pilot phase" basis, and projects are monitored carefully to ensure that they do not adversely affect the environment.

The RBCMA's management objectives are

- Preservation of the natural heritage and biological diversity of Belize,
- Production of sufficient cash return from sensible utilization of the area to pay for its perpetual care,
- Participation in the proper economic development of the Greater Rio Bravo Area, including surrounding population centers, to further the national economic interest.

PFB's outlook on protected areas management is important because the organization has taken lessons from other PPAs in developing countries that are not financially sustainable From the outset, PFB has made financial sustainability its highest priority In striving for that goal, PFB is developing programs that can be replicated by other PPA management organizations

However, it is important to note that revenue generation is only one component of PFB's comprehensive, integrated management regimen for the RBCMA Although the RBCMA's management plan has many components (revenue generation, community outreach, etc), it is

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highly integrated in that each component complements and supports the others Hence, though each component of the plan proposes specific objectives to be achieved over the life of the plan, all of those objectives ultimately support the overarching objectives listed above

Crooked Tree Wildlife Sanctuary

Crooked Tree was the only protected area visited that was managed by the local community In this protected area the community of Crooked Tree works in partnership with the Belize Audubon Society (BAS has been delegated management authority for the sanctuary by the GOB) to preserve the rich wetland habitat that is host to a great number of bird, reptile and mammal species Since its establishment in 1984, the community has managed the sanctuary to its economic benefit

Managemen of the sanctuary is not intensive In fact, aside from the ranger station where a ranger collects entrance fees, there seemed to be no formal management structure at all and regulations are not strictly enforced Representatives of the Village Council explained that the natural resources, which attract ever-increasing numbers of visitors, are not threatened by the current level of use They are, however, acutely aware that many other areas in the region with comparable natural resources have been ruined by over-exploitation They expressed that although present management practices seemed to be low-input, the guiding principle is that any present and future development of the resources must provide long-term benefits to the community

They stated that present uses, such as conducting bird-watching tours, have been good for the local economy and have supported a small hotel/restaurant trade They stressed that the reason that these uses have been good for the community is that they are low-input, community-based ventures The future management of the area, they felt, must promote locally-based ventures, and strive to avoid the proliferation of foreign-owned hotels and businesses BAS supports this plan It is particularly significant that the Crooked Tree Village Council has real political power Although the Council is the lowest rung of government, it is the authority that ultimately controls local development has the authority to approve or deny any application for development and can thus guide development to suit local needs

Management practices in Crooked Tree focus on ensuring the well-being, economic and otherwise, of the community The Village Council understands how uncontrolled development can have negative social and economic impacts on local communities and is committed to avoiding it Regarding the management of natural resources, Crooked Tree/BAS understands that continued sustainable economic development depends on their health and therefore will ensure their sustainable use

ENFORCEMENT

In Florida, the group was exposed to strict environmental enforcement practices that provided stiff penalties for infractions It was noted that the threat of heavy fines and/or imprisonment for breacnes acted as a powerful deterrent to unlawful conduct This was in direct contrast to common enforcement practices in Jamaica, where violators of environmental legislation are often given a fine or other punishment that is of little consequence in comparison to the potential economic benefit of the unlawful behavior

In Belize, at both Crooked Tree and Hol Chan, participants noted that the local resource users play an important role in the enforcement process Local resource users, recognizing that their economic well-being is dependent on the health of the resource base, tend to self-enforce regulations in order to maintain its quality

John Pennekamp Coral Reef State Park

The State of Florida's environmental legislation gives it broad powers to address breaches in a strict manner The State levies substantial fines for breaches and has the power (which it uses) to condemn and confiscate structures that are not in compliance with wetlands and other environmental regulations This real threat of legal action in response to environmental breaches serves as an effective deterrent to illegal activity

Environmental legislation governing the use of natural resources can only be effective if the consequences for violating the law outweigh the benefit from the violation Several individuals cited cases in Jamaica that provided examples of enforcement rendered ineffective by weak fines One case, in Montego Bay, involved a fisherman who speared and killed two hawksbill turtles The value of the turtle's shells was estimated at J$20,000 When the fisherman was arrested and brought before the court, he was fined J$500 and released In addition, the judge ordered that his spearfishing equipment be returned If the penalty for a violation such as this is a fraction of the benefit the violator will receive if he is not caught, the threat of punishment is not a deterrent.

The Forestry Department

The Forestry Department, along with other agencies with environmental enforcement responsibilities, has recently initiated an effort to adopt an integrated national approach to enforcement. The goal, to coordinate activities with Department of the Environment, the Fisheries Department, and other agencies, should increase efficiency and eliminate duplication of effort.

Countries such as Belize and Jamaica, whose enforcement budgets are minimal, must look for more efficient ways to enforce environmental regulations Integrated enforcement strategies can help stretch enforcement dollars

Crooked Tree Wildlife Sanctuary

As mentioned above, the Crooked Tree community (with BAS) does not enforce sanctuary regulations However, a sort of unwritten "code of conduct" seems to be in operation (wherein community members are cognizant of the link between local environmental and economic health) that ensures that the natural resources (and hence the economic benefits) are not degraded This

kind of mutual recognition of the link between natural resources and economic opportunity has, to date, formed a balance between exploitation and conservation

Hol Chan Marine Reserve

Enforcement in Hol Chan is carried out by a ranger in a boat that is stationed at the reserve's dive site 24 hours a day Enforcement duties are virtually non-existent, however This is due mainly to two factors One, Hol Chan, although it covers a five square mile area, limits dive/snorkel activities to a very small area that can be easily patrolled from a stationary boat using binoculars From their vantage point, rangers can also detect vessels throughout the reserve boundaries The full-time presence of rangers in this area also acts as a deterrent to any illegal activities Two, the tour operators help to self-enforce reserve regulations The tour operators that bring their clients to Hol Chan do so because the coral reefs are healthy and teeming with fish Since a majority of the operators were once fishermen, they understand the delicate nature of reefs and are well aware that their livelihood depends on the health of the reef ecosystem Hence, if tour operators notice activities that could negatively impact the reefs, they are quick to report it or confront the offender They are also careful to impress upon their clients the importance of proper dive/snorkel techniques

At Hol Chan, as in Crooked Tree, local resource users contribute to the sound management of natural resources This ideal situation is primarily due to the direct (recognized) link between environmental health and economic opportunity Recognizing that this scenario is critical to the long-term success of protected areas, local environmental management personnel strive to strengthen awareness of the economic importance of natural resources as well as create opportunities to sustainably exploit those resources Awareness-raising activities also target peripheral beneficiaries such as hotel and restaurant operators and craft vendors Although awareness-raising activities such as this would not be considered "enforcement" in the traditional sense, in Belize it seems that enforcement personnel believe that if they can provide economic incentives to conserve resources, resource users will view regulations as protective not only of the resource but also of their livelihoods

PARTNERSHIPS

In Florida, conservation partnerships between government agencies and NGOs have proven to be an effective way of leveraging resources and increasing overall protected area management capacity NOAA, the federal agency charged with the management of the Florida Keys National Marine Sanctuary, has formal and informal partnership agreements with state government agencies and many local, regional, and national environmental NGOs Under these partnerships, the state agencies and NGOs perform duties ranging from public outreach and education to water quality monitoring

Florida Keys National Marine Sanctuary (FKNMS)

To successfully implement the sanctuary, partnerships have been formed between federal, state, and local government agencies, non-governmental organizations, research institutes, and private sector groups By promoting the concept of "stewardship", this coalition of public and private sector organizations has built wide public support for the sanctuary The partnerships have focused on coordinating activities to maximize effectiveness and minimize duplication of effort All of the following organizations and agencies coordinate activities and cooperate to some degree Some of the key players and their roles include

- *National Oceanic and Atmospheric Administration (NOAA)* is the federal agency with management responsibility for National Marine Sanctuaries throughout the US In the FKNMS, NOAA has full-time staff at regional offices in the upper and lower Keys, and at the sanctuary headquarters in Marathon, FL NOAA has established partnerships and cooperative agreements with State of Florida Department of Environmental Protection and several NGOs to accomplish management, education, and enforcement objectives
- *The Nature Conservancy (TNC)* is working with federal and state agencies to promote public understanding and involvement in the sanctuary TNC's Marine Stewardship Program, which is managed jointly by the National Marine Sanctuary and The Nature Conservancy, is supported by over 400 local and regional volunteers and sponsors a variety of activities including a conch restoration project, coral reef monitoring projects, coral reef education, and water quality monitoring projects Volunteers also participate in environmental education programs with local schools This program, as it capitalizes on the goodwill of volunteers, has been cost-effective, has enjoyed a high degree of success and is an excellent example of government-NGO partnerships working to accomplish ambitious objectives on restricted budgets
- *The Center for Marine Conservation (CMC)* focuses on science-based advocacy The group's efforts include lobbying the government at the local, state and federal levels to promote the conservation of coastal and marine ecosystems as well as grass-roots organizing of activities such as the International Coastal Clean up Although they work in partnership with government agencies on such efforts as establishing educational visitor centers, the CMC prefers to limit government partnerships that might compromise their ability to effectively lobby the government Grass-roots activities conducted by CMC include working with local populations to reduce stormwater run-off as well as addressing issues such as inadequate housing and sewage disposal
- *Team Ocean* is a volunteer-based organization which promotes responsible use of marine resources by visiting popular reef areas, by boat, to distribute educational materials on issues such as water quality, coral reef ecology, and ecologically sound boating practices Volunteers range from local junior and high school students to retirees They also work with local dive

shops to promote programs such as "Adopt a Reef" as well as support scientific research in the area

- *Florida Bay Watch* is a volunteer-based organization similar to Team Ocean The group, which was formed by local fishermen and other resource-users to address the increasing problems caused by algae blooms, monitors water quality and promotes the reduction of land-based pollution from sewage and other run-off Over 200 volunteers take water samples, distribute educational information, and disseminate the results of their research to the public
- *Coral Watch* is an NGO that uses volunteers to monitor coral health around the Keys The group works with federal, state and private scientists to support coral reef research
- *Reef Relief* is an NGO that promotes the sound use of coral reef ecosystems One of Reef Relief's main activities has been the installation of mooring buoys in heavily visited reef areas Other activities include monitoring reef health and the production and dissemination of educational information
- *The Florida Marine Research Institute* conducts research on the effects of pollution and fishing on populations of commercially important species of finfish, conch and lobster They operate a pilot conch reproduction facility The Institute supports Sanctuary efforts to monitor species populations and other indicators

This example of a federal government agency (NOAA) working towards one goal in collaboration with a host of both governmental and non-governmental organizations was inspirational When broken down into numbers, one finds that within this coalition of partner organizations there are thousands of people working to achieve one goal a successful protected area This type of collaborative dedication is unfortunately rare in the world, but it has proven to be an effective strategy for the FKNMS and shows what can be accomplished when people and organizations work together toward a common goal

Crooked Tree Wildlife Sanctuary

The Belize Audubon Society's partnership with the community of Crooked Tree seems to be a successful one Although the Forestry Department delegated management authority to BAS, the community has basically taken over management duties Rangers and managers are hired from the community, and the Village Council has the final word on all development activities taking place in the area. Since, for economic reasons, it is important for the community to maintain the quality of the area's natural resources, BAS does not have to expend much effort in ensuring that the resources are managed properly This is a natural partnership that has proven effective over a number of years with few problems

PUBLIC OUTREACH/PUBLIC CONSULTATION

"Public outreach" is a broad topic area that includes education, protected area promotion, and participatory planning In Florida, conservation organizations have taken outreach to a level of sophistication that can almost be considered scientific Organizations working with the Florida Keys National Marine Sanctuary, in their effort to involve the general public in the establishment and management of the protected area, have employed a diverse array of media and outreach methodologies, from simple newsletters, to complex internet webpages, to public meetings These activities, which have promoted the sanctuary as key to the long-term environmental and economic health of the Florida Keys region, have been critical in the development of broad-based, multi-sector support for the protected area Similar outreach programs have been undertaken in Belize, where it has also been important to draw links between environmental and economic health

Critical to the success of these outreach programs (in both Florida and Belize) have been the personnel employed to implement them In both Florida and Belize, natural resources management organizations have recognized that one of the keys to protected area success is to develop "people centered" programs that involve communities in the planning and management of these areas that are so important to their long-term well-being To this end, these organizations have sought employees who have excellent "people skills" such as sociologists and public relations specialists

John Pennekamp Coral Reef State Park

The Park has used several effective methods to promote itself and to accomplish conservation objectives

- It has mutually beneficial arrangements with private sector entities One such arrangement, with a major soft drink manufacturer, gives the company exclusive rights to market their product in the Park In exchange, the company has painted a John Pennekamp Coral Reef State Park scene on the side of several trucks that distribute soft drinks in Florida.
- The concessionaire markets the Park as a unique recreational destination Although this is a strictly self-serving activity, the park itself does not have to spend time and money on advertising but they still benefit financially from increased visitation
- The media is used to sensitize the general public on conservation issues and happenings at the Park
- The Director of the state park system spends considerable time on promotional and lobbying activities in order to build support and awareness in all levels of government as well as the private sector
- John Pennekamp has undertaken studies showing that many visitors to Key Largo come specifically to visit the park Many of the 1 2 million people that pass through the parks gates also patronize local restaurants, stay in local hotels, and generally contribute to the health of the local economy

By promoting itself as an important part of both the local economy and environment, Pennekamp has drawn support from all sectors of society This is a critical strategy given today's economic climate In most countries, conservation of lands and waters for conservation's sake cannot be justified when economic need is creating pressure on the natural resource base To gain multi-sector support for protected areas, their economic worth must be demonstrated. The studies

Pennekamp has undertaken, which demonstrate yearly park visitor contribution of millions of dollars to the local economy, have convinced many people of the park's value and fostered wide-reaching support By using the media, promotional and lobbying activities, and other strategies to raise public awareness of the benefits that accrue from the park's presence (directly linking economic benefits to the protected area), Pennekamp has built a strong constituency throughout the state of Florida.

Florida Keys National Marine Sanctuary (FKNMS)

The FKNMS has employed an innovative outreach process to build public support for the sanctuary and garner stakeholder input in the drafting of the sanctuary management plan An advisory council, comprised of representatives of all sectors of local society, played a key role in ensuring that all stakeholder interests were considered in the process of establishing the sanctuary and drafting of the protected area management plan The participation of the advisory board, coupled with a long series of public meetings, helped to resolve many major issues and promote community ownership and support of the protected area. A public consultation process of this scope was unprecedented in the history of marine sanctuaries in the U S Over the course of the process, thousands of individuals and organizations contributed and commented on the plan, and although some issues were debated intensely, many solutions and compromises were reached that shaped the management plan into its present form

The State of Florida Department of Environmental Protection (DEP), has been instrumental in building public debate and support for the Sanctuary through a comprehensive public outreach campaign Specific activities have included

-a weekly newspaper column and articles,
-radio PSAs, talk shows, and news,
-television programs, commercials, PSAs, talk shows, and news,
-advertisement and articles in fishing, diving and tourism magazines,
-active involvement in the local chamber of commerce,
-networking and marketing,
-brochures and posters,
-educational signs strategically placed at boat ramps and other heavily used areas,
-sponsorship of Team Ocean, a group that distributes educational information on the water;
-sponsorship of environmental education grants for teachers,
-internet homepage,
-utilization of volunteers to disseminate information,
-participation in community events,
-information expos

These strategies have proven successful Particularly effective have been the working relationships that DEP staff has established with members of all sectors of the media including local, regional and national newspapers, television and radio stations and magazines When an issue arises, new developments need dissemination, or there is a need to reinforce public awareness, DEP staff simply call their media contacts and ask them for a favor DEP staff also stressed that their involvement in community activities outside of work helped to raise their visibility and level of support considerably

The FKNMS staff were unusual in that they had obviously been hired for their "people skills" rather than science or management. Their skills, a combination between social work and public relations, seemed ideal for the type of public consultation work that they were doing

FKNMS staff and partner organizations are absolutely dedicated to ensuring that the general public is aware and involved in the planning and management of the sanctuary Through the exhaustive implementation of the methods and strategies outlined above, they have involved thousands of individuals and groups and built strong multi-sector support for the protected area.

Programme for Belize (PFB)

One of PFB's primary management objectives is to participate in the sustainable economic development of the Rio Bravo area This has translated into several programs aimed at raising environmental awareness and creating economic opportunity for local communities Programs include[2]

- facilitating the establishment of community groups including August Pine Ridge Crafts Group, Yocoxtic Dance Group, San Lazaro Women's Group, Trinidad Crafts Group, St Paul's Craft Group, Lemonal Community Group, Lemonal Beekeepers, Country-Can Producers of Isabella Bank and Ranch Dolores Women's Group,
- group training and development covering a range of skills and topics from organizational skills (e g micro-entrepreneursnip, community banking) to technical skills relating to a particular community initiative (pottery making, handicrafts and sewing, cultural dances, sustainable agriculture and livestock, beekeeping, community-based ecotourism, and production of preserves),
- infrastructure to support small industry and ecotourism including the construction of a handicrafts center in August Pine Ridge, ceramic sheds in August Pine Ridge, road signage and a facility for making preserves by the County-Can Producers of Isabella Bank,
- educational visits, ecology field trips, and teachers workshops with schools in the target villages and to a lesser extent throughout the nation,
- acquisition of educational materials and equipment for use in presentations and as reference materials,
- production and dissemination of documentary and public relations materials such as short video stories, public service announcements, press releases, brochures and information packets

PFB's community outreach/education programs have helped to promote better relations and channels of communication with neighboring communities This type of "people centered" outreach strategy is seen as critical to the long-term viability of the RBCMA Much like in other protected areas visited, PFB is dedicated to linking conservation with economic gain PFB's community outreach programs are designed not only to help local communities understand that protected areas can provide economic benefits, but also to help create economic opportunities for them

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ALTERNATIVE INCOME GENERATION

In both Florida and Belize, it was noted that the protected areas that enjoy the highest degree of popular support are those that provide economic benefit to local communities Belize, in particular, as its economy is relatively undeveloped, must clearly demonstrate the economic value of protected areas if they are to be accepted by the rural poor who sometimes see protected areas as a waste of good farmland

In Belize, environmental management organizations such as Programme for Belize and the Belize Audubon Society realize that the *only* way that a protected area will have success in a developing country such as Belize is if local communities enjoy obvious economic benefits from it As a result, these organizations see the development of alternative income generating opportunities as a critical component of their public outreach programs (see "Public Outreach" section)

Programme for Belize (PFB)

As discussed above, one of PFB's primary management objectives is to contribute to the economic development of the Rio Bravo area. Indeed, the main thrust of its community outreach program is to help promote sustainable economic opportunities for local communities while raising awareness of the importance of conservation This strategy is effective because it builds support for the protected area while it helps local communities raise their standard of living

Crooked Tree Wildlife Sanctuary

The community of Crooked Tree has received significant economic benefit by developing and offering services to visitors This has been critical to the success of the protected area because many local residents now value the natural resources, particularly the wildlife, as central to their economic well-being As was noted in other protected areas, when direct and obvious links between natural resources and economic benefits are developed, local communities generally respond by supporting conservation activities

In 1984, the year it was established, the sanctuary had no hotels, had only one boat adequate for giving tours, and only received 26 visitors Today, there are five community-run hotels, several bed & breakfasts and many boats that cater to the 4000+ tourists who visit each year The number of tourists is steadily increasing

The Village Council is also interested in developing other sustainable economic activities such as the production and sale of crafts and cashew products They have established an annual "cashew festival" to celebrate and market the area's number one agricultural product. There are also plans to build a boardwalk through the wetlands to a nearby Mayan archaeological site

The Council, though it is actively promoting the development of sustainable, natural resource-based income-generating activities, cited a Peace Corps-supported craft project that failed as having been an important learning experience for the community A group of women had received training in craft production but not in marketing The project failed. They now recognize that the lack of marketing training was the root of the failure They stressed that, particularly at the community level, it is not enough know how to make a product, one must also know how to sell it

Crooked Tree provided yet another example of the benefits that accrue from forging a direct link between the integrity of the natural resource base and economic development

Hol Chan Marine Reserve

Hol Chan provided yet another example of a protected area whose success was tied to the economic benefits that accrued to local user groups Although local fishermen initially resisted the idea of a protected area, the Fisheries Department, through education and training programs, offered fishermen the tools they needed to exploit the expanding dive/snorkeling market. As demand for dive/snorkel tours increased, many fishermen abandoned fishing and learned how to conduct safe, responsible tours They are now earning many times what they earned as fishermen As in Crooked Tree, Hol Chan's users now see the reserve as central to their livelihood and strive to preserve it

Tourists that come to visit Hol Chan also support a thriving hotel, restaurant and craft shop industry This has broadened support for the reserve among these indirect beneficiaries As a result of the obvious economic benefits that have accrued from the reserve, the neighboring village of Cay Caulker is trying to establish its own marine protected area.

NATURE TOURISM

John Pennekamp Coral Reef State Park is one of the most popular "nature tourism" destinations on the East Coast of the US, attracting over one million visitors a year In the US, visits to public natural areas is increasing Protected areas such as Pennekamp are under great pressure to accommodate the increased demand Parks such as Pennekamp, however, which have revenue generation programs in place, are making millions of dollars catering to this trend

In Belize, many organizations and individuals, both public and private sector, see environmentally responsible nature tourism as central to the economic development of the country Many Belizeans feel the tourism development strategies that have been implemented in other Caribbean nations, with their emphasis on sun and sand, are not appropriate for Belize It was noted that tourist attitudes are changing, and many of the "high end" tourists are looking for an high-quality tourism experience that is an "adventure", or out of the ordinary Belize is committed to attracting the "active tourist" who would rather hike through the jungle or snorkel a coral reef than sit on the beach Judging by the success of many of Belize's nature tourism programs (tourism is the fastest-growing sector in Belize), there is a great potential for growth in this area By preserving its prime natural resources in protected areas, Belize feels that it is investing in its economic future

Programme For Belize (PFB)

PFB defines nature tourism, or "ecotourism", as "low-impact tourism, based on appreciation of the environment and where a conscious effort is made to re-invest an adequate portion of revenues in conservation of the resource on which it is based " PFB staff emphasized this definition because many other so-called ecotourism programs use natural settings such as protected areas for their tours without contributing substantially to the conservation of those resources

PFB has made nature tourism a central pillar of its economic development program PFB sees nature tourism as having the potential to generate a substantial amount of income while providing opportunities for natural history and cultural education and interpretation

PFB presently operates La Milpa Field Station which consists of cabanas, a dormitory, a food service facility, a maintenance shelter, two staff residences, and a gazebo All structures and facilities incorporate the most environmentally sensitive and resource efficient materials, techniques, technologies and operating standards possible [3]

Specific examples of environmentally sound facilities include

- structures are built using lesser-known construction timbers,
- solar power - currently supported by a diesel generator, PFB plans to build a windmill to decrease dependency on diesel,
- dormitory facilities use composting toilets,

While at La Milpa, visitors can choose from a variety of educational nature walks and tours of a nearby Mayan archaeological site

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PFB sees nature tourism as a critical component in the overall management of the RBCMA for several reasons

- It can provide a significant source of income for the protected area and so is a key component of their revenue generation strategy
- It can provide a substantial source of alternative income for surrounding communities
- The educational focus of the tours supports PFB's environmental education objectives

This holistic approach to nature tourism is manifested in PFB's dedication to truly integrated, sustainable development Each component of PFB's management strategy, in this case nature tourism, complements and supports other components such as education and outreach and revenue generation

The traditional view of ecotourism, at best, is that it should not adversely impact the resources it uses It is noteworthy that PFB's definition of nature tourism-differs from the norm in that it necessitates a financial commitment to the long-term conservation of the resources used.

INTERPRETATION

Many of Florida's PPAs have developed environmental interpretation programs that are designed to help visitors better understand the natural environment. Two of the protected areas that the group visited in Florida had visitors centers that had well-developed interpretation programs These programs serve to both promote the protected areas and educate visitors on the importance of healthy ecosystems

John Pennekamp Coral Reef State Park

John Pennekamp's interpretive displays were simple yet effective By using a combination of aquariums and informational posters, park staff has created displays that are both attractive and informative The aquariums, which housed typical reef communities, were complemented by the informational posters which, by explaining individual species and their role in the greater ecosystem gave the visitor a comprehensive lesson in the dynamics of coastal ecosystems In addition, the park offered hourly talks and/or video presentations on the park's purpose and the importance of coral reef ecosystems This program seemed to be an effective way of orienting visitors and preparing them for subsequent activities at the park This combination of aquariums, simple information, and informational presentations as an educational tool is effective because it captures and holds a visitor's interest.

Crane Point Hammock

Crane Point Hammock provided two extraordinary examples of highly effective environmental interpretation One, the museum/zoo, was fascinating and educational Although the displays representing local natural and cultural history were excellent, it was their interactive nature that attracted and held one's attention Many of the displays, by inviting visitors to touch and smell, gave a participatory feel to the museum It seemed that when people are invited to experience something that employs more than just the intellect, their interest levels rise This was especially apparent at the ' touch tank" People are initially afraid to handle the odd-looking sea creatures, but when they begin to handle them and realize they are harmless, they begin to ask questions about their diet, habits, etc This focus on tactile learning seemed to spur visitor inquisitiveness and imagination

The second example of interpretation was provided by Captain Ed Davidson Captain Ed, who has led nature walks and boat tours for many years, emphasized and re-emphasized the need to involve people's imagination when talking about the environment. He stated that people in general, and children especially, need to get excited about something before they can really learn about it He explained that most people's interest is sparked by sex, violence, and bodily functions He said that by focusing on these topics as they occur in natural systems, one can spark a person's morbid curiosity His favorite topics include spiders, poisonous plants, and distribution of seeds by birds Spiders, as they tend to incite fear in humans, attract interest immediately The fact that many female spiders eat the males after mating adds an extra level of interest because it brings sex and violence into the picture Birds, which spread plant seeds through their feces, interest people who are fascinated by bodily functions Captain Ed explained that while this methodology may seem immature, when dealing with people who are not knowledgeable about natural systems, focusing on this type of topic serves to draw them in to a tour by getting them to laugh and ask questions Once this is accomplished, he said, the guide can focus on other aspects of the environment.

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VOLUNTEERISM

Florida's parks and protected areas benefit substantially from volunteer support Both government agencies and NGOs sponsor volunteer programs that support their missions Volunteers donate time and expertise worth tens of thousands of dollars a year This allows protected areas to accomplish objectives on smaller budgets

John Pennekamp Coral Reef State Park

The park leverages funds and bolsters its public awareness programs through the use of volunteers These volunteers maintain park landscaping, paint buildings, remove exotic vegetation, and perform a variety of other important tasks

Florida Keys National Marine Sanctuary (FKNMS)

It is estimated that since 1992, the hours worked by Florida Keys National Marine Sanctuary (FKNMS) volunteers have been worth over US$850,0000 Volunteers help with everything from education to water quality monitoring This resource has been critical to the success of the sanctuary The following groups have organized major volunteer programs

- *The Nature Conservancy (TNC)* is working with federal and state agencies to promote public understanding and involvement in the sanctuary TNC's Marine Stewardship Program, which is managed jointly by the National Marine Sanctuary and The Nature Conservancy, is supported by over 400 local and regional volunteers and sponsors a variety of activities including a conch restoration project, coral reef monitoring projects, coral reef education, and water quality monitoring projects Volunteers also participate in environmental education programs with local schools This program, as it capitalizes on the goodwill of volunteers, has been cost-effective, has enjoyed a high degree of success and is an excellent example of government-NGO partnerships working to accomplish ambitious objectives on restricted budgets
- *Team Ocean* is a volunteer-based organization which promotes responsible use of marine resources by visiting popular reef areas, by boat, to distribute educational materials on issues such as water quality, coral reef ecology, and ecologically-friendly boating practices Volunteers range from local junior and high school students to retirees They also work with local dive shops to promote programs such as "Adopt a Reef" as well as support scientific research in the area.
- *Florida Bay Watch* is a volunteer-based organization similar to Team Ocean The group, which was formed by local fishermen and other resource-users to address the increasing problems caused by algae blooms, monitors water quality and promotes the reduction of land-based pollution from sewage and other run-off Over 200 volunteers take water samples, distribute educational information, and disseminate the results of their research to the public
- **The Florida Marine Research Institute** The Institute is supported by two volunteer programs One, run by TNC, provides volunteer divers who assist in the assessment of offshore populations The other, Americorps, provides one to three full-time volunteers for up to two years at a time In exchange for their volunteerism, Americorps volunteers receive government assistance with higher education

LESSONS LEARNED AND RECOMMENDATIONS

KEY LESSONS LEARNED AND RECOMMENDATIONS FOR JAMAICA

The group, during discussions of the site visits, examined the relevance of specific aspects of those sites to the Jamaican experience These discussions produced many recommendations for increasing environmental management effectiveness in Jamaica. The following section outlines the key lessons learned and recommends actions that could be taken in Jamaica.

REVENUE GENERATION/FINANCIAL SUSTAINABILITY

1 It was apparent to the group that the Government of Belize is highly committed to establishing a viable national system of protected areas as a component of the nation's economic development plan This commitment was particularly manifested in the steps it has taken to promote revenue generation in its PPAs By giving protected area management organizations license to collect and retain revenue from entrance fees and sales of products and services, it has provided the Forestry and Fisheries Departments and their NGO partners with the tools they need to effectively manage their PPAs In addition, the GOB's initiative in establishing the PACT shows a further commitment to raising the funds necessary to finance a system of protected areas

The group felt that the Government of Jamaica should take immediate steps to establish and facilitate means by which PPAs can become financially sustainable If the GOJ truly hopes that NGOs will manage protected areas, it must follow Belize's example and allow the NRCA and its NGO partners the freedom to charge user fees and otherwise create revenue generation opportunities for themselves If the tools that the rest of the world is using to establish and manage financially sustainable PPAs are not made available to interested groups in Jamaica, it is highly unlikely that a viable PPA system will become a reality

2 The group was particularly interested in Belize's PACT fund Belize, by developing the PACT, is attempting to create an effective protected area financing mechanism that will complement the revenue generation initiatives of individual agencies and organizations It was felt that this model could be replicated in Jamaica to support the expansion of the national system of protected areas It was suggested that the DEMO project assist in the process by distributing PACT literature to members of the "Trust Fund Group" formed at February's DEMO-sponsored Financial Sustainability Workshop The group felt that Jamaica's present trust fund is not fulfilling its mandate and that it must either be restructured or a new trust fund created.

3 John Pennekamp Coral Reef State Park and Programme for Belize's Rio Bravo Conservation and Management Area both provided excellent examples of parks that have made revenue generation a top priority They both view park management as a business venture There is a fundamental difference, however, in their management philosophy John Pennekamp's management focus is almost purely revenue generation oriented. The impact of visitor use on the park's ecological integrity is not considered. Programme for Belize, although its management plan places major emphasis on revenue generation and financial sustainability, it places higher priority on environmentally sustainable development. This commitment to maintaining the integrity of the ecosystems that it manages in trust for the people of Belize cannot be compromised

The group agreed that the Jamaica's System Plan for Protected Areas should emphasize the need to run PPAs using good business practices and that Jamaica should make an effort to replicate the revenue generation strategies employed by John Pennekamp and PFB, but that Jamaica should follow Programme for Belize's example by setting guidelines and establishing monitoring programmes that ensure environmental sustainability Although revenue generation

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is necessary, environmental integrity should not be compromised in pursuit of financial sustainability

4 The "cash cow" protected area strategy that Florida employs to subsidize other, less-lucrative protected areas has proven effective John Pennekamp and other 'recreational" parks, through the creative use of multiple revenue generation tools raise enormous sums of money for the park system The group agreed that this strategy should be adopted, where possible, as opportunities arise in Jamaica. If Jamaica could establish several high revenue "recreational" protected areas, the revenue generated could support the management of other less-accessible and/or environmentally sensitive protected areas The long-term feasibility of this strategy, however, must be examined carefully As the group noted at John Pennekamp, if high levels of visitation degrade the park to the point that it no longer attracts visitors, revenue will drop and other PPAs will suffer

5 Programme for Belize, with its tropical ecology course, provided a good example of how protected areas can develop educational programmes which not only inform but are also a source of revenue This type of program could be replicated in protected areas such as Blue and John Crow Mountains National Park

6 If revenue generation is to be a goal for organizations involved in the management of protected areas, it is critical that those organizations learn business skills As evidenced by the success of PFB, management, marketing and proposal writing skills, complemented by tenacious, energetic development of innovative programs, are key to organizational (and protected area) success

Jamaican NGOs could benefit greatly by emulating or adapting many of PFB's revenue generation strategies PFB has made a distinct effort to integrate all components of its management plan in order to create overlap of discreet program objectives For example, as noted in section two, PFB programs such as nature tourism and the tropical ecology course allow the organization to generate revenue while fulfilling educational objectives PFB's dedication to achieving financial sustainability while fulfilling complementary objectives provides an example of sound NGO and protected area management. PFB is an ideal candidate for a more comprehensive study by a Jamaican group Relevant organizations would benefit greatly from an extended visit to this organization

PROTECTED AREA ESTABLISHMENT

1 The group noted that in Florida and Belize, the agencies and organizations responsible for establishing protected areas have instituted strategies that promote public participation These strategies have proven successful in both countries Since Jamaica is instituting a participatory process for the planning and establishment of protected areas, it was encouraging to learn that this strategy is being implemented with success in other areas The group learned, particularly in Florida, that there are many public outreach methods that Jamaica could adapt and employ to increase the effectiveness of participatory protected area planning efforts

Participatory planning is rapidly becoming accepted as the most effective way to establish protected areas that enjoy public support. There are, however, many different methods that are employed around the world to varying degrees of success To increase the effectiveness of participatory planning initiatives in Jamaica, the NRCA and environmental NGOs should develop a "best practices" document that outlines the methodologies that have proven successful and presents new practices that could be adapted to the Jamaican context.

2 The group felt that the GOJ should emulate Belize's level of commitment to the establishment of a national system of protected areas After seeing how PPAs are contributing to both local and national economies in Belize, it was obvious that Jamaica is missing out on a variety of economic opportunities Given that Jamaica is committed to tourism as a major foreign exchange earner, it would seem that the country should strive to preserve examples of its natural beauty that could broaden its base of attractions

Like the Government of Belize, the Government of Jamaica should adopt the view that the simple act of declaring a protected area provides a certain level of legislative control and secures lands from development interests, even though, at present, resources to manage it may not be available The group agreed that this strategy could pay off for Jamaica. At the present rate of PPA establishment, it will take decades to establish the PPAs that are proposed It was agreed that if Jamaica is serious about establishing a national system of PPAs, it should move ahead as quickly as possible before the proposed areas are developed and/or degraded

As discussed in the *revenue generation* section above, a commitment to establishing and managing viable protected areas must include the creation of means by which PPA management organizations can raise the revenue they need to do the job The NRCA is committed to establishing protected areas in Jamaica. However, the Authority does not have the resources to manage these areas once they are declared Although there might be no shortage of NGOs who would wish to manage protected areas, the Authority realizes that the NGO community, which it hopes will be capable of managing these areas once they are established, is in an even worse-off position in terms of financial resources The challenge is therefore that the NRCA work with NGOs to develop revenue generation strategies which are realistic and implementable in support of establishment and management of protected areas

3 Both Belize and Florida have spent considerable energy on the promotion of protected areas as necessary and beneficial Through a variety of public outreach methodologies, including the media and school curriculums, they have built support for their respective protected area systems Jamaica, as its system of PPAs is very young and unknown, should make every effort to disseminate information on the system to the public, using all available public outreach methodologies in an effort to garner public support for the continued establishment of new protected areas

PROTECTED AREA MANAGEMENT

1 The group felt that the GOB's co-management arrangement with the Belize Audubon Society was a successful one and that the GOJ should strive to develop similar relationships with Jamaican NGOs Of particular importance was the GOB's commitment to giving BAS and other NGOs the tools they need to raise the funds necessary to effectively manage protected areas The group strongly agreed that if the GOJ is committed to co-management as a means of managing PPAs, it must follow Belize's example

2 The group noted that the Biscayne National Park was adopting a more proactive management stance Whereas in the past, park managers did not work with potential pollution problems and other issues until the impact on the park was apparent, now park management is taking steps to identify and stop possible problems before they become problems

Proactivity should be the principle on which protected areas management in Jamaica is based The stated policy of the NRCA is to delegate management authority for protected areas to non-governmental organizations The NGOs in Jamaica need to become better watchdogs for the

environment and NRCA should assist them in developing the skills to detect potential risks to the environment

3 Programme for Belize's (PFB) management strategy for the Rio Bravo Conservation and Management Area is an excellent example of comprehensive, integrated protected area management Each of the components of PFB's management plan is complementary and supportive of the others The management plan is carefully designed to set out goals and objectives that are mutually supportive Both the NRCA and Jamaican NGOs could benefit from a review of the RBCMA management plan, if not an extended visit to PFB

The group saw Programme for Belize as an efficient, aggressive, innovative NGO that has taken its mission seriously Its accomplishments provided an ideal example of how much a small NGO can do when it is well-managed Many Jamaican NGOs could learn from PFB's business-like approach to environmental management

4 As mentioned in the "revenue generation" section above, the group learned important lessons from the two divergent management strategies demonstrated by Pennekamp and PFB Though both areas have management plans whose major focus is on revenue generation and financial sustainability, PFB differs from Pennekamp in that environmental sustainability, not financial, is the driving force behind the management plan The group felt that PFB's strategy was more sound and would be more successful over the long-term than Pennekamp's

5 In Crooked Tree, the group was exposed to a local community that played an important role in the management of a major protected area It was apparent that the community valued the natural resources for both their ecological and economic benefits The important lesson imparted by the community was that if a community possesses political power as well as knowledge of the importance of healthy ecosystems, it can ensure that sound natural resource management practices are employed that benefit both the environment and local residents

ENFORCEMENT

1 The group learned that the State of Florida has the ability to levy substantial fines for breaches and this acts as a strong deterrent to illegal activities If the potential consequences of unlawful conduct do not outweigh the possible benefit if the violator is not caught, environmental legislation is rendered inconsequential In Jamaica, fines and other punishments for breaches need to be increased significantly if they are to act as a deterrent.

2 The Hol Chan Marine Reserve provided an excellent example of resource user participation in protected area management and enforcement of regulations The group was impressed that almost all local fishermen had forsaken fishing for the more lucrative and sustainable dive/snorkel trade The critical lesson learned in Hol Chan was that when resource users value the health of those resources as the source of their livelihood, they sometimes begin to police themselves

The NRCA and its NGO partners should make the development of more programs that allow resource users to derive income from *sustainable* use of protected areas a high priority If resource users could be incorporated in the management of protected areas (for their economic benefit) this sort of self-enforcement might develop in Jamaica.

Though the resource users in Hol Chan seem to be practicing a high level of self-enforcement, It is important to note that the reserve is a *managed* common area. As has been seen around the world, fishermen that fish relatively unmanaged common areas, though they are entirely cognizant of the link between the health of the resource and their livelihoods, still deplete fish

stocks In Hol Chan, the profitable, sustainable use of the reefs by local communities has been accomplished only through intensive education and training, and vigilance by rangers So, although establishing a link between economic development and healthy natural resources is critical, it is equally important to provide a management structure that guides resource use and ensures its long-term health

3 In both Florida and Belize, government agencies are making an effort to integrate the enforcement of environmental regulations This entails close coordination between all agencies with enforcement responsibilities, environmental organizations, and private individuals representatives from both countries stressed that this integration is coming very slowly, but is seen as necessary to prevent duplication of effort and increase efficiency The group agreed that Jamaica, too, should move more quickly in this direction

PARTNERSHIPS

1 Florida Keys National Marine Sanctuary provided an excellent example of what can be accomplished when government agencies and NGOs team up The NRCA, particularly given its present lack of sufficient human and financial resources to fulfill its mandate, should try to develop more effective partnerships with other government agencies and NGOs around the Island The group learned that the partnership strategy can result in more effective education, enforcement, and research programs

2 The Center for Marine Conservation (CMC), although it works in partnership with government agencies on such efforts as establishing educational visitor centers, it prefers to limit government partnerships that might compromise their ability to effectively lobby the government.

This is a key point for Jamaican NGOs because so many of them are dependent on government for financing NGOs need to recognize that dependency on government financial support can compromise the effectiveness of their lobbying efforts The group suggested that the National Environmental Societies Trust assist in developing an NGO policy document to address this issue

3 The community of Crooked Tree provided the group with an excellent example of a local community that has become a strong partner in the management of a protected area. The group recognized, however, that Crooked Tree has been an effective partner because 1) the Village Council holds real political power, and 2) the community leaders have been educated on environmental issues and appreciate the link between the health of local natural resources and the local economy This type of effective partnership, if it could be replicated in Jamaica, could contribute to both successful protected area management and local economic development.

PUBLIC OUTREACH/PUBLIC CONSULTATION

1 The group learned several important lessons from the innovative outreach process employed by the Florida Keys National Marine Sanctuary The NRCA and NGOs could benefit greatly by emulating some of the FKNMS's public outreach/consultation strategies Of particular note was the FKNMS staff's ability to use the media as a channel through which they disseminated their message The NRCA and NGOs alike could use the media more effectively as an outreach tool By establishing relationships with members in all different media (newspaper, TV, radio, magazines) FKNMS staff can reach tens of thousands of people whenever necessary Environmental organizations in Jamaica could greatly increase their effectiveness by developing similar relationships with the media.

The NRCA and environmental NGOs could benefit from the development of a "Best Practices in Public Outreach" document that outlines the methodologies that have proven successful in Jamaica. In this manner, environmental management organizations could move toward the institutionalization of public outreach programs that support their activities

2 Many of FKNMS staff who conducted the public consultations leading to the development of the management plan were public relations experts The FKNMS showed the group that establishing protected areas requires much more than technical expertise It was apparent to the group that the FKNMS believes that multi-disciplinary teams which include technical personnel, sociologists, and public relations specialists are necessary to effectively implement public consultations processes The NRCA, through the Public Education/Information Branch, is moving in this direction However, much greater emphasis should be placed on changing public opinions and attitudes By involving sociology and public relations experts, the NRCA could develop more effective awareness and education campaigns

3 Although the group was impressed by the exhaustive public consultation process undertaken by the FKNMS, we were cautioned by Captain Ed Davidson, Chairman of the Florida Audubon Society, that it is easy to "fall in love with the process" and lose sight of goals and objectives He felt that the FKNMS had allowed user groups to bully it into making concessions on critical environmental issues and that this had resulted in a management plan that is not as stringent as it should be The group felt that Captain Ed had raised a key point, and that the NRCA, since it is only just starting to conduct public consultations, must be careful However, it was clear that participatory planning methods are being adopted world-wide as the most effective means of cultivating long-term support for environmental initiatives

To increase its effectiveness in public consultation, the NRCA should develop a charter for public consultation This charter should clearly outline steps which the organization will take in its consultative process, the different indicators of when milestones have been achieved and also the indicators of when the objectives of the consultative process have been achieved. Relevant NRCA staff should receive ongoing training in consultation techniques such as rapid rural appraisal, participatory rural appraisal and consensus building

4 In Belize, the group noted that the most effective public outreach programs were those that combined environmental awareness initiatives with economic development programs Local communities were much more likely to respond to environmental initiatives that provided the promise of economic benefit. The group felt that this strategy would also be effective in Jamaica and that environmental management organizations, particularly NGOs, should strive to incorporate a local economic development component whenever possible

5 Like the Executive Director of the Florida State Parks System, high level personnel involved in environmental management should focus a great deal of energy on public relations The ED of the Florida parks system spends at least 40% of her time lobbying state and federal officials and local, state, and regional chambers of commerce to drum up support for her system. This investment of time and energy has paid off in that the park system has warded off budget cuts and increased private sector and public support. Top-level personnel from the NRCA, PIOJ, and NGOs could increase public support of PPAs through similar activities

ALTERNATIVE INCOME GENERATION

1 In both Florida and Belize, the group noted that the protected areas that enjoyed the most public support were those that provided direct or indirect economic benefits to local communities John Pennekamp, in Florida, went so far as to commission studies to assess the park's impact

on the local economy Once park management could prove that the park was bringing millions of dollars into the local economy, support for the park increased Similarly, in Belize, when local communities receive direct economic benefits from protected areas, they support them This is a critical point The group noted that when local communities are beneficiaries, the need for intensive management and enforcement strategies is reduced The communities themselves begin to care for the resources and even assist in enforcement

The group felt that, particularly in a developing country such as Jamaica, the development of programs that help local communities derive economic benefits from protected areas is critical to their long-term success By striving to create direct economic links between protected areas and local communities, the NRCA and its NGO partners can greatly increase protected area success while reducing the need for intensive management and enforcement

2 The group learned an important lesson about developing local income-generating capacity in Crooked Tree The Village Council, citing the example of the failed craft cooperative, emphasized that it is not enough to know how to produce a product, one must also have the marketing skills to sell it This is an important lesson because although environmental organizations make great efforts to give training in craft production, aquaculture, etc , all of these good intentions can be scuttled if local communities do not have the skills to identify and develop markets for their commodities

NATURE TOURISM

1 The group was surprised at the importance that Belize's government (environmental and tourism agencies) NGO, and private sector has placed on the development of a high quality nature tourism product Belize has responded to the rapidly expanding market for active, educational, nature-based tourism by marketing its natural beauty and variety of pristine natural resources The most important aspect of this strategy was that protected areas play a key role in the development of the tourism product.

It was apparent that Belize is ahead of Jamaica in developing a nature tourism product The group agreed, however, that Jamaica's natural areas are equally or more impressive than Belize's, and that Jamaica should tap the expanding nature tourism market. All agreed that the nature tourism product, if developed in an environmentally sustainable manner, has the potential to generate substantial foreign exchange while supporting the conservation of key natural resources

The group suggested that the NRCA and tourism agencies such as the Tourism Product Development Company (TPDCo) work closely to develop a nature tourism product based on and supportive of protected areas It is critical to link tourism, both foreign and national, to protected areas to the greatest extent possible It is important to note that although the GOB is committed to the establishment of protected areas, conservation for the sake of conservation is not the main motivating factor Belize is establishing protected areas because it sees them as playing a key part of the country's economic growth The group felt that Jamaica, with its incredible natural beauty, must not only protect its natural areas, but also market them.

2 Programme for Belize's approach to nature tourism provided the group with a critical lesson on the importance of approaching this rapidly expanding area in a sensible, resource-focused manner Although PFB has made nature tourism a central pillar of its economic development program, the NGO has adopted the environmentally responsible definition of nature tourism as "low-impact tourism, based on appreciation of the environment and where a conscious effort is made to re-invest an adequate portion of revenues in conservation of the resource on which it is

based " Many persons in the group expressed that Jamaica must attempt to regularize nature tourism enterprises to ensure that they adhere to the same definition

- It was noted that many so-called "nature tourism" or "ecotourism" organizations in Jamaica do not, in fact, invest in the conservation of the natural areas which they frequent It was suggested that TPDco develop a nature tourism certification program that ensures responsible, sustainable use of Jamaica's natural areas

INTERPRETATION

1 The group learned that the manner in which information is presented is very important. This was particularly reinforced by Captain Ed Davidson, of Crane Point Hammock, who took the group on a tour of this facility His talk focused on methods of presenting historical and ecological information to the public in a way that captures not only their attention, but their imagination as well Captain Ed emphasized the importance of getting people to think and be creative when learning about the environment The group agreed that his methodology, to focus on examples of sexual reproduction, violence, and bodily functions that occur in nature, helps to get people to laugh and relax, which in turn makes them more receptive to learning

Training in environmental interpretation should be provided to all protected area personnel across Jamaica. Nature walks and visitor centers can be an effective environmental education tools, but they are most effective when the guide or designer is skilled in interpretation

2 Lessons on how to make use of simple indigenous materials to create a low-cost and interesting displays were demonstrated by John Pennekamp Coral Reef State Park, Biscayne National Park and Crane Point Hammock. The group agreed that environmental visitors centers in protected areas are excellent teaching tools for all age groups and should be further developed in Jamaica.

3 Jamaica's environmental management organizations need to become innovative in their use of indigenous material as teaching tools and also ways of packaging information to interest their target audience Some work has been done already Some use is being made of "plays" and "skits" on the environment. Members of the group have plans to build displays similar those seen and the NRCA has since implemented the "environmental expo" model

VOLUNTEERISM

One important lesson learned is the pivotal role that volunteers can play in the establishment and management of protected areas This topic is a challenge In a developing country such as Jamaica, in which most people are busy trying to earn a living, it is difficult to find volunteers In light of this, innovative strategies for volunteerism will have to be developed locally One method could be to target students and teachers Many teachers would like to become skilled in environmental education, but they do not have the tools A programme could be put in place in which teachers and students learn about the environment while actually doing valuable work for environmental management organizations It was also suggested that the Jamaica Youth Service program could incorporate an environmental component.

CONCLUSION

The group agreed that the study tour was a valuable experience Participant's overall individual and organizational learning needs were in all cases met or surpassed The group expressed that they had learned a great deal about the majority of the target topics and many participants indicated that they will be able to immediately apply lessons learned on the tour in their present work

The sites chosen in Florida and Belize provided participants with an opportunity to compare and contrast protected area management styles and strategies in both developed and developing country contexts The group unanimously agreed that this contributed invaluable lessons and insights that would benefit them in their respective environmental management positions

Site visits in Belize, in particular, provided the group with important lessons on all of the tour's target topics These lessons were valuable because the similarities between Jamaica and Belize will allow for transfer of protected areas management methodologies The group agreed that Belize's commitment to protected areas as a key component of an overall conservation strategy sets an important example for the rest of the Caribbean and that Jamaica should strive to emulate many of Belize's successes

The study tour brought together 17 natural resources management professionals from different backgrounds and geographic areas, many of whom had not previously known each other and whose only known common denominator was a personal and professional interest in environmental management Over the course of the tour, the 17 people learned not only about what is happening in Florida and Belize, but also about what each is doing in Jamaica Friendships were formed and many of the group plan to remain in contact both professionally and personally

Perhaps most importantly, many of the group, particularly those that had not traveled abroad, expressed that one of the key lessons learned was that environmental management, whether in the US, Belize, or Jamaica, is an extremely difficult field Several persons stated that exposure to the enormous problems that face environmental managers in both developed and developing countries alike helped to make them aware that these problems are not unique to Jamaica, but in fact are ubiquitous The understanding that Jamaica and the rest of the world are struggling with many of the same issues was, although sobering, encouraging

The group felt that the study tour, by providing them with the opportunity to meet individuals and visit projects in other countries that are facing challenges similar to those experienced in Jamaica, served as an excellent training tool

FOLLOW-ON ACTIVITIES

As a follow-on to the study tour, the DEMO PMU will maintain contact with study tour participants to evaluate the impact of the study tour over the medium term Over a period of one year, DEMO PMU personnel will contact participants periodically to assess progress of implementation of any projects or programs developed based on lessons learned from the tour, and any other impacts that the training activity may have had on their work In March, 1998, the DEMO PMU will compile a report based on the findings of the follow-up activities