Ecotourism: Are current practices delivering desired outcomes?  
A comparative case study analysis

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(ABSTRACT)

Ecotourism has emerged as one of the fastest-growing sectors of the tourism market, influenced primarily by public demand for more environmentally responsible tourism. When planned properly, it has been asserted that ecotourism can integrate conservation of biodiversity with socio-economic development of local communities. For this reason, many governments and non-governmental organizations (NGOs) are eager to develop ecotourism in protected areas in order to maximize these benefits. However, ecotourism can have significant negative impacts when poorly planned and managed including severe environmental degradation, negative cultural changes and decreased welfare of individuals or communities. Ecotourism should not be regarded as a panacea for harmonizing rural development with environmental conservation until the industry’s influence on developing countries has been thoroughly analyzed.

This paper shall explore whether ecotourism has proven to be an effective tool for integrating conservation and development. Through the examination of existing literature pertaining to ecotourism, I investigate the environmental, economic and social impacts of 14 ecotourism development projects in six developing countries: Belize, Costa Rica, Dominica, Ecuador, Indonesia, Nepal and Peru. The case study analysis reveals that local communities adjacent to protected areas are often not fully involved in the tourism development planning process. Ecotourism as a mechanism for achieving local conservation and development goals is more successful when projects prioritize local involvement and control. Through the identification of trends emerging from the case studies, this paper contributes to the ongoing discussion of ecotourism as a development strategy and suggests that local participation should be encouraged in ecotourism development.
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Chapter 1

INTRODUCTION

Ecotourism has emerged as one of the fastest-growing sectors of the tourism market, influenced primarily by public demand for more environmentally and responsible tourism (Boo, 1990, Eagles et al 1993). Spreading throughout the world, ecotourism is estimated to be growing at an annual growth rate between 10% and 15% (Scheyvens, 1999). Some authors stress the potential of ecotourism to promote the well being of local people as well as their environments (Honey, 1999; Weaver, 1998), while others caution us from accepting ecotourism without considering its imperfections (Boo, 1990; Ziffer, 1989; Cater and Lowman, 1994; Scheyvens, 1999). Thus, there appears a need to consider the needs and welfare of local host communities as well as the ensuing environmental impacts.

Tourism is the largest industry in the world. Generating about US$3.4 trillion annually, it is a key sector in the world economy (WTO, 1996). According to the World Travel and Tourism Council (WTTC), tourism accounts for 10.1% of the world’s gross domestic product (GDP) in 1995 (UNEP-IE, 1995). Much of the money spent on tourism ends up with foreign investors and companies with a considerable amount of revenue leaking back to developed countries through the purchase of imported supplies, repatriation to owners for foreign-owned hotels, fees to foreign tour operators, and purchase of airline tickets (Boo, 1990). The World Bank estimates the leakage of revenue to developed countries from ecotourism in less developed countries to be 55% (McCormick, 1993).

Tourism has the potential to contribute to a high level of economic and social development. However if tourism development is not properly planned and managed, the destructive consequences of development will outweigh the otherwise beneficial. Areas
particularly at risk of suffering from unplanned or poorly planned tourism include coastal regions, small islands, coral reefs, mangroves, beaches, mountain areas & desert regions. Additionally, tourism itself produces a myriad of negative effects. It is an unstable source of income largely influenced by factors such as political instability and weather (Boo, 1990). The industry is repeatedly blamed for damaging the environment and local cultures. Some of the environmental impacts of tourism include aircraft emissions and noise, increased water consumption, water pollution by sewage and litter and increased stress on endangered species (Goodwin, 1996). Appropriate planning plays an essential role in the successful development of tourism.

This paper describes the elements and components of ecotourism identified in the literature. It then analyzes research documents from 14 ecotourism projects in selected developing countries assessing their impacts on biodiversity conservation and local community development. In addition, the paper explores trends across the projects and identifies characteristics that might define a project as successful or unsuccessful according to the ecotourism research literature. Finally, recommendations are made regarding potential strategies to more effectively implement conservation and community development planning within the context of ecotourism.
Chapter 2
WHAT IS ECOTOURISM?

Around the world, ecotourism has been hailed as a panacea: a way to fund conservation and scientific research, protect fragile and pristine ecosystems, benefit rural communities, promote development in poor countries, enhance ecological and cultural sensitivity, instill environmental awareness and a social conscience in the travel industry, satisfy and educate the discriminating tourists, and, some claim, build world peace.

(Honey, 1999:4)

Ecotourism is alleged to be a sustainable development strategy that is receiving much attention (Boo, 1990; Farrell and Runyan, 1991; Tobias and Mendelsohn, 1991; Kangas et al., 1995). This current buzzword describes the link between tourism and the ecological and socio-economic principles of sustainability, ecotourism is viewed as a promising tool to provide environmental, socio-economic and cultural benefits. Although the scale is generally smaller than mass tourism, the amount of income generated is relatively modest. However, even small amounts of revenue if distributed to local economy, can considerably raise the stand of living in local communities (Kangas et al., 1995).

Although sightseeing and tourism have been associated with natural attractions such as national parks and wilderness areas for a long time, “ecotourism seeks to tighten the relationship and to create new economic linkages. The most important feature of ecotourism is that money generated by the tourist’s presence is used to improve and protect the natural resource base that originally attracted the tourist” (Kangas et al., 1995:669). Several important questions are generated when considering the ecotourism development: Is it ecologically benign development? Can it truly serve as a long-term resource development strategy? Are the host countries’ local residents truly benefiting from this development (environmentally, economically
and socially)? Will it destroy the viability of natural systems through overuse and lack of precautions?

**Ecotourism Defined**

Distinct origins and definitions of the term “ecotourism” remain an issue of debate. However, selected definitions commonly promoted by NGOs and practitioners in the field are presented to provide a baseline to ground the activity of ecotourism and assess its current status and impacts (Table 1).

<table>
<thead>
<tr>
<th>Source</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hector Ceballos-Lascurain (Boo, 1990: xiv)</td>
<td>Traveling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas.</td>
</tr>
<tr>
<td>Ziffer of Conservation International (1989)</td>
<td>A form of tourism inspired primarily by the natural history of an area, including its indigenous cultures. The ecotourist visits relatively undeveloped areas in the spirit of appreciation, participation and sensitivity. The ecotourist practices a non-consumptive use of wildlife and natural resources and contributes to the visited area through labor or financial means aimed at directly benefiting the conservation of the site and the economic well-being of the local residents.</td>
</tr>
<tr>
<td>The Ecotourism Society (2002)</td>
<td>Responsible travel to natural areas that conserves the environment and sustains the well-being of local people</td>
</tr>
<tr>
<td>Honey (1999)</td>
<td>Ecotourism is travel to fragile, pristine, and usually protected areas that strive to be low impact and (usually) small scale. It helps educate the traveler; provides funds for conservation; directly benefits the economic development and political empowerment of local communities; and fosters respect for different cultures and for human rights.</td>
</tr>
</tbody>
</table>

Many dimensions clearly emerge from these widely stated definitions including:

1. Ecotourism occurs in natural areas (most often protected areas) and/or places of unique ecological or cultural interest
2. Ecotourism contributes to conservation or preservation of the natural resources and promotes stewardship of natural and cultural resources.
3. Ecotourism should create necessary funds to promote permanent protection of ecological and socio-cultural resources
4. The local residents accrue economic and social benefits thereby contributing to project’s long-term success.
5. Ecotourism incorporates environmental and cultural education.
6. Ecotourism should be effectively managed for the long-term through minimal negative impacts on the host environment.
7. Ecotourism should provide a quality tourism experience.

These seven themes contribute to the development of criteria utilized in the case studies analysis.

**Ambiguous nature-based tourism descriptors**

A few authors have attempted to differentiate the myriad of terms used to describe ecotourism. However, overall the literature fails to differentiate between these terms. An examination of the following expressions leads to the assumption that throughout the world a new form of tourism is being identified (Table 2).

Table 2. Alternative terms for “ecotourism” (adapted from Lesley, 1997 and Valentine, 1993)

<table>
<thead>
<tr>
<th>Terms</th>
<th>Other Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adventure travel</td>
<td>Low impact tourism</td>
</tr>
<tr>
<td>Alternative tourism</td>
<td>Natural areas travel</td>
</tr>
<tr>
<td>Anthropological tourism</td>
<td>Nature-based tourism</td>
</tr>
<tr>
<td>Appropriate tourism</td>
<td>Nature oriented tourism</td>
</tr>
<tr>
<td>Biotourism</td>
<td>Nature tourism</td>
</tr>
<tr>
<td>Community-based tourism</td>
<td>Nature travel</td>
</tr>
<tr>
<td>Cultural tourism</td>
<td>Nature vacations</td>
</tr>
<tr>
<td>Ecological tourism</td>
<td>Non-consumptive wildlife recreation</td>
</tr>
<tr>
<td>Ecotavel</td>
<td>Resource based tourism</td>
</tr>
<tr>
<td>Eco-tourism</td>
<td>Responsible tourism</td>
</tr>
<tr>
<td>Ecotripping</td>
<td>Rural tourism</td>
</tr>
<tr>
<td>Ecoventures</td>
<td>Safari tourism</td>
</tr>
<tr>
<td>Environmental pilgrimage</td>
<td>Science tourism</td>
</tr>
<tr>
<td>Environment-friendly tourism</td>
<td>Socially responsible tourism</td>
</tr>
<tr>
<td>Environmental tourism</td>
<td>Soft adventure tourism</td>
</tr>
<tr>
<td>Ethical travel</td>
<td>Soft and hard tourism</td>
</tr>
<tr>
<td>Ethical tourism</td>
<td>Special interest tourism</td>
</tr>
<tr>
<td>Ethnic tourism</td>
<td>Sustainable tourism</td>
</tr>
<tr>
<td>Green tourism</td>
<td>Wilderness tourism</td>
</tr>
<tr>
<td>Jungle tourism</td>
<td>Wilderness tourism</td>
</tr>
</tbody>
</table>

One of the largest sources of confusion is the failure to discriminate between nature-based tourism from the small-scale nature tourism (or ecotourism) described in this paper. In the literature, ecotourism is often used interchangeably with “nature-based tourism” or “nature
tourism” although it should be noted that many scholars believe there to be a distinction (Orams, 1995; Burton 1998). In fact, these terms all have very different connotations. Goodwin (1996) explains nature-based tourism as a label describing all types of tourism that occur in a natural setting, with ecotourism falling under this classification. Orams (1995) describes ecotourism as being an “active participant”, intended to signify that as a result of this development the area is better off either though financial, time, and/or labor contributions. Additionally, ecotourism has an educational or interpretative element to it where the participants are able to learn about relevant environmental issues as well as develop skills to minimize the impact that they have on the environment (Burton, 1998). Orams (1995) classifies nature-based tourism as being a “passive participant” meaning that the natural environment is merely a setting for the activity and does not directly benefit from ecotourism.

“Adventure tourism” is another classification commonly confused with ecotourism and often falls under the classification of nature tourism. Adventure tourism ordinarily refers to “physically exerting sporting activities (frequently involving a certain level of personal risk) also conducted in a natural setting (e.g., hang gliding, whitewater rafting, and mountain biking)” (Lindberg, et al., 1998:8). Nature tourism or adventure tourism activities may or may not be environmentally friendly or benefit the local people adjacent to the venue of activity.
Chapter 3

IS ECOTOURISM A PANACEA?

Proponents of ecotourism generally claim that ecotourism can improve the quality of life for both host and guest, protect the natural and human environment and substantially contribute to the local economy. From the definitions and principles stated above, it is evident that ecotourism puts a much heavier weight on conservation, education and ethics than do other forms of tourism. With the provision of revenue for parks and conservation, ecotourism often provides economic justification for park protection. However, ecotourism will only deliver its promised benefits if implemented in such a manner that involves all stakeholders, especially the local population, and manages conflicting interests. Given the countless disparities in interests, including prevalent situations where one interest gains at the expense of another (as illustrated in the case studies), it is unlikely that ecotourism will be comprehensively perceived as successful. Furthermore, a win-win experience of one particular project may not transfer to a different locality with a different culture and political structure. In order for a region to avoid being exploited or “eco-sold”, the host community must have the will and ability to protect its natural areas from excessive development before they will attain the benefits from ecotourism. Lastly, with an ambiguous idea as to what ecotourism specifically embodies on either a global or local scale, it is not surprising then, that marketers and consumers are unclear as to the appropriateness or meaning of the word “ecotourism” and thus use and accept it arbitrarily.

Promises

Ecotourism development has the potential to provide alternatives to more traditional land uses, such as logging and agriculture, and can provide an impetus for private conservation efforts. It contributes to a growing awareness of conservation issues as well. In principle,
ecotourism offers enhanced prospects for local involvement and benefits compared with conventional tourism. For example, income may be captured locally through revenue-sharing strategies, entrepreneurship and labor and through the sale of traditional handicrafts as souvenirs. Potentially, ecotourism can act as a means of financing and improving basic services in rural communities such as clean water and sanitation, electricity and transportation systems. Additionally, ecotourism may possibly provide incentive and reason to preserve certain features of a particular traditional culture. Lastly, when local communities are involved and receiving benefits from the venture, the possibility of lastingly conserving the natural resources upon which ecotourism depends, is appreciably increased. Adapted from Koth (1991) cited in Gartner (1996:150), the promises of ecotourism, relating to an appropriate activity occurring in the appropriate venue, having minimal impact on the land or other resources while significantly contributing to the local economy, and increased stewardship, are explained in more detail below.

The venue: Ecotourism is assumed to occur in an exotic, remote, undisturbed, and unpopulated natural area. If the literature is any indication, the majority of ecotourism development occurs within and around protected areas. Most of the case studies profiled in this paper illustrate that ecotourism is generally defined around a protected natural area whether this be a large national park or a small private sanctuary. Regional governments and non-governmental organizations are eager to develop ecotourism in protected areas to help preserve ecosystems and benefit local communities (Walker, 1996). However, worldwide agencies administering protected areas are suffering from budget and staff constraints rendering many national governments unable to respond to the management of the resources or the tourism demand. There is a growing
consensus that protected areas will not be able to survive if they exclusively depend on government management (Barzetti, 1993: 55). At the moment, the most practical response seems to be shared management with private and non-governmental organizations. Thus both publicly managed protected areas as well as privately run nature sanctuaries serve as ecotourism sites.

**Minimal impact:** An assumption about ecotourism is that it minimizes negative environmental and social impacts. Activities are planned to be more ecologically aware. “Visitors rely more heavily on local lodging, transportation, and locally made products. Operators are expected to minimize water through proper disposal and recycling methods, and initiate environmental policies for their clients which are based on responsible behavior” (Gartner, 1996: 150). Clearly the environment does not benefit from high visitation levels, it does however benefit from the revenue received from the tourists if land-use patterns are changed from a resource extraction to resource protection structure.

**Economic linkage:** A distinguishing factor between ecotourism and traditional mass tourism or nature tourism is the intent of the former is to establish a strong connection between tourism development and local industries. “Ecotourism attempts to link economic and environmental impacts in a model which promotes community development activities while protected and preserving local resources” (Gartner, 1996: 151). Ecotourism is thought to be beneficial to national economies by increasing foreign exchange, expanding the service sector leading to increased employment, and attracting investment capital for infrastructure development (Boo, 1990).
**Stewardship:** Another assumption of ecotourism is that it can lead to increased concern for the environment, both by tourists and locals. The tourists can contribute to the preservation of an area through entrance fees and donations. When villagers recognize that the potential exists to receive continuous income from tourists without an unsustainable use of their natural resource (e.g. logging), they will understand the importance of preserving the natural area (Goodwin, 1996).

Ecotourism is often viewed as a reaction to many of the negative results of mass tourism. Ecotourism does indeed have the potential to generate adequate funds for development or maintenance of ecologically or culturally important resources, provide tourists with a quality experience, serve as a mechanism to stimulate local economic development and provide national level benefits including increased foreign exchange. This goal is echoed in several guidelines for ecotourism development displayed in Box A.

**BOX A - Guiding Principles for ecotourism based on Wight (1994)**

Ecotourism should:
- Not degrade the resource and should be developed in an environmentally sound manner
- Provide long-term benefits to the resource, to the local community and industry (benefits may be conservation, scientific, social, cultural or economic)
- Provide first-hand, participatory and enlightening experiences
- Involve education amongst all parties—local communities, government, non-governmental organizations, industry and tourists (before, during and after the trip)
- Encourage all-party recognition of the intrinsic values of the resource
- Involve acceptance of the resource on its own terms, and it recognitions of its limits, which involves supply-oriented management
- Promote understanding and involve partnerships between many players, which could include government, non-governmental organizations, industry, scientists, and locals (both before and during operations)
- Promote moral and ethical responsibilities and behavior towards the natural and cultural environment by all players
Although ecotourism appears to be beneficial to all sides in theory, its implementation often does not produce the desired results. There are many examples of the word “ecotourism” being applied to a number of activities, which do not meet these initial criteria.

“Eco-Selling”

In theory the promises of ecotourism are enchanting. However, in practice the buzzword is often used for ulterior purposes. Some believe that ecotourism is merely being used to sell a product and is nothing more than a marketing gimmick (Wight, 1993). “Eco-selling” the regions and tourism resources solely for short-term economic gains is prevalent. Wight (1993: 4) claims, “almost any terms prefixed with “eco” will increase interest and sales”. If travelers are only attracted to ecotourism for the sake of justifying or feeling better about their ecological and cultural impact or to simply perceive themselves as environmentally friendly than ecotourism may be ecologically based, but not ecologically sound. For example, experiences promoted with the prefix “eco-” such as ecotour, eco-travel, and eco-vacation are not necessarily certified or standardized to signify anything exceptional. These terms are often intentional misrepresentations to attract customers.

The case studies presented in this paper suggest that ecotourism operators do not often take an interest in investing their resources in the local community. The development of partnerships between the agencies marketing the resource and the community could potentially serve to reduce exploitation of the local population as well as provide assurance to consumers that the principles embodied in ecotourism goals are incorporated in any development claiming to offer “ecotourism”.
Chapter 4
THE IMPACTS OF ECOTOURISM

Ecotourism is extensively accepted as a strategy with the potential to provide ecological, economic, and social benefits at the local and national level. Although a set of explicit objectives or standard principles of ecotourism does not definitively exist, clearly the aim of ecotourism is to channel economic benefits to local communities thereby creating a greater incentive for continued involvement of the local people and thus a greater chance of success for biodiversity conservation. The following sections detail positive and negative environmental, economic and social impacts on the affected natural area as well as the local population.

Environmental Impacts

For the purposes of this discussion, environmental impacts considered here include both the direct and indirect impacts on the natural environment. Advantageous and detrimental environmental impacts are listed in Table 3. It should be noted that the severity of impacts depend upon the type of activity as well as the type of ecosystem affected. With the exception of obvious impacts such as trampling of vegetation and changes in wildlife habits and patterns, little research has addressed less obvious ecological impacts such as noise disturbance or wildlife population dynamics.

Although ecotourism has brought awareness to the conservation of pristine areas and unique biological resources, some have argued that tourism is just not eco-friendly. Like any other tourist, an ecotourist uses a huge amount of natural resource to even get to her destination. According to the World Watch Institute, (Mclaren, 1998: 98), “Airplanes are the most energy-intensive means of carrying people and cargo.” Scientists report that nitrogen oxides from
aircraft might be responsible for over 30 percent of future global warming (Kane, 1993 cited in Mclaren, 1998: 98).

Table 3. Environmental impacts of ecotourism (adapted from Buckley, 2001; Green and Hunter, 1992; Boo, 1990)

<table>
<thead>
<tr>
<th>Positive Impacts</th>
<th>Negative Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation of wildlife reserve/sanctuary</td>
<td>Disruption of breeding habits</td>
</tr>
<tr>
<td>Justification for park protection</td>
<td>Change in wildlife migration patterns</td>
</tr>
<tr>
<td>Habitat restoration</td>
<td>Water pollution by sewage or petroleum disposal</td>
</tr>
<tr>
<td>Less intensive resource use option</td>
<td>Visual impacts (litter, facilities)</td>
</tr>
<tr>
<td>Reduce incentive for other more resource intensive uses</td>
<td>Compaction of soils causing increased run-off and erosion</td>
</tr>
<tr>
<td>Environmental education</td>
<td>Over-exploitation of biological resources (over-fishing)</td>
</tr>
<tr>
<td>Increased stewardship</td>
<td>Land use changes in primary production areas</td>
</tr>
<tr>
<td>Impetus for private conservation efforts</td>
<td>Destruction of vegetation</td>
</tr>
<tr>
<td>Community building which promotes conservation</td>
<td></td>
</tr>
</tbody>
</table>

**Economic Impacts**

Ecotourism definitions require that the indigenous host community receive the benefits and despite its small-scale and seasonal character, ecotourism has the potential to deliver economic benefits on multiple levels. This includes foreign exchange earnings, increased employment opportunities, infrastructure development, and a more diversified local economy (Lindberg, 2001; Wight, 1994).

Direct and indirect economic benefits of ecotourism will be realized if the resource capacity is not exceeded by the tourism demand. Direct impacts include revenues from initial tourism spending such as food and lodging. Indirect impacts accrue to the local communities when, for example, restaurants and lodges buy local goods and services. Although sometimes local communities receive all income generated from tourism, often a large amount of profit generated in local communities eventually end up with local elites, outside operators, or
government agencies (Scheyvens, 1999). This money that flows out of the community in order to support tourism is referred to as economic or revenue leakage. Revenue leakage accounts for a significant percentage of income that would otherwise be directed towards the local community (Boo, 1990). The amount of leakages occurring depends upon the local economy and the level of self-sufficiency. A few sources of leakages include the continual need to import foreign goods and services, repatriation of profits from foreign-owned hotels and restaurants, and advertising and marketing efforts abroad. Lindberg and Enriquez (1994) estimated that 55 cents of every tourist dollar spent in developing countries leaks back into developed countries. In Tangkoko Duasudara, Indonesia, the village receives minimal benefits with the current income distribution structure. Forty-seven percent (47%) of revenues heads to the major tour company and only 7% accrues to guides -and the head reserve guard get 20% of this (Kinnaird and O’Brien, 1996). The only way to avoid significant economic leakage is to acquire goods and services as much as possible from the local community and for locals to maintain ownership of tourist establishments. Often ecotourism development in remote locations will import expertise and products from urban areas and foreign countries instead of developing skills or products, including food supplies and lodging, locally.

The economic impacts are difficult to capture in a table since economic benefits are received on numerous levels. Additionally, whether the impacts are positive or negative depend on one’s outlook. For example, people desiring to sell land would benefit from increased land prices while those buying land would oppose increased prices. Jobs and income are the focus of the literature and will be the focus in analyzing the case studies (Lindberg, 2001)

Table 4 lists the positive and negative local economic impacts, although some do overlap with larger scale benefits (i.e. funding for protected areas is a potential benefit on both the local
level as well as the national level). A critical question regarding the economic impacts of tourism is: who is benefiting?

Table 4. Economic impacts of ecotourism (adapted from Lindberg, 2001 and Lindberg and Huber, 1993)

<table>
<thead>
<tr>
<th>Positive Impacts</th>
<th>Negative Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased employment opportunities</td>
<td>Leakage of revenues</td>
</tr>
<tr>
<td>Increase household income</td>
<td>Uneven distribution of revenues/ income inequalities</td>
</tr>
<tr>
<td>Funding for infrastructure</td>
<td>Reduced access to resources (i.e. wood, medicinal plants)</td>
</tr>
<tr>
<td>Funding for protected areas</td>
<td>Locals lose income from resources because a public protected area</td>
</tr>
<tr>
<td>Revenue-sharing</td>
<td>Foreign ownership of businesses</td>
</tr>
<tr>
<td></td>
<td>Inflation-increased prices for goods, services and land</td>
</tr>
</tbody>
</table>

**Social Impacts**

Lasting success of ecotourism development projects depends on participation of local indigenous communities in all phases of planning and implementation. However, ecotourism development is often imposed from the national level with local communities excluded from the planning, preparation and implementation phases of ecotourism development projects (King and Stewart, 1996). It has been claimed that the long-term success of the tourism industry depends upon the level of agreement and support of the adjacent local community. Often, however, the residents of these protected areas do not fully understand the potential environmental, economic and social impacts of ecotourism and thus may not support ecotourism development.

Social impacts (Table 5) include capacity-building opportunities, such as cooperatives and training, increased cultural pride as a result of ecotourism, and increased government support such as protection and the reduction of illegal practices (Wearing, 2001). It should also be noted that economic impacts do indeed have a profound influence on consequent social impacts. For
example, tourism can lead to increased prices of goods and services, rendering the locals unable to remain in the area.

One of the most significant influences of ecotourism on local indigenous communities is the “commodification” of their culture whereby people and their cultural artifacts and symbols are treated as commodities that can be bought or sold (Scheyvens, 1999). This often occurs when a desire for short-term economic benefits outweigh a desire to maintain long-term local support (Wight, 1993). King and Stewart (1996: 296) state “for indigenous people, the commodification of nature implies a change in the meaning of their environment from a source of direct sustenance with a use value to a commodity with an exchange value”. Other impacts include the loss of indigenous knowledge and a change in social structure whereby people begin to emigrate and shed traditional practices in order to cater to tourists (Brandon, 1996). The shift from traditional life-supporting activities to service activities such as ecotourism may be perceived by many indigenous cultures as negative (Place, 1991).

Table 5. Social impacts of ecotourism (adapted from Brandon, 1996; King and Stewart, 1996; Wearing, 2001)

<table>
<thead>
<tr>
<th>Positive Impacts</th>
<th>Negative Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased interest in traditional practices/ceremonies</td>
<td>Shifts away from traditional practices; loss of indigenous knowledge</td>
</tr>
<tr>
<td>Government protection of valued cultural resources</td>
<td>Move away from self-sufficiency to dependency</td>
</tr>
<tr>
<td>Preserved cultural identity and pride of local community</td>
<td>Changes in cultural landscape e.g. housing, employment</td>
</tr>
<tr>
<td>Promotion of cultural exchange</td>
<td>Restricted access to natural resources</td>
</tr>
<tr>
<td>Development of local cooperatives</td>
<td>Changes in family economies</td>
</tr>
<tr>
<td>Training and education</td>
<td>Increased exploitation of local natives</td>
</tr>
<tr>
<td>Funding for protection/maintenance of natural and cultural attractions</td>
<td>Injury to residents, livestock, crops by wildlife within protected area</td>
</tr>
<tr>
<td>Reduction of poaching or other illegal activities</td>
<td>Local obligation to perform traditional dances/activities</td>
</tr>
<tr>
<td>Increased market for development of local goods</td>
<td>Growth of vandalism, prostitution, crime</td>
</tr>
<tr>
<td>Increased used of local labor and expertise</td>
<td>“Commodification” of culture</td>
</tr>
<tr>
<td></td>
<td>Changes in family structures and values</td>
</tr>
</tbody>
</table>
Impact evaluation

Change is inevitable regardless of whether it is due to economic, environmental or social impacts. When considered collectively, the impacts detailed above raise several questions. What degree of change is acceptable on local economies and the environment? Which changes are unacceptable? What strategies should be implemented to manage changes or impacts? Who should be involved in managing impacts? These questions need to be asked and addressed concerning the burgeoning tourism industry and its influence upon local indigenous communities. Answers have been sought in numerous studies.

Ecotourism is especially aimed at preventing adverse effects that could threaten the very foundation on which it depends. If achieving the principles/standards stated above and minimizing impacts, ecotourism development has the capacity to encourage individuals, the private industry and governments to protect environmental and cultural resources and plan for long-term resource use. A critical determinant of the success or failure of an ecotourism project is said to depend on participation of local indigenous communities in all phases of planning and management of a project (King and Stewart, 1996). However, a full reflection of the ecological, economic and social consequences of ecotourism raises fundamental uncertainties regarding its ability to endure for the long-term.

Effective planning and management

Ecotourism development is the product of multiple planning processes originating from local communities, NGOs, and national governments. An important consideration in how ecotourism affects rural communities is the level and type of control maintained by local populations. Locals are involved on various levels depending on the project; sometimes they are
owners and essential participants in planning and sometimes they have minimal control or opportunities to participate and thus are merely recipients of unwanted change.

Since an objective of ecotourism is to contribute to local community development, collaborative or participatory planning is ideal. Clearly, local ownership and control is a basic “planning action under which the positive economic development benefits from tourism will flow to the local people and which can minimize negative economic, social, and cultural impacts on resident people” (Johnson, 1991 cited in Brandon, 1996: 30). However exclusive control by the government is a common tactic to ecotourism planning and management often resulting in detrimental impacts to the local community and thus a lack of local support for conservation and tourism. “Though effective planning and management is crucial to the proper functioning of ecotourism, it continues to be largely absent” (Drumm, 1998: 204).

If local populations do not actively participate in all aspects of developing and managing natural resources for ecotourism and its economic benefits, they many choose to use natural resources for other land uses such as logging, mining, slash-and-burn agriculture or poaching thereby threatening the integrity of the resources as an ecotourism destination. The planning and management structure, whether participatory and community-based or non-participatory and governmentally managed, is an important element to consider when assessing the success of ecotourism development projects.
There is concrete evidence that ecotourism is a global phenomenon. In some regions it is subtle and discreet and in other regions ecotourism receives considerable government attention and extensive commercial publicity. There seem to be very few countries in the world in which some type of ecotourism discussion is not occurring. Many countries, including Mexico, Australia, Malaysia and Ecuador have created national ecotourism strategies and plans (Lindberg, et al., 1998). The challenge now is to move beyond the theoretical constructs presented in the literature to practical application in the field.

**Characterization of ecotourism literature**

The current study is informed by several different disciplines including economics, ecology, anthropology, sociology, hospitality and tourism, and regional planning and utilizes data from these fields in an attempt to identify impacts of ecotourism emerging from the literature. Research of ecotourism development projects is not necessarily sound. There is a shortage of systematic and comparative reviews of the effects of tourism and development. After extensive research within the ecotourism literature, the author did not come across any single study attempting to compile or compare data from the assorted sources to create an amalgam of the involved disciplines.

Tourism scholars do not utilize consistent theories, methods or literature bases; each study seemingly starts from the beginning rather than building upon or comparatively using empirical data from previous studies. The tourism literature is far from standardized, making comparison and generalization extremely problematic. It is tremendously challenging to clearly
compare data from diverse disciplines using different data collection and analysis techniques not to mention different jargon, variables, and criteria.

Overall, case studies emerge as a prevalent research method in the tourism literature and although valuable, they merely provide a description of a situation unique in geography and culture and deficient in an unambiguous explanation of what ecotourism is globally. Without generalizability, the tourism literature has limited ability to contribute to an overall estimation of the extent of ecotourism impacts and possibilities. Additionally, much of the research published in academic journals is limited to a one-time analysis of a particular project including assessment of ecological and cultural impacts. It would be useful to delve further into causal processes contributing to a particular issue thereby enabling future ecotourism development projects to learn from past mistakes. There are enough ecotourism projects in existence to justify a strategy of impact evaluation beyond mere exploratory observations.

Having reviewed the literature, the author suggests that standard methodologies be applied to ecotourism research in order to logically evaluate the impacts and thus the potential of ecotourism. It would be sensible for researchers to seek collaborative efforts among academics, NGOs and governing agencies to provide an interdisciplinary field and thus more credibility to ecotourism research. Until more comparative and collective analysis is accomplished across the disciplines in addition to longitudinal research studies, assessing the potential of ecotourism as a mechanism for achieving local conservation and development goals will remain irresolute.

**Case Study Analysis Methodology**

Background information and case studies were obtained from the existing ecotourism research literature. Ecotourism projects were distinguished from other forms of tourism development by the emphasis on unique natural resources, the potential to contribute to
community development, and the relatively small-scale development in relation to the site and surrounding communities. Clearly, several projects identified are currently not achieving these goals, however, either formerly or currently goal attainment was/is a possibility. Galapagos National Park, for example, did have the potential to remain small-scale and beneficial to the ecology and local community of the area, however, the management structure did not enforce use regulations and thus visitation has burgeoned far beyond the carrying capacity of the area. Hence, it is still considered an ecotourism project by most, albeit currently in a state of decline.

Research was primarily identified by conducting a keyword search with the Virginia Tech library database system. Using the keyword “ecotourism” served to extract research on ecotourism development and the author’s analytical proficiency was used to eliminate any outlying studies that clearly did not fit the definition utilized in this case study analysis. Other relevant research emerged through the snowball technique. Since the goal of this study is to assess whether ecotourism has proven to be an effective tool for integrating conservation and development in developing countries, I have excluded case studies from the United States, Canada, Australia and Europe. Although, ecotourism is heavily promoted in these regions, they have much more infrastructure to support tourism than what exists in developing countries.

While by no means a homogenous group, a comparative analysis of specific ecotourism development projects within the existing ecotourism literature was completed using the significant criteria listed in Table 6. Criteria were selected based on identified impacts of ecotourism in the literature as well as common elements emerging from the case studies.
Table 6. Criteria contributing to success or failure of ecotourism project

<table>
<thead>
<tr>
<th>Environmental</th>
<th>Economic</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecological Preservation</td>
<td>Household Income</td>
<td>Community Education or Training</td>
</tr>
<tr>
<td>Use Impacts</td>
<td>Distribution of Benefits</td>
<td>Local attitudes towards tourism and conservation</td>
</tr>
<tr>
<td>Protected area restricted access</td>
<td>Type of employment (management vs. unskilled labor)</td>
<td>Local capacity building (e.g. cooperatives)</td>
</tr>
<tr>
<td>Tourism revenues reinvesting in protected area</td>
<td>Infrastructure development</td>
<td>Cultural Impact</td>
</tr>
<tr>
<td>Management structure</td>
<td>Local Businesses</td>
<td>Participatory planning</td>
</tr>
<tr>
<td></td>
<td>Revenue leakage</td>
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</tbody>
</table>

The criteria selected are universal and can and do cut across specific cultural and geographical parameters. Additionally, although several criteria lend themselves to fitting under more than one categorical impact (environmental, economic or social) a subjective selection was made to fit each criterion under only one impact.

It should be again noted that the tourism research literature explored in this study generally suffers from a lack of analytical interest or rigor. Few research studies encompass all impacts identified to be components of ecotourism. As might be expected, not every case study has sufficient data to address every criterion, even if numerous sources are used. Therefore although not directly comparable since using different baselines and methods of data collections, the ecotourism case study literature analyzed for as a whole will provide evidence of broad trends. Fourteen ecotourism projects located in six developing countries (Belize, Costa Rica, Dominica, Ecuador, Indonesia, Nepal and Peru) were selected for this analysis to help determine the degree to which ecotourism has served ecological, economic, and social goals defined above.
Belize

Belize is a small (8,867 square miles), Central American country with a relatively low population density (8 persons per km²) (Lindberg, et al., 1996: 544). Given this, much of the country’s natural resources remain relatively unaffected by the human population. This is beneficial both to biodiversity and nature-based tourism. Primary economic activities in Belize include agricultural production, forestry, fishing and tourism. Belize’s policy regarding the national economy places tourism alongside agriculture as the two most important economic sectors (Lindberg, et al., 1996). Its close proximity to the United States in addition to its impressive natural resources makes Belize an immensely popular tourist destination.

Tourism is Belize’s largest foreign exchange earner. In 2000, there were 326,642 international arrivals into the country. The Belize Tourist Board estimated that in 1994 tourism revenue within the country reached about US$75 million (World Resources Institute, 2002). The Government of Belize and one of the largest NGOs, the Belize Audubon Society (BAS), are promoting ecotourism development as a major source of revenue for local landowners.
The Community Baboon Sanctuary (CBS) is situated in a rural community called Bermudian Landing, 33 miles northwest of Belize City. Bermudian Landing has 32 households and is located along the main road running through the sanctuary. There are seven other villages involved in the sanctuary development. CBS was established as a private protected area in 1985 for protection of the black howler monkey, *Alouatta pigra* (also called “baboons”). It was created after Dr. Robert Horwich, a biologist from the United States, studied black howlers in Belize and the Yucatan Peninsula. Although howlers were generally threatened due to habitat destruction from slash and burn agriculture and hunting, they were thriving in the Bermudian Landing area. Dr. Horwich along with a few colleagues proposed the creation of a community-based sanctuary to help preserve black howler habitat and asked local residents and the village council for support.

In 1985 villagers signed a pledge to keep their land according to the proposed management plan for the baboons and other wildlife. Although voluntary, sanctuary membership requires that certain management practices be followed which includes leaving a section of shrubbery along the river corridor, protecting trees along the property line to serve as primary habitat of howlers and preserving vegetation serving as food sources for howlers when clearing farmland. Landowners benefit by learning better farming practices resulting in reduced

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1Information on this ecotourism project was obtained from the following sources: Alexander (2000), Brandon (1996), Farrell and Marion (2001), Horwich and Lyon (1998)
soil erosion and siltation. Additionally, researchers and ecotourists benefit because the wildlife and habitats are available to study and observe.

Ecotourism development

The villagers first proposed tourism in the mid-1980s. Local residents providing guest rooms and meals began in 1987 with a small group of students visiting Bermudian Landing to study monkeys (Horwich and Lyon, 1988; Alexander, 2000). They camped on host families’ properties and were provided with meals. This program of local residents providing tourist facilities continued for several years, and encouraged the community to diversify their services. Guided tours began in 1988 and soon thereafter the need to regulate visitors was acknowledged by sanctuary staff. Visitors were charged $2.50 per person to be accompanied by sanctuary staff. Today CBS depends on the US$5.00 registration fee paid to the museum (Alexander, 2000). Visitors can still arrange for a tour guide, meals and overnight stays with a local family through the Community Baboon Sanctuary office.

Visitors spend a substantial amount of money when visiting CBS and the profits do indeed remain in the local community. In 1990, there were about 3,000 visitors who spent an estimated $21,605 in the village. Of this, 43.2% was spent on meals; 20.2% on accommodations; 12.3% on souvenirs, 9.8% on guiding, and 8.7% on personal/other (Brandon 1996: 43). Although some of the tourist revenues stay within the community through local purchases and the hiring of local labor, it is unevenly distributed as a small percentage of the families (i.e. lodge owners) receive most of the revenues (Alexander, 2000).

Current resident attitudes towards the sanctuary are generally supportive although some feel that they have not fully received their share of economic benefits from tourism. Alexander (2000) studied local residents’ feelings towards resource protection and tried to assess their
attitudes towards management of the sanctuary. She surveyed both member (of CBS) and non-member households in three of the eight villages located within the boundaries of the sanctuary. Overall, she found that tourism was regarded by CBS membership as the most positive benefit. Residents positively supported conservation and protection for the howler monkeys for their “intrinsic, aesthetic and material values” as well as for future generations. However, residents were frustrated with the sanctuary and its managers because the promise of direct involvement in administration and significant economic benefits had yet to be fully realized. Interestingly, Alexander (2000:345) found that non-members “indicated stronger agreement that the sanctuary was created for tourism and not only to support the howlers.”

Is CBS accomplishing its objectives?

Two years after its inception, 60 additional landowners from eight neighboring villages joined CBS. Today, about 160 members and eight villages, encompassing approximately a 20 mile stretch along the Belize River are included among CBS supporters, each conducting their farming practices in accord with wildlife needs. “The increase in the howler monkey population shows nine out of ten landowners are living up to their pledge to support the project and have adopted improved farm management practices” (Brandon, 1996: 43).

Since its establishment, CBS has been regarded as an excellent example of participatory ecotourism development in a community-owned protected area and is asserted by the Belizean government to be a model for grassroots participatory ecotourism development. Even though its management and financial successes are not flawless, CBS is seemingly achieving the four goals established by the Belize Audubon Society: conservation, education, research and tourism. In reviewing the literature, the sanctuary is generally touted as a success even though there is room for improvements (e.g. insufficient staffing) and no critiques of the sanctuary were found. The
analysis has proven that the mutually beneficial partnership between local communities and conservationists at CBS is working towards the protection of essential howler habitat while providing an educational opportunity for ecotourists.

<table>
<thead>
<tr>
<th>Summary of ecotourism development impacts- CBS</th>
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<tbody>
<tr>
<td><strong>Environmental:</strong></td>
</tr>
<tr>
<td>★ Increase in howler population</td>
</tr>
<tr>
<td>★ Landowners practice lower impact land management agricultural practices in accordance w/ management plan (voluntary)</td>
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<tr>
<td>★ Since management plans are not legally mandated, still possible for hunting, timbering etc to occur.</td>
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<tr>
<td><strong>Economic:</strong></td>
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<tr>
<td>★ Although most money stays within community, ecotourism revenues only benefiting central community (closest to sanctuary); excluding those villages further away</td>
</tr>
<tr>
<td>★ Inequitable distribution of tourism income between community members creating a competitive atmosphere</td>
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<tr>
<td>★ Increased tourism related business enterprises available (guest rooms, canoes, horses) (Although some residents felt employment opportunities were unevenly distributed among villages)</td>
</tr>
<tr>
<td><strong>Social:</strong></td>
</tr>
<tr>
<td>★ Signed voluntary agreement to become a CBS member (~60% of villagers are members)</td>
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<tr>
<td>★ Rooms and meals available in villagers’ homes for overnight visitors</td>
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<tr>
<td>★ Training sessions by primatologists sparsely attended (because of lack of communication)</td>
</tr>
<tr>
<td>★ Alexander’s (2000) survey revealed 90% of residents support towards sanctuary</td>
</tr>
<tr>
<td><strong>Management:</strong></td>
</tr>
<tr>
<td>★ Weak management committee</td>
</tr>
<tr>
<td>★ Privately owned by communal resident population-- buy-in of local pop is essential to its success</td>
</tr>
<tr>
<td>★ No national government involvement</td>
</tr>
<tr>
<td>★ Insufficient staffing of sanctuary</td>
</tr>
<tr>
<td>★ Inadequate basic infrastructure and office equipment (telephone, fax, computer, full-time staff) and inadequate physical infrastructure (paved roads, signs)</td>
</tr>
<tr>
<td>★ Not enough training in natural resource management, tourism marketing and guiding</td>
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Initiated by a proposal by the same biologist (Dr. Robert Horwich) who helped create the Community Baboon Sanctuary, the idea of ecotourism in Gales Point was proposed to raise revenue and create an incentive for locals to support low-impact land use and conservation of vital natural resources. Unlike CBS, which was formed without any government participation, Gales Point Manatee Project (GPMP) was established with much help from the government, a variety of NGOs, and the community. The project area is comprised of a range of habitats including tidal areas, coastal beaches, mangrove forests, pine forests, and broadleaf tropical rainforests. As the name suggests, the area is known for the manatees that inhabit the local lagoons. Management of GPMP is complicated as the project encompasses both public and privately owned land.

After several meetings with various stakeholders, an American team of biologists proposed a multiple land use plan for the project area. Belsky (1999) describes this process essentially as two outsiders who mapped, zoned, and suggested regulation of land use across the proposed territory. They also proposed that the reserve be declared the Manatee Special Development Area (SDA). It was declared as such in 1991. Under the “SDA” classification, a zoning system is applied to regulate development projects, boat traffic, and fishing activity (UNEP, 1995). As of 1994, an official management structure or plan for the area did not exist.

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2 Information on this ecotourism project was obtained from the following sources: Belsky (1999), Horwich and Lyon (1998), Lindberg, Enriquez and Sproule (1996), UNEP (1995)
Local involvement

The adjacent community, Gales Point, is a Creole village mainly relying on fishing, hunting, subsistence farms, and payment from relatives working in the United States (Lindberg, et al., 1996). After establishment of GPMP villagers formed the Gales Point Progressive Cooperative (GPPC) to promote “sustainable economic development and conserve the natural environment of the region” (Horwich and Lyon, 1998: 352). Numerous associations were formed under the GPPC including a bed and breakfast association and a local products association. The GPPC had strong community support from the beginning and with the help of the Belize Tourist Board offered several training programs for its residents to improve leadership, organizational and business skills (Horwich and Lyon, 1998).

A survey conducted by Belsky (1999) however, revealed that this project did not turn out to be as “participative” as expected. The objective of Gales Point was to develop a locally supported reserve encouraging a durable use of resources and maintenance of local culture. The project also aimed to increase local revenue through tourism (Horwich and Lyon 1998). Belsky (1999: 651) suggests that the consultative American biologist team did not direct any attention on “developing a historical understanding of cultural and environmental change in Gales Point or determining how property rights and other local social institutions had been organized, managed, or disrupted over time”. From her 1994 household survey, Belsky revealed discontentment among community members regarding ecotourism. The responses of local residents surveyed imply a perception of inequitable distribution of tourism revenue and employment opportunities, and inadequate management capability. It was felt that tourism revenues were clustered among only a few households and that ecotourism intensified intra- and inter-community differences. This “produced a violent backlash against conservation and instigated a privatized approach to
tourism development with unknown social and ecological impacts” (Belsky, 1999: 662). She identified only 28% of local residents relying on ecotourism as a primary or secondary source of income (only 13.9% of communities rely on tourism-related activities as primary source of household income). The other 72% rely on “wage labor, hunting/selling bush meat, remittances/pension, or selling agricultural products” (Belsky, 1999:652).

Is GPMP accomplishing its objectives?

Many sources consider the project, overall, to be a successful ecotourism project. Horwich and Lyon (1998) tout both the CBS and GPMP projects as successes, but they also launched the projects. They believe that income has been generated from tourism efforts of GPMP and has substantially impacted the local community. It is felt that residents feel a great sense of pride in regards to their conservation efforts to protect the manatee as well as toward their rich ecological resources. Although said to be “less expansive” at Gales Point than CBS, a renewed interest in cultural heritage has been observed, evidenced by a revival of traditional crafts and activities such as basket-making, drumming and boat making (Horwich and Lyon, 1998). However, Belsky (1999) identified a very different perception of locals towards ecotourism.

The objective of the project- to create a large protected area involving the management of both public and private lands and to include the wide range of stakeholders ranging from the national government to the villagers and ensure local management - is difficult to meet. Although local residents were involved at the onset and continue to participate in management decisions of the protected area and some tourism-related activities, a significant challenge to GPMP project involves creating more opportunities for economic success. Without permanent
staff, adequate infrastructure, and stable economic benefits, the ongoing success of GPMP is questionable.

<table>
<thead>
<tr>
<th>Summary of ecotourism development impacts - GPMP</th>
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</thead>
<tbody>
<tr>
<td><strong>Environmental:</strong></td>
</tr>
<tr>
<td>★ Increasing boat traffic and use of gill nets (both legally and illegally) threatens the manatee (UNEP, 1995)</td>
</tr>
<tr>
<td>★ Protection of manatee</td>
</tr>
<tr>
<td>★ Collaboration with local villagers to protect nesting sites of the endangered hawksbill sea turtle (<em>Eretmochelys imbricata</em>) (Horwich and Lyon, 1998)</td>
</tr>
<tr>
<td>★ Protection of unique ecosystems including coastal beaches, mangrove forests, saline marshes, karst hill forests and riparian forests</td>
</tr>
<tr>
<td><strong>Economic:</strong></td>
</tr>
<tr>
<td>★ Lindberg found that tourism has generated significant economic impacts for Gales Point residents</td>
</tr>
<tr>
<td>★ In Gales Point 24% of residents surveyed (Lindberg et al., 1996) identified direct economic benefits including a wage-paying job or income-generating activity related to tourism; 34% identified additionally indirect economic benefits</td>
</tr>
<tr>
<td>★ Belsky (1999) found only 28% of residents surveyed who rely on tourism related activities as primary or secondary sources of income</td>
</tr>
<tr>
<td><strong>Social:</strong></td>
</tr>
<tr>
<td>★ Early local involvement and formation of an equitable management structure of villagers promoted continued interest in goals of project (Horwich and Lyon, 1998)</td>
</tr>
<tr>
<td>★ Lindberg’s study (1996) revealed 50% of residents in favor of the project (12% listed tourism benefits as their reason for support and 35% listed conservation benefits as their reason)</td>
</tr>
<tr>
<td>★ Locals sense a lack of ability to participate in decisions (Belsky, 1999)</td>
</tr>
<tr>
<td><strong>Management:</strong></td>
</tr>
<tr>
<td>★ Better management structure than CBS—a local management committee was established from the outset (Horwich and Lyon, 1998)</td>
</tr>
<tr>
<td>★ Difficult with so many stakeholders and management of both public and private land</td>
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</tbody>
</table>
Originally established in 1984, the Cockscomb forest reserve was created to protect jaguars (*Panthera onca*), but has since been expanded and converted into the Cockscomb Basin Wildlife Sanctuary (CBWS). In addition to natural resource preservation, current management goals include the promotion and implementation of nature-based tourism in order to improve the national and local economy (Lindberg et al., 1996). Protected within the confines of the sanctuary are jaguars, pumas, ocelots, and margays as well as tapir, deer, amphibians, snakes and hundreds of bird species (Lindberg et al., 1996).

**Visitation and Local Involvement**

Receiving approximately 4,000 visitors annually, infrastructure was developed to support the sanctuary by the managing institution, the Belize Audubon Society (BAS). This included simple accommodation for about 10 people, latrines and a potable water system (Brandon, 1996). Usually, visitors make day trips from the towns of Dangriga or Placencia but some stay overnight at the bunk and camping facilities provided by the sanctuary (Lindberg et al., 1996). Although the two nearby communities, Maya Center and Maya Mopan, primarily rely on agriculture, they also focus on CBWS tourism. Local women in these towns recognized the demand for souvenirs and first began selling handicraft products at the park entry gate. Soon thereafter the local council and manager devised a plan to create a craft/souvenir center. The BAS offered workshops on business skills to local woman and their revenues have since

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3 Information on this ecotourism project was obtained from the following sources: Brandon (1996), Farrell and Marion (2001), Lindberg and Enriquez (1994), Lindberg, et al. (1996)
skyrocketed. Since most materials are local, revenue is purely profit (Lindberg et al., 1996; Brandon, 1996). The literature does not detail specifically what type of skills the women acquired through the training workshops, how often the workshops were offered, the perceptions of women, the community’s response to the workshops or how the women used their skills. Additionally, information regarding access to the market is lacking in the articles examined. Again, the research only shares the facts without outcomes or results. Moreover, as with most other case studies, “community” is not defined in the research.

**Economic Impact/ Tourism Revenues**

Tourism revenues from 1991 to 1993 totaled $42,213. This included direct revenues from bunk fees for overnight visitors, donations and profits from postcard and book sales in addition to indirect revenues from donor agencies. Tourism expenditures for 1991-1993 including wages, brochures, facilities and maintenance, bridges and road repair, and traditional management totaled $46,894 (Lindberg, 1996).

In order to assess tourism’s direct local economic impacts, Lindberg et al. (1996) surveyed all households in Maya Center and Maya Mopan. They discovered that 67% of residents surveyed in Maya Center identified individual benefits including a wage-paying job or income-generating activity related to tourism. Much of Maya Center’s additional local economic benefits come from non-wage jobs and other income-generating activities such as handicraft sales (Lindberg, 1996). It should also be considered that with the creation of CBWS, hunting and agriculture became illegal within the sanctuary thus indicating a significant reduction in access to resources and potentially resulting in both economic and social loss. Two larger towns nearby, Dangriga and Placencia, with larger tourism infrastructure also benefit from Cockscomb visitors.
Summary of ecotourism development impacts - CBWS

Environmental:
- Protection of jaguars and other wildlife
- Significant trail erosion

Economic:
- 14% of residents identified ecotourism (bed and breakfasts, tour guiding) as primary source of income; 72% said ecotourism did NOT provide either primary or secondary income (Belsky, 652)
- Tourism provides direct economic benefits to 67% of locals (Lindberg, et al., 1996: 554) including a wage paying job or other income-generating activity (even though they primarily depend on agriculture)
- Community benefits from sale of food and handicrafts
- Woman’s’ craft center generated $28,000 in three years (1988-1991); an 87% profit significantly contributing to household income (Brandon, 1996: 45)
- Money goes back to facilities, maintenance, road repair, advertising, etc.

Social:
- Business training for local women
- About 15 women participate in handicraft coop; craft center
- Lindberg and Enriquez’s (1994) survey suggest that support for sanctuary has increased since establishment due to increased cash benefits
- Lindberg and Enriquez identify that residents still do not have much appreciation for conservation benefits.
- Lindberg and Enriquez found that when established 58% supported protected area, now 92% support it (75% support it because of tourism benefits and 17% support it because of conservation benefits)
- Establishment of park withdrew abundant natural resources form local use
Costa Rica is a small Central American country (19,703 square miles) inhabited by roughly four million people with a gross national product of US$2400 per capita in 1995 (WRI, 1996). One of the world’s most biologically diverse countries, Costa Rica claims 85 protected areas totaling 14% of the country’s total land area (WRI, 2001). Although today much land area is protected, Costa Rica lost half of its forest cover between 1950 and 1990 due to forest conversion to agriculture (Chase et al., 1998: 467). The development of the National Park System slowed this trend and Costa Rica has recently earned a growing reputation as an ecotourism destination. The tourism industry in Costa Rica began to rise in 1987 and by 1995 tourism had become the largest foreign exchange earner. Tourism arrivals are also steadily increasing and at least 60% of tourists visiting Costa Rica state that they are traveling to visit one or more protected areas (Brandon, 1996).

Despite the country’s international reputation for its park system and ecotourism, Costa Rica still is not generating enough revenues to sufficiently finance the parks or extensively change destructive land uses adjacent to the parks. Insufficient park management staff and services such as trained guides, visitor facilities, and environmental and interpretive information, all hinder national park revenue generation. This lack of infrastructure and management ability at many of the public national parks initiated the formation of several private reserves.
Monteverde is a rural community in northern Costa Rica nestled in the Tilaran Mountain Range. The area began its economic development in the 1950s with the arrival of a group of Quakers. Soon thereafter Monteverde became known as a dairy region and in the mid 1980s tourism became a major economic sector. Biologists originally visited this area to study its unique cloud rainforest and associated wildlife. The establishment of the Monteverde Cloud Forest Reserve by the Tropical Science Center (TSC) of San Jose in 1972 prompted Monteverde’s role as an ecotourism destination. Despite its fairly remote location (a slow two-hour drive along a steep dirt road off of the Inter-American highway), the Cloud Forest Reserve has become one of Costa Rica’s most popular tourist destinations with plentiful accommodations and activities. The reserve is often a reason for traveling to Costa Rica given its unique cloud forest ecosystem characterized by constant clouds, unique tropical vegetation and the Resplendent Quetzal (*Pharomachrus mocinno*), a bird with an important cultural role in Central America (Menkhaus and Lober, 1996).

**Visitation and economic impacts**

A survey conducted by TSC (1991) revealed that 24% of respondents traveled to Costa Rica specifically to visit the reserve; 83% of respondents stated that their visit to Monteverde was motivated primarily by desire to visit preserve (Alyward et al., 1996: 335). This implies that the reserve is responsible for many visits to Costa Rica.

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4 Information on this ecotourism project was obtained from the following sources: Alyward et al. (1996), Farrell and Marion (2001), Lee and Snavenper (1992), Menkhouse and Lober (1996), Southgate (1998), Weaver (1998) and (1999), WRI (1996)
Menkhaus and Lober (1996) identified visitors to Monteverde to be more educated and affluent than the average international tourist to Costa Rica. This, combined with an increased visitation level to Monteverde, has made significant economic impact on the local community. On average visitors will stay in Monteverde at a local hotel for 2 nights and spend between $1,000-$2,000 (Alyward et al., 1996: 34). Unlike many Costa Rican beach resorts, most businesses are locally owned. Many residents are directly employed by the tourism industry including hotels, restaurants, guides and art coops; and indirectly through agriculture for local restaurants and local ventures (canopy tours, butterfly farms, bed and breakfasts) (Alyward et al., 1996; Brandon, 1996). The promotion of community development by ecotourism, evidenced in the formation of local groups (i.e. artisan cooperatives), is significant.

**Reserve revenues**

Figures from 1995 suggest that ecotourism revenues from Monteverde are generating roughly 18% of the national tourism income (Aylward et al., 1996: 335). Since the early 90s the preserve has experienced significant net revenues and has consequently invested in construction of additional infrastructure, facilities and research. “Unlike the public system, 95% of revenue is returned to the reserve through allocation to operating expenses, an endowment fund and a fund for scientific research” (Honey (1994) cited in Weaver, 1998: 93). Since the reserve is a private protected area, there is much management and financial autonomy. For example, the reserve has a variable entrance fee policy meaning that they charge entry fees according to a visitors expected ability to pay. In 1995 the park charged US$ 1 for Costa Rican Residents, US$ 4 for foreign students; $8 for foreigners not on package tours and $16 for those with package tours. Local community members are considered “courtesy” visitors and are not charged an entry fee (Alyward et al., 1996: 228). More than half of what visitors pay to enter the reserve (entrance
fee and souvenirs) goes directly to wages for local workers and to purchases of goods in the surrounding area (Southgate, 1998).

**Ecological Impacts**

Ecotourism has served as a catalyst for additional conservation efforts such as the butterfly farms and canopy tours, also providing local tourism revenue. The reserve does have policies prohibiting off-trail exploring and limiting the number of people allowed on the designated trails at one time. Visitors are only permitted to tour a small section of the reserve, concentrating the impact and preserving the majority of the area for protection and biological research. The majority of visitors arrive during two peak seasons of the year. During these periods reserve staff are especially alert towards trail deterioration and will close damaged trails until they have recovered (Alyward et al., 1996). Nonetheless, the creation of new trails has resulted in heavy erosion and severe root trampling during the rainy season (Farrell and Marion, 2001). Since managed by a non-profit conservation organization dedicated to education and research instead of a private enterprise aiming to make a profit, there does exist the freedom to cap visitor levels and development.

**Is Monteverde accomplishing conservation and economic development?**

The Monteverde Cloud Forest Reserve has been acknowledged as a major source of income for the region. It appears to be a good example of successful ecotourism in a private reserve. Limiting entrance and monitoring tourist impact helps ensure significantly less environmental deterioration. Local ownership of much of the tourist infrastructure in the town of Monteverde “provides added insurance against the temptation to over-exploit the preserve” and helps to balance between conservation and economic development (Alyward et al., 1996: 335).
Summary of ecotourism development impacts- Monteverde Cloud Forest

Environmental:
★ Protection of unique cloud forest and wildlife including the Quetzal (*Pharomachrus mocinno*)
★ Ecotourism has served as catalyst for additional conservation/education efforts (butterfly farms, canopy tours)
★ Creation of new trails inside the reserve--- serious erosion w/ root trampling during rainy season (Farrell and Marion, 2001)
★ Locals have reported changed animal habitats due to human activity

Economic:
★ The reserve contributes to local benefits and the GNP (Alyward et al. 1996; Brandon, 1996)
★ 95% of the reserve’s revenue is returned to the reserve for operation, research and conservation
★ Tourism earnings are currently second largest for local residents  (Brandon 1996: 46)
★ Locals employed both directly (i.e. art coops, hotels, restaurants, guides) and indirectly (i.e. agriculture for local restaurants/hotels and local ventures such as canopy tours, butterfly farms, bed and breakfasts).
★ TSC (1991) survey revealed that 96% of visitors will stay in local hotels for an average of 2 nights (Alyward et al., 1996: 333)
★ Much tourism-related employment is seasonal
★ Tourism revenue at reserve was reinvested to improve infrastructure and services (trails, shelters, facilities) (Alyward et al., 1996: 325)
★ Entrance fee: Reserve has a variable entrance fee policy

Local involvement:
★ Monteverde Conservation League—purchased 17,200 ha of land around preserve to serve as a conservation buffer
★ Woman’s handicraft operation—benefited from tourism
★ Monteverde Institute—provides training to locals to help establish family hotels and restaurants
★ Community planning process—has helped local residents not over-expanded its infrastructure in order to receive and accommodate ever increasing visitors (Alyward et al., 1996: 333)

Management:
★ There is complete local control over the reserve although no local control over private projects outside of the reserve (competitive tourist ventures)
★ National level--No government restrictions on tourism development in region and little government support apart from general services (school, health) and basic infrastructure (roads, communication)
★ Reserve level--policy limits on number of number of visitors allowed on trails at one time (100); restrict visitors to a small area of preserve; visitors not permitted to step off trails; if trail severely damaged it will be closed until recovered (Alyward et al., 1996: 332)
Located on the Caribbean Coast, the Tortuguero area, known for its rich ecological resources, is extremely isolated - only accessible by plane or boat. Approximately 300 residents inhabit the small village of Tortuguero. Although the area now uses tourism as the major source of revenue, the local economy was traditionally reliant on natural resource exploitation including agriculture, logging and sea turtle harvesting (Lee and Snepenger, 1992: 368; Jacobson and Robles, 1992: 703; Place, 1991: 189). Tortuguero National Park (TNP) was created in 1975, to protect the last major nesting beach of the endangered green sea turtle (*Chelonia mydas*) in the western Caribbean. Today the park encompasses tropical rainforest and 30 kilometers of nesting beach between the Tortuguero and Parismina rivers. Tourists typically visit TNP to observe the annual nesting activity of the green sea turtle and the biodiversity of the adjacent rainforest. Its inaccessibility makes day trips nearly impossible.

**Local resident satisfaction and involvement**

Although the establishment of TNP prohibited locals from hunting and farming on land traditionally used for such purposes, a study conducted by Lee and Snepenger (1992) in 1990 revealed a high level of satisfaction (90%) among residents with the existence of the park and its benefit for the community. Fifty-seven percent (57%) of the local households had at least one person directly employed with a tourism-related enterprise while the remainder of the households provided supplementary services to tourists. Two major sources of local employment have

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5 Information on this ecotourism project was obtained from the following sources: Aylward, et. al. (1996), Jacobson and Robles (1992), Lee and Snepenger (1992), Place (1991), Weaver (1999)
resulted from the formation of TNP: provision of guest services and working with the Turtle Research Station (located near the park and administered by the Caribbean Conservation Corporation (CCC)). From the survey it was also gathered that most businesses were indeed staffed by locals and 70% of the tourism-related business owners lived in the village. Conversely, three large lodges were discovered to have absentee owners who do not always support the local economy. As far as long-term natural resource protection, some survey respondents understood the importance of long-term protection while others were only interested in the short-term profit window. Ironically, with the increase in visitors to Tortuguero, outside investors are becoming more interested in entrepreneurship thereby limiting local opportunity for business investment (Place, 1991).

**Distribution of tourism revenues**

Although ecotourism emerged as a major source of local income (Place, 1991), Lee and Snepenger’s study (1992) indicate that tourism revenues were not spent on community service improvements including education, health care, public water and sewage systems and garbage collection. Moreover, similar to other national parks within Costa Rica, TNP did not generate enough funds to meet its operational budget. This might indicate that tourism revenues in Tortuguero were devoted neither the community nor the protected area.

Place (1991) concludes that the creation of TNP was in reality a disadvantage for local residents. Her study reveals greater discontentment among residents regarding their loss of access to the natural resources within the parks boundaries than dissatisfaction with the tourism market.
Training program

A tour guide training program was developed near TNP to help rural communities manage the increase in park visitation. The training program was designed to improve communication of environmental information (environmental education) and increase year-round employment opportunities for the tour guides (Jacobson and Robles, 1992).

Ecological Impacts

Participants in the tour guide training program revealed numerous concerns regarding negative impacts of tourism. “All reported that the tourists’ lights, flash photography, and movements on the beach at night frightened the turtles and kept them from nesting. The scientists also complained that the tourists interrupted their nightly turtle tagging work by asking questions or shining flashlights” (Jacobson and Robles, 1992: 705). Other issues directly related to tourism included littering, sewage waste and fuel leaks from boats.

With ever-increasing visitation, actions will need to be taken to regulate and mitigate visitor impact. For example, in response to the concerns voiced by CCC scientists as well as TNP natural resource managers, in 1991 the Costa Rican government declared a 6-kilometer segment of the beach where tourists are required to be accompanied by a guide and are prohibited from using lights during the green sea turtle’s nesting season (Jacobson and Robles, 1992). Careful management is necessary to ensure that as a tourist attraction, TNP’s environmental and social costs do not exceed the benefits.
Summary of ecotourism development impacts- Tortuguero NP

Environmental:
★ Disturbance of nesting sea turtles
★ Protection of turtles nesting beach
★ Protection of tropical rainforest ecosystem and canals
★ Tour guide training program encouraged greater interest in sea turtles

Economic:
★ Increased local employment through hotels, TNP or the CCC Turtle Research Station ((57% of households employed w/ tourism industry) (Jacobson and Robles, 1992; Place, 1991)
★ Increase household income
★ 70% of business owners are local and live in villages; most businesses are staffed by locals
★ Tourists spend about $20 on average on local activities—less than 10% of total expenses of Tortuguero trip
★ Establishment of park withdrew abundant natural resources from local use
★ Inequitable distribution of benefits; profits from tourism not shared with national park or community services
★ Many businesses only driven by short-term profit

Social:
★ Tour guide training guide program—provide environmental education and communication skills for Tortuguero residents
★ 90% residents satisfied with protected area status
★ Resident businesses were 70% staffed by locals
★ Tortuguero has low levels of education, health care and public sanitation

Management:
★ Government manages TNP
★ CCC manages the Turtle Research Station
In the Caribbean, the Carib and Arawak Indians felt the impact of European contact earlier than indigenous people on the mainland. The island of Dominica became a haven and strategic base for Carib warriors’ raids against Europeans. By the 1700s the Caribs on Dominica were the only remaining indigenous group living in the Caribbean.

The Carib Reserve or the “Carib Territory” supports 2,700 inhabitants. Since colonization, the Caribs have experienced losses in their indigenous language, crafts and traditional lifestyle (fishing and subsistence agriculture). The Dominican government encouraged the Carib community to develop a management plan to promote ecotourism as an instrument to connect “economic incentives with natural resource preservation and cultural restoration” (Slinger, 2000: 521) and in 1993 it was completed. The ecotourism management plan includes “research and documentation of cultural information for the revival of crafts, medicines and traditional music, as well as environmental education, soil conservation and reforestation” (Slinger, 2000: 521).

Ecotourism development has created an awareness of the importance of maintaining the natural environment for a source of raw materials, agriculture and potential sites for nature tours.

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Information on this ecotourism project was obtained from the following source:
Slinger (2000)
Slinger (2000: 521) states that, “ecotourism is providing positive economic, social and environmental impacts on the territory”.

**Summary of ecotourism development impacts- Carib Territory, Dominica**

**Environmental:**
- Land clearing for cultivation has made it difficult to consistently use local materials for building construction and crafts.
- The community has begun a conservation project testing growing conditions of various species to help the scarcity. The aim is to maintain constant source of materials most important to their handicraft trade.
- Since the establishment of ecotourism in the Carib territory, the local community has recognized the importance of protecting their natural environment and has begun to implement watershed management projects.

**Economic:**
- Community sells surplus produce from home gardens as well as commercial corps.
- The crafts produced by the Caribs are sold in the territory, the capital, Roseau and on neighboring islands.
- “Some Carib handicraft workers reported income from sales as high as $320 a month, giving a total of $3,840 per year or $1,000 more than the per capital GNP of Dominica” (Slinger, 2000: 522).
- Tourism also provides employment (taxi drivers, tour guides, guesthouse owners).
- User fee of new project (model Carib village) will be $2 and will be used to help with maintenance and access regulation as well as going towards a loan from the Caribbean Development Bank.
- Suggests that ecotourism is producing a more diversified economy and additional sources of income.

**Social:**
- As their ancestors did, the Caribs (mostly women) still produce traditional handicrafts such as baskets, mats, fans, handbags, and hats.
- The Caribs also still construct canoes to use for their transportation and fishing. They also sell canoes to the neighboring Creole community. Miniature canoe replicas are sold to tourists.
- Carib tour guides are “expected to have basic knowledge of the flora and fauna of the territory, and of Dominica in general” due to an interest of visitors in local botany and wildlife.
- Tourism has kept cultural traditions alive: The latest project to promote ecotourism in the territory is “the development of a model Carib Village which will serve as the tourism center, a site for performances, and an area for shopping and information. Plans that call for residential and guest houses, with structures made of thatch and wood, will allow tourists to stay among villagers and experience Carib life, including basket making and food processing” (Slinger, 2000: 522).
- Ecotourism has “encouraged a renewed interest and rediscovery of the Carib culture including language, dance, drumming, food processing and architecture” (Slinger, 2000: 522).
Ecuador

Modern Ecuador is named for its position on the equator although it was once called Quito. It was conquered by the Incas, then the Spanish in 1534. The land area of the country, including the Galapagos Islands, is 283,561 square kilometers—about the size of Nevada. Quito, the capital, and Guayaquil, the commercial hub, are the two closest cities to the Galapagos Islands (a territory of Ecuador) which are located about 1,000 kilometers to the west. The population of the entire country is over 13 million people. Ecuador is a very popular travel destination in South America given its array of indigenous cultures and varied topography including volcanic landscapes, high peaks of the Andes, dense rainforest and beaches along the Pacific Ocean.

Galapagos National Park

| Size of protected area: | almost 8,000 km2 (800,000 hectares) within archipelago |
| Ownership: | Government of Ecuador |
| Managing agency: | NPS |

The Galapagos Islands are located in the Pacific Ocean and are composed of fourteen islands and more than 107 islets and rocks. Achieving fame through their role in Darwin’s

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Information on this ecotourism project was obtained from the following sources: Benitez (2001), Sitnik (1999), Southgate (1998)
development of his theory of evolution, the islands are characterized by unique flora and fauna. Well-recognized wildlife includes the giant tortoise, land and marine iguana, and seabirds.

Conservation of the archipelago’s biodiversity began in 1934, close to the centennial of Darwin’s visit, when the government of Ecuador created a nature sanctuary and prohibited hunting of selected species (Southgate, 1998). In 1970 the nature sanctuary was enlarged to become Galapagos National Park (GNP). Since then, GNP has been declared a World Heritage Site by the United Nations.

Visitation and Infrastructure development

Tourism began in the archipelago in 1969 and has been steadily increasing ever since. Visitation levels have surpassed every visitor limit set forth in the GNP management plan and today there is no limit (Sitnik, 1999). Entrance fees are charged by the park using a differential pricing system so that foreign tourists pay higher fees than do Ecuadorians (Benitez, 2001). Historically, all park revenue went directly to the Central Bank of Ecuador, however today thirty percent (30%) of visitor use fee revenues are allocated to local government institutions (Brandon, 1996; Benitez, 2001)

Presently, tourism is the primary economic activity in the archipelago. De Miras (1994) cited in Southgate (1999) estimated total spending in 1993 as $55 million by multiplying number of visitors by the average estimated expenditures. This only represents a small part of national tourism revenue from GNP because visitors traveling to the park must pass through Quito or Guayaquil and many choose to spend several days or weeks in these towns thereby increasing national revenue.

Infrastructure development has accompanied ecotourism including airports, hotels, restaurants, and shops, which has increased employment opportunities and encouraged migration
of Ecuadorians to the islands. Annual population growth has averaged five percent (5%) and the total number of inhabitants in 1990 was about 10,000 (Southgate, 1998). Most of the households in the two largest towns have water, sewer, and electricity. Their food and consumer goods are considerably more expensive than on the mainland. Southgate (1998: 114) points out that “many island residents have not found it easy to benefit from ecotourism”. De Miras (1994) again cited in Southgate (1998: 113) estimates that out of the “$1337 that an average foreign tourist spends getting to, around and back from the archipelago, $102 goes into the local economy.”

**Ecological Impacts**

Although GNP does have a management plan including the designation of visitor sites and paths and regulations for tourists (e.g. tourists must be accompanied by a guide). However, due to a lack of capability to enforce the existing regulations, there is noticeable ecological impact including overuse of certain areas resulting in disturbance to plants and animals and littering (Benitez, 2000). Immense population growth and visitor-local competition for basic services also contribute to an overuse of finite natural resources. Additionally, significant conflicts exist over land and water use including controversy over the illegal harvesting marine life (Sitnik, 1998).
Summary of ecotourism development impacts- GNP

Environmental:
★ Overuse of sites causing damage to geological features, trail wear and erosion
★ Flora and fauna disturbed by human activities
★ Reports of floating trash from tour ships and plastics have occasionally strangled sea lions and sea birds
★ Huge indirect impacts including exotic species introductions, human population growth and extraction of resources (locals seeking alternative economic activities (i.e. fishing) are competing with the tourism industry for finite natural resources)
★ Environmental education for locals and tourists as well as guide training program

Economic:
★ Immense infrastructure development including airports, restaurants, shops and hotels has increased employment opportunities but also encouraged migration of Ecuadorians to the islands.
★ Tourism has caused food and consumer goods to be considerably more expensive than on the mainland.
★ Increased national revenue (estimated to be more than $55,000,000 each year)
★ Slight increase in local revenue (of the $1400 an average tourist spends getting to and from the islands only about $100 goes to the local economy)
★ 40% of entrance fee revenue goes back to GNP

Local involvement:
★ Education through research center including the guide training program
★ Indigenous culture was impacted with the tourism industry as traditional uses of land the land was replaced by work related to tourism

Management:
★ Galapagos NP has a Management Plan to help with regulation use and environmental impact, however it is not enforced
★ Government has done little to limit development and growth on the archipelago or to restrict the illegal harvesting of marine resources such as lobsters, sea cucumbers and sharks (Brandon, 1996)
Twenty-four Quichua Indian families comprise the community of Capirona located in Ecuador’s Napo Province of the Amazon basin (Colvin, 1994). The community is committed to preserving their rainforest from agricultural encroachment in tandem with sharing their cultural traditions with visitors. They began a very unusual ecotourism program in which they are complete owners and beneficiaries of the venture. Benefits are shared equally among community members (Colvin, 1994).

**Economic diversification and cultural exchange**

The program began when the community wished to diversify their economic base because the cost of seeds and transportation supporting their traditional subsistence lifestyle was becoming too expensive. Recent immigrants to the area had begun logging the forest and although the Quichua people could have done the same, they were seeking an activity that would be more long-term. They highly regard the forest as integral to life, providing everything from food to medicine. The beginning of a small-scale ecotourism program was marked in 1991.

The entire community supported the idea of ecotourism and participated in its development. Money earned from selling maize in addition to a small loan provided by the regional indigenous federation, provided the capital needed to build a visitor center, dining area and small tourist lodge. They constructed the tourist facilities to appear “authentic” using the traditional grass and bamboo style. This ecotourism project is quite unique in that it is accessible

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8Information for this ecotourism project was obtained from the following sources: Brandon (1996), Colvin (1994) and (1996)
only by foot or canoe. Villagers meet the visitors in the regional capital of Tena and bring them to the Capirona trailhead by truck or bus. From there, it is a two-hour walk through the forest to the village. Visitor activities include nature hikes, and demonstrations and participation in traditional activities such as basket making and farming. They have designed the program to focus on cultural exchange and visitors are encouraged to share something of their culture.

**Communal management**

The project continues to be a community effort. “Women from different families rotate the responsibility of preparing meals for visitors and cleaning the lodges. Men from the village maneuver the canoes used for transporting both supplies and visitors or act as guides through the forest” (Colvin, 1994: 175). Although to date, ecological impacts are not significant, the residents have begun proactively contemplating potential problems including water contamination (river is used by both villagers and tourists for bathing) and utilizing large amounts of fuel wood to purify the water for drinking. The impacts of tourism upon the indigenous culture appear neutral. Tourism has even revived such cultural traditions as ceramic bowl making (Colvin, 1996).

Capirona provides an example of how a community with little capital can initiate, participate and fully control an ecotourism operation. In an attempt to diversify their local economic base, the residents have created an entirely new opportunity for ecological and economic success.
Summary of ecotourism development impacts-Capirona

Environmental:
★ Rainforest preservation
★ Rainforest education for the tourists by the community members

Economic:
★ Tourism provides supplementary revenues for households and community services
★ (75%) of locals employed as tour guides, cooks, etc
★ Tourism provides 100% financial support for conservation

Local involvement:
★ Communal management
★ Extremely high level of local support for conservation and tourism
★ Program of cultural exchange benefiting both residents and visitors
★ Project is a source of cultural and community pride

Management:
★ No government involvement or support or regulation
Indonesia consists of about 17,000 islands covering a land area of 2 million square kilometers. Some of the world’s most diverse natural resources are found here including tropical forest and expansive coral systems. Given its burgeoning population and unique ecosystems, Indonesia has set aside almost 17.2% of land as protected areas (Ross and Wall, 1999). Ecotourism, centering on these protected areas, has been a national priority both towards the country’s national economic development plans as well as its Biodiversity Action Plan (Ross and Wall, 1999).

**Tangkoko Duasudara Nature Reserve**

<table>
<thead>
<tr>
<th>Size of protected area: 8867 hectares</th>
<th>Ownership: Indonesian Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing agency: Government</td>
<td>Annual visitation: ~3000</td>
</tr>
</tbody>
</table>

Tangkoko Duasudara Nature Reserve (Tangkoko) is located in North Sulawesi, Indonesia. The area is known for its biodiversity and habitat variation including three volcanoes, lowland, and cloud forest (Ross and Wall, 1999). Tangkoko boasts a wide array of endemic flora and fauna including the primary wildlife attractions of primates, the Sulawesi crested black macaques (*Macaca nigra*) and red-knobbed hornbills (*Rhyticeros cassidix*) (Kinnaird and O’Brien, 1996:66). The reserve borders the Sulawesi Sea, full of unique coral reefs.

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9 Information on this ecotourism project was obtained from the following sources
Ross and Wall (1999), Kinnaird and O’Brien (1996)
Visitation

Similar to other protected areas within North Sulawesi, visitation is increasing at Tangkoko. Kinnaird and O’Brien (1996) studied the responses of wildlife to the large numbers of tourists and found that the crested black macaques often retreated in fear from large groups of visitors and separated from their social groups. Both of these effects were seen to disrupt their daily activity patterns. Tourists also significantly affect tarsiers with flash photography at night. This is surmised to delay the nocturnal tarsiers from leaving their sleeping sites and considerably reduce their early evening foraging opportunities (Kinnaird and O’Brien, 1996).

Economic impacts

Residents surrounding Tangkoko have been expected to change their livelihoods and resource uses in order to accommodate the protected area although they have not received any tourism-related revenues. Ross and Wall (1999: 678) note that thus far, there is “limited evidence of positive contributions being made to residents by way of local economic benefits, infrastructural benefits and social benefits.” For example, guides are not required to enter the reserve but nevertheless, 94% of all foreign tourists take a guide. An opportunity for locals to participate and gain a sense of ownership of the natural resources would clearly be through guide training and employment. Unfortunately, local villagers are typically not allowed to guide. Reserve guards or tourist companies based in Manado (the provincial capital) primarily perform guiding (Kinnaird and O’Brien, 1996). In addition to guiding revenue, Manado is retaining most of the tourism profits because about 30% of tourists typically stay overnight in Manado and use Manado travel companies (Kinnaird and O’Brien, 1996: 70). Killian and O’Brien (1996) concluded that the reserve only acquires 2% of the total profits and most of this money is paid to the North Sulawesi government.
Local attitudes towards protected area

The degree of dependence of local residents on the resources of the protected area is said to be “medium-high” with their livelihoods considered “unsustainable” (Ross and Wall, 1999: 677). Agricultural encroachment is the largest threat to the protected area ecosystems. Attitudes of locals towards protected area conservation are still “unknown”. It does not appear that ecotourism has encouraged positive attitudes towards conservation of protected areas. However, since residents can perceive that most benefits are accumulating with outsiders, the protected area is viewed as a “cost”. Thus local attitudes towards conservation are expected to be negative (Ross and Wall, 1999). Furthermore, locals were only minimally included in the planning process of the park.

<table>
<thead>
<tr>
<th>Summary of ecotourism development impacts-Tangkoko</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental:</strong></td>
</tr>
<tr>
<td>★ Wildlfe behavior is being altered</td>
</tr>
<tr>
<td>★ Harassment of wildlife by guards</td>
</tr>
<tr>
<td>★ Illegal hunting is a problem however park does not have financial support to patrol</td>
</tr>
<tr>
<td>★ Litter</td>
</tr>
<tr>
<td>★ Forest fires</td>
</tr>
<tr>
<td>★ Not much incentive for conservation</td>
</tr>
<tr>
<td>★ Negative impact is enhanced because tourists are unrestricted</td>
</tr>
</tbody>
</table>

| Economic:                                  |
| ★ “Inadequate” economic contributions to park protection |
| ★ “Inadequate” socio-economic contributions to locals |
| ★ Overall, very little economic benefit    |

| Local involvement:                        |
| ★ Locals are typically not allowed to guide |
| ★ Until the area becomes national park, nature tourism will not be a management objective, and locals will not be involved in the planning. |

| Management:                               |
| ★ Status as a “nature reserve” does not allow tourism and thus the government cannot develop or implement tourism management plans |
| ★ A need for supervised guiding           |
Komodo National Park\textsuperscript{10}

| Size of protected area: | 1730 square kilometers |
| Ownership: | Indonesia Government |
| Managing agency: | Government |
| Annual visitation: | 1995-96: 30,000 |

Komodo National Park (KNP) is located in the Lesser Sunda Islands of Indonesia, in the province of East Nusa Tenggara. Within the park, 35\% of the land is terrestrial and 65\% is marine. No more than 3,000 inhabitants live in this region including three villages within the park. Tourists have been traveling to the islands since the famous “Komodo Dragon” (\textit{Varanus komodoensis}) was discovered. Most visitors must pass through one of the two gateway towns, “Sape o Sumbawa” and “Labuan Bajo on Flore” in order to reach KNP.

\textbf{Economic Impacts}

KNP is funded entirely by government sources but only the revenues generated by the entrance fee are returned to the government. Common to Indonesian protected areas, the entrance fee into KNP is quite low; tourists pay the equivalent of the US $0.50 (Kinnaird and O’Brien, 1996). All other tourist expenditures such as guides, lodging, food, and souvenirs go to the local economy surrounding the park (Walpole and Goodwin, 2000a).

The results of several studies conducted by Walpole and Goodwin indicate that the local residents of the gateway town, Labuan Bajo, have the largest contact with foreign tourists and thus financially benefit the most. Labuan Bajo is the primary lodge location, accounting for 80\% of all tourist expenditure (Walpole and Goodwin, 2001a: 162).

Another study conducted by Walpole and Goodwin found that in 1996 an estimated $1.1 million was spent in the park, although only about 20\% of the total expenditure reaches the local economy.

\textsuperscript{10} Information on this ecotourism project was obtained from the following sources: Walpole and Goodwin, (2000a) (2000b) (2001a) (2001b)
economy. Approximately 50% of expenditure is lost due to importing goods and services and about 30% is lost because travelers with package tours are generally isolated from the local economy. Furthermore, only 1.1% of this is accrued to the inhabitants of the park. Several villages are too isolated or inaccessible for tourists. The village of Kampung Komodo located closest to the visitor center on Komodo Island receives roughly 5,000 tourists a year yet the only local employment opportunities are either the shuttle bus service or carving souvenir wooden dragons (Walpole and Goodwin, 2000b).

**Employment opportunities**

Walpole and Goodwin (2000b) found that tourism employment and revenues were unequally distributed favoring external operators and urban gateway residents rather than rural villagers. A survey conducted in 1996 revealed that 7% of local tourism-related revenue was generated in Kampung Komodo, almost 20% in Sape and about 74% in Labuan Bajo. A different survey conducted in 1996 concluded that only 30.4% of respondents claimed dependence on tourism for a portion of their household income (Walpole and Goodwin, 2001a: 162). The researchers believe that the majority of hotel owners were non-local.

**Support towards conservation and tourism**

The fact that locals support conservation and identify the link between tourism and conservation is evidenced in Walpole and Goodwin’s (2001a: 163) finding that 93.7% of responders agreed that “it is good that Komodo National Park is protected by the government” and 90% responded that “tourists come here because of Komodo National Park”.

Many respondents to the survey (92.7%) would like to see increased tourist visitation and 88.9% would like their children to work in tourism. About half (49.7%) of the respondents felt that tourism had caused increased prices for goods and services. Approximately one third
(32.2%) felt that tourism was damaging their culture and about one-half (51.1%) did not appreciate the dress of tourists. There was no consensus on who was economically benefiting from tourism; some felt that mostly outsiders or the rich were benefiting and only 23.0% felt that tourism increased their individual income (Walpole and Goodwin, 2001a: 163).

<table>
<thead>
<tr>
<th>Summary of ecotourism development impacts-KNP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental:</strong></td>
</tr>
<tr>
<td>★ Protection of Komodo dragon and its environment</td>
</tr>
<tr>
<td>★ Almost unanimous support for protection of KNP in communities surrounding KNP</td>
</tr>
<tr>
<td>★ Almost unanimous understanding of linkage between conserving natural resources and tourism success- community surrounding KNP</td>
</tr>
<tr>
<td>★ Until 1994, goats were used as bait to attract Komodo dragons and tourists to feeding site having a negative effect on population of dragons</td>
</tr>
<tr>
<td><strong>Economic:</strong></td>
</tr>
<tr>
<td>★ Tourism has provided employment for local residents- mostly unskilled or semi-skilled; 23% of local residents surveyed in 1996 felt they had individually benefited</td>
</tr>
<tr>
<td>★ Unequal distribution of benefits among and within villages</td>
</tr>
<tr>
<td>★ 7% of local tourism-related revenue generated in Kampung Komodo, 20% in Sape and 74% in Labuan Bajo</td>
</tr>
<tr>
<td>★ Development in adjacent towns has significantly been affected by tourism including transport facilities, an airstrip and a deep-water harbor. (Walpole and Goodwin, 2001:161)</td>
</tr>
<tr>
<td><strong>Local involvement</strong></td>
</tr>
<tr>
<td>★ Local people are at a disadvantage with a lack of skills or training opportunities Many hotels are not locally owned</td>
</tr>
<tr>
<td>★ Land is being purchased near Labuan Bajo by “external investors in anticipation of an expansion of tourism development in the region” (Walpole and Goodwin, 2000:571)</td>
</tr>
<tr>
<td>★ Minimal contact between tourists and inhabitants living within KNP</td>
</tr>
<tr>
<td><strong>Management:</strong></td>
</tr>
<tr>
<td>★ Not much collaboration among stakeholders- park authorities, local government, local communities, external tour operators</td>
</tr>
<tr>
<td>★ No regulations</td>
</tr>
</tbody>
</table>
Nepal

Nepal’s tourism industry is one of the country’s largest sources of foreign exchange (Gurung, 1998). Nepal is a major destination for trekkers as the country contains eight of the highest mountains in the world, including Mount Everest. In 1996, trekking tourism brought in over 350,000 visitors to Nepal (Gurung, 1998:19). Regarding natural resource protection and community development, inadequate revenues in addition to small management capacity and policy regulations caused many of Nepal’s Parks to backfire. Until 1979 the country’s tendency towards conservation was espoused in Nepal’s first National Park and Wildlife Conservation Act of 1973. The Act empowered the Department of National Parks and Wildlife Conservation to establish and manage parks and reserves in a more centralized regulatory manner (Mehta and Kellert, 1998). Although the local people traditionally depended on natural resources for basic needs, they were denied their rights to exploit natural resources in established protected areas. Furthermore, military personnel positioned in the parks and reserves handled law enforcement. “This management approach fostered park-people conflicts, ironically undermining long-term biodiversity goals” (Mehta and Kellert, 1998: 321). However, recently Nepal has shifted from their customary traditional centralized planning approach to a more decentralized one.
A number of local employment opportunities are now available due to tourism including agriculture, firewood collation, and lodge management, however immense pressure has been incurred on the natural and cultural environment. For example, to meet the demands of the increasing visitation, the indigenous population has cleared huge expanses of forested land solely to meet the cooking and heating needs of trekkers. Furthermore, Gurung (1998: 19) asserts “the temporary wealth generated from tourism is often spent in hotels or on larger herds of livestock, hastening the downward spiral of ecological degradation”. Sanitation and litter are also becoming a problem. Additionally, a socio-economic survey conducted by Sherpa et al., (Gurung 1998: 19) found that only 20 cents out of every US $3 was benefiting the local economies—the rest spent on imported goods and services from nearby towns and the capital.

**Annapurna Conservation Area Project**

| Size of protected area: | 7,683 square |
| Ownership: | Public |
| **Managing agency:** | NGO (KMTNC) – Government Partnership |
| **Annual visitation:** | >45,000 |

The Annapurna Region is one of the two most popular trekking regions in Nepal receiving roughly 60% of all trekkers in the country (Popocik and Butalla, 1998; Gurung, 1998). Characterized by vast climate changes according to the altitude, the area is known for diverse flora and fauna. The region supports approximately 120,000 local residents most of which are at or below the subsistence level. On one hand, tourism has been important to economy but it has also contributed huge environmental strains to the area. Population growth, poverty, deforestation, and low agricultural productivity are generally recognized as the fundamental factors of the environmental degradation in the region (Gurung, 1998).

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11 Information on this ecotourism project was obtained from the following sources: Brandon (1996), Gurung (1994) and (1998), Popocik and Butalla (1998), Wells (1994)
Tourism in the beginning

Up until the establishment of ACAP in 1986, the management of tourism in the Annapurna region was solely demand-driven, reacting to the pressures of the tourists. There was not a plan to manage the environmental and socio-economic problems created by tourism. Forests were cleared to provide fuel and lodges for tourists, litter and sanitation problems arose in addition to the local economy not adequately benefiting from the industry. Additionally, economic benefits from tourism revenues were not evenly distributed. Lodge and restaurant owners received the majority of benefits while subsistence farmers received nothing. At the outset the local inhabitants were not acquiring any benefits from the tourism industry.

Establishment of ACAP

ACAP’s formation in 1986 began as a joint partnership between a Nepali NGO, the King Mahendra Trust for Nature Conservation (KMTNC), and the Nepalese government in response to the impact of trekking tourism on the area’s ecology and culture. The long-run objective of the project is to maximize the positive impacts of tourism and minimize the negative impacts of it in the local ecology, economy and society. This is accomplished through making the involvement of the locals in the management of the reserve a priority, distributing the fees paid by trekkers directly to the local inhabitants for management of the reserve, and preserving the ecology of the area. Using a new approach of allowing the local populations to live within and around the conservation area (Gurung, 1994), it was hoped that the local residents would take ownership of the resources and, in a sense, co-manage the tourism industry so that it becomes more self-sufficient.
Impacts

ACAP’s contribution to the local community has included community development, forest management, conservation education, and research and training (Brandon, 1996). Formerly skeptical of the establishment of a protected area, the population is now participating in natural resource management decision-making. While employment opportunities have been created with community development projects, including guiding and guest services, they have been limited and the distribution of economic benefits has been unequal. Only a small percentage of households have directly benefited. As one would imagine, villages closer to the trekking trails are receiving a greater proportion of revenues. Furthermore, trekking activities in general do not generate much revenue as other forms of tourism as trekkers typically come to hike, relax, and view mountain scenery.

ACAP has charged an entry fee since 1989. In 1994 revenues from ACAP were equivalent to US $160,000 and all of the revenues collected stay with ACAP (Wells, 1993). With increased control over tourism and revenues, the communities have benefited from infrastructural improvements including bridge and trail repair, agricultural extension, health clinics, and improved water supply.

Education and extension

An important component is the incorporation of education and extension to raise awareness of the locals and visitors. Environmental education is included in the regular classwork at school for local children and adult education includes study tours, discussions, and training. This has successfully increased pride and ownership of their resources and created a situation for ecotourism to thrive, benefiting the local community as well as the surrounding
natural resources (Gurung, 1998). To raise awareness of the ecological sensitivity of the area, ACAP has developed an educational brochure that is distributed to all visitors.

**Local involvement**

Providing conservation and business education to the local community has contributed to their institutional ability and conservation effort (Gurung, 1994). The development of ACAP has also mitigated the extent of deforestation, raised local awareness regarding the importance of natural resources, and thereby caused better stewardship among locals. Lodge owners also contribute to the cost of trail maintenance and development (Gurung, 1994). Developing a trained local labor pool is one of the guiding principles of the project. Approximately 80 percent of the project staff are local residents and about 30% of the staff are women (Gurung, 1994). The project trains the trekking lodge operators in addition to providing training for other income-generating activities.

ACAP has made progress in “motivating a skeptical local population to participate in natural resource management decision-making, although local institutions are not expected to assume major responsibility for several years” (Brandon, 1996: 53). Unlike national parks in Nepal, ACAP did not move local residents or use “military assistance”, but rather educated and empowered local residents to effectively manage and use their local natural resources.
### Summary of ecotourism development impacts-ACAP

#### Environmental:
- ★ Wildlife populations have increased
- ★ Deforestation mitigated with kerosene regulation
- ★ Litter and sanitation problems controlled with better facility construction (trash cans and toilets)
- ★ Alternative energy systems devised to minimize firewood consumption
- ★ Pro-active planning at present including Eco-trekking routes developed, eco-lodges, micro hydro plants and kerosene depots

#### Economic:
- ★ Created some employment opportunities such as guiding and guest services
- ★ Locals have responded to new economic opportunities for tourism and have opened a number of tea shops and trekking lodges (Wells, 1994: 265)
- ★ 95% of lodges are locally owned; average lodge provides employment for 7.5 people
- ★ Benefits are unevenly distributed among and within villages-- lodge and restaurant owners receive most benefits; 1986 survey revealed that only lodge and restaurant owners (about 100-150 families) were benefiting (Popocik and Butalla, 1998: 163; Wells, 1994: 271)
- ★ 1994 survey revealed that 50% was being retained in local economy (Popocik and Butalla, 1998: 163)
- ★ Some revenue leakage, most lodges buy supplies in Pokhara and many of these goods originate external to Nepal (Wells, 1994: 271)

#### Local involvement:
- ★ Local participation is key principle of project
- ★ Education and training
- ★ Development of committees of locals to implement activities; ACAP set up an artisan’s cooperative
- ★ Women’s groups playing a role in conservation and development activities

#### Management:
- ★ Partnership between NGO (KMTNC) and Government
- ★ Little involvement with Nepal tourist industry
Makalu-Barun National Park and Conservation Area

| Size of protected area: | NP- 2,330 square kilometers; Conservation Area- 830 square kilometers |
| Ownership: | Public |
| Managing agency: | Government (DNPWC) and The Mountain Institute |
| Annual visitation: | ~1000 |

In 1991, Makalu-Barun National Park and Conservation Area (MBNPCA) was modeled on the Annapurna Conservation Area. It includes land located in the Solukhumbu and Sankhuwasabha districts of eastern Nepal Himalaya and adjoins the Sagarmatha National Park (Mt. Everest) (Mehta and Kellert, 1998). MBNPCA incorporates two management zones, the national park and the conservation area; the conservation area serves as a buffer to the former. The area contains thousands of unique plant and animal species including three endangered species: the clouded leopard (*Neofelis nebulosa*), red panda (*Ailurus fulgens*), and musk deer (*Moschus moschiferus*) (Mehta and Kellert, 1998).

Thus far, the Makalu-Barun Conservation Project (MBCP) has initiated several policies and programs using a community-based conservation approach in an attempt to generate local support for long-term biodiversity conservation. The project has assisted with community-initiated development such as trail improvement, drinking water, and small-scale irrigation (Mehta and Kellert, 1998). The project is also attempting to develop local institutional capacity to maintain livelihoods in conjunction with biodiversity protection through education and training.

The Conservation Area (CA) is home to approximately 32,000 people. Local communities are arranged under four jurisdictional offices (Bung, Tamku, Seduwa and Hatiya) and represent a range of ethnic/caste groups. Most depend on subsistence agriculture and the

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Information on this ecotourism project was obtained from the following source: Mehta and Kellert (1998)
forests for basic needs including firewood, fodder, timber, and grazing (Mehta and Kellert, 1998). Although the economic status of women is much below men, women do comprise half the population of Makulu-Barun and participate in blanket weaving, trading, and agricultural activities (Mehta and Kellert, 1998).

Visitation is growing at a rate of 30% each year (Mehta and Kellert, 1998). MBCP incorporates several elements of community-based conservation including community development, community forestry, wildlife conservation, and ecotourism. Although ecotourism is only one component of the project, it represents a large policy area of the MBCP. The project promotes ecotourism as a way of expanding non-farm employment opportunities for locals while simultaneously reducing environmental impact.

A study conducted by Mehta and Kellert in 1996 revealed local respondent attitudes toward ecotourism. A majority of the respondents (84%) said that tourism was either “very important” or “important” for their community; only 10% reported that it was not important. Likewise, 88% of respondents either “strongly approved” or “approved” of tourists visiting their area; only 11% disapproved to tourism within their community (Mehta and Kellert, 1998: 326). However, over 61% disapproved of changing the natural resources (such as damming a river to create a recreational lake) to support tourism. Predictably, most respondents who benefited economically from ecotourism were more supportive of the whole prospect than those who did not benefit. It was discovered that only 26% reported economic gain derived from tourism. A prevalent obstruction to the local community identified in the article is the problem of visitors hiring porters, cooks and guides from outside the community.

Thirty percent (30%) of local residents surveyed reported that a member of their household had received training from the project (Mehta and Kellert, 1998). The project has
contributed to community development through financial assistance to schools and providing training and educational opportunities to local residents concentrating on management skills and employment opportunities.

<table>
<thead>
<tr>
<th>Summary of ecotourism development impacts- Makalu-Barun</th>
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<tbody>
<tr>
<td><strong>Environmental:</strong></td>
</tr>
<tr>
<td>★ Preservation of large tract of land</td>
</tr>
<tr>
<td>★ Wildlife conservation</td>
</tr>
<tr>
<td><strong>Economic:</strong></td>
</tr>
<tr>
<td>★ 26% of respondents surveyed said their families had economically benefited</td>
</tr>
<tr>
<td>★ Project has assisted community-initiated infrastructural improvement and development (schools, trail improvement, small-scale irrigation)</td>
</tr>
<tr>
<td>★ Women comprise half the population of Makulu-Barun and do participate in blanket weaving, trading and agriculture</td>
</tr>
<tr>
<td>★ Revenue leakage- visitors regularly hire porters, cooks, and guides from outside the community</td>
</tr>
<tr>
<td><strong>Local involvement:</strong></td>
</tr>
<tr>
<td>★ Education and training provided for locals-- 30% of respondents indicated at least one member of their household receiving training from project</td>
</tr>
<tr>
<td>★ Local support is very high- 84% support tourism in Makalu-Barun and 88% approved of tourists visiting their community</td>
</tr>
<tr>
<td>★ 61% disapproved of changing their natural and cultural resources in order to support tourism</td>
</tr>
<tr>
<td><strong>Management:</strong></td>
</tr>
<tr>
<td>★ Managed by an international non-profit and government</td>
</tr>
<tr>
<td>★ Some restrictions on local land use, seeking to ensure low-impact extraction of natural resources</td>
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<tr>
<td>★ Provision for compensating farmers for crop and livestock degradation from wildlife</td>
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</table>
The Royal Chitwan National Park (RCNP) encompasses a very unique combination of grasslands and riverine forests. Large populations of tigers and one-horned rhinoceros depend on this unique habitat type (Bookbinder et al., 1998). Thirty-six villages border the RCNP with 260,000 people, most subsistence-level farmers (Bookbinder et al., 1998). With increasing visitation to the park, the region of Sauraha serves as the core of the ecotourism industry in the area. Located adjacent to the park’s entrance, Sauraha has experienced the development of many ecotourist facilities including hotels and restaurants.

**Ecological and Economic Impact**

In 1992, RCNP’s visitation comprised 17% of all tourists visiting Nepal and 75% of tourists visiting Nepal’s parks (Bookbinder et al., 1998: 1402). A survey conducted by Bookbinder et al. (1998) found that only 6% of those surveyed households received income either directly or indirectly form ecotourism; an average annual salary of those earning income was $600. An additional 2% of households surveyed earned money from tourism-related product sales or services. Distribution of household income was unevenly distributed with benefits significantly decreasing in relation to the distance from Sauraha. Additionally, the survey revealed that 61% of hotels are not locally owned. Therefore the $4.5 million dollars of total revenue earned by the hotel industry alone, did not serve to benefit the local economy.

“The hotel industry in RCNP employed approximately 1100 villagers, representing only 1% of

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13Information on this ecotourism project was obtained from the following source: Bookbinder et al., (1998)
the district’s total working-age population” (Bookbinder et al., 1998: 1402). One of the most advantageous contributions to the local economy of RCNP is the demand for and employment of locals as tour guides. The RCNP conducts a nature guide training and certification program and of the 140 nature guides surveyed 74% were permanent residents of the Chitwan district and 26% had migrated to the area from other parts of Nepal and India.

**Entrance fees**

Prior to 1996 only a small portion of money generated by the park was reinvested and no revenue was dispersed to the local community. However, since 1996 there has been a law in place requiring that 50% of all park entry fees be distributed to the local communities affected by the park--this was intended to help generate greater local support for biodiversity conservation. (Bookbinder et al., 1998). Nevertheless, if incentives do not reach the outlying communities where the majority of the population surrounding the park resides, they will continue to view the protected area as detrimental to their livelihood and not find any motivation to refrain from exploiting their natural resources.
Summary of ecotourism development impacts- Royal Chitwan NP

Environmental:
★ Restoration of rhinoceros and tiger populations (due to strict protection by Nepalese government and park staff, minimal local support)
★ Preservation of unique habitat
★ Local support for conservation is minimal

Economic:
★ Ecotourism provides little employment potential, has a marginal effect on households income and offers few benefits to local people
★ 87,000 people living near park and <1100 employed directly by ecotourism industry
★ Only 6% of surveyed households earned income either directly or indirectly from ecotourism; average salary of those earning an income was $600
★ Uneven revenue distribution w/ villages closed to park accruing most benefits
★ Although the area earned $4.5 million in revenue from hotels; local communities did not benefit as much as 61% of hotels are not local owned.
★ Significant leakage occurs through advanced bookings made through travel agencies in Kathmandu or other countries; hotels rarely purchase local goods and services

Local involvement:
★ Minimal involvement of locals in planning and management
★ Insubstantial economic benefit for local communities

Management:
★ No limitation on visitor numbers
★ No restriction on hotel construction outside the park
★ Minimal tourism planning and management
Peru

Peru is the third-largest country in South America with a population of 22.6 million people. Over seven million people live in the capital on the Pacific Coast, Lima. Peru has immense biological diversity as well as incredible cultural resources including the Inca ruins at Machu Picchu. After Peru recovered from economic and political instability in the late 90s, tourism became the fastest growing sector in the country’s economy (Mitchell and Reid, 2001). Tourism is considered by the Government of Peru to be one of the most important sources of hard currency revenues and as such they Peruvian government is aiming to provide proper tourism infrastructure (Mitchell and Reid, 2001).

Taquile Island, Peru

<table>
<thead>
<tr>
<th>Size:</th>
<th>754 hectares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ownership:</td>
<td>Indigenous community</td>
</tr>
<tr>
<td>Managing agency:</td>
<td>Indigenous community</td>
</tr>
</tbody>
</table>

Taquile Island is situated within one of the highest navigable lakes in the world, Lake Titicaca, near the extreme southeast border of Peru. The island has nearly 1,850 inhabitants. Most are Quechua-speaking people, highly skilled in agriculture, fishing and weaving. The main

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14 Information on this ecotourism project was obtained from the following source: Mitchell and Reid (2001)
attractions for tourists to the island are the natural resources of the area as well as the traditional handicrafts, particularly the weavings.

**Economic Opportunities and Cooperatives**

The handicraft industry is a major element of the islanders’ lifestyle; “most men, women, teenagers and children (starting at age 7) now earn money by producing woven crafts” (Mitchell and Reid, 2001: 124). In order to avoid competition among vendors, the community formed cooperative organizations to help sell their products. As of 1997, records revealed that 77% of the population was involved with a cooperative (Mitchell and Reid, 2001). The cooperatives set prices of goods based on quality and amount of labor and 5% of the revenue earned is kept for maintenance of the cooperative. Additionally, cooperative regulations and community laws prohibit vendors to sell privately to tourists. Cited in Mitchell and Reid (2001: 124), Prochaska (1990) claims that by 1990 “Taquile had succeeded in integrating tourism with its traditional way of life; the community’s position of control and the cooperative organizations allowed for a relatively egalitarian redistribution of benefits.” In 1990 Taquile apparently had control over production and manufacturing of handicraft goods and controlled most tourism services.

Prior to anti-monopolization laws of the early 1990s, Taquile residents enjoyed the monopoly of transport to the island from Puno, the regional capital with about 100,000 residents. However, as of 1996 at least half of the 37 travel agencies officially operating out of Puno carried clients to Taquile Island. Most of the agencies hire non-Taquile owned and operated Puno boats and guides because they are typically faster and more reliable, although they are also more expensive than the cooperatively-owned Taquile boats. In 1996, of the 62 boats traveling from Puno to Taquile, only 19 were owned and operated by Taquile residents (Mitchell and
Reid, 2001). This emphasizes the large leakage of revenues that have been directed towards non-local travel agencies since the market was opened.

Most island restaurants are owned and managed by groups of local families and accommodations in traditional adobe huts are also offered by local families. Each household directly receives tourism income from lodging, although the authors observed that only about 30 houses accommodated most tourists on the island (Mitchell and Reid, 2001).

**Local Perceptions**

A household survey was conducted to research household perceptions of socioeconomic benefits from local tourism activities. Mitchell and Reid (2001: 123) discovered through interviews that initially there was reluctance towards tourism development however this turned into complete support once economic benefits were realized from “community-wide participation in handicraft sales and through the provision of rustic lodging.” One interviewee told the researchers that “until the 70s tourism handicrafts were clothes to be worn and tourists themselves were considered as unwanted strangers, not potential clients” (Mitchell and Reid, 2001: 123).

Interviewees also agreed that since the beginning of tourism development in the early 1970s, “Taquile has been a participatory, albeit unstructured process”. To complement this statement, 44% of those surveyed in the 1997 household survey thought there was a tourism plan or strategy in place (Mitchell and Reid, 2001: 123).

**Overall results**

From the advent of tourism development on the island, Taquile has been in control of its own tourism planning and development “through self-awareness and self-reliance, and a relatively fair and balanced power structure has facilitated a community-based tourism product”
(Mitchell and Reid, 2001: 136). However, as the numbers of Puno travel agencies increase and obtain a larger market share, local control by Taquile residents is expectedly decreasing.

Even though some concur that the actual economic benefits are relatively low or not entirely distributed, there is still a decent attitude of the locals towards economics. Overall, the traditions and culture of the indigenous people of the island focus on cooperative participation, local control and local benefit. With the exception of guides and boat transport, which are becoming increasingly controlled by non-locals or private enterprises, most local services are collectively managed (especially handicrafts and accommodation). Although Puno attracts tourists and supplies to Taquile Island, the town is also a detriment to the community-planned tourism development of the island as Puno is reaping larger economic returns with its many agencies, boat owners and guides. It is concluded from this case study that equitable participation in tourism planning and development is essential if the local population is to be more prone to preserving the natural and cultural resources upon which their livelihoods depend.
Summary of ecotourism development impacts on Taquile Island, Peru

Environmental:
★ No data

Economic:
★ Tourism-related employment: Total jobs related to local tourism sector for Taquile Island was 1,594 of which Taquile residents held 75%
★ Actual amount of revenue earned is relatively low (most respondents to survey make less than $400 annually and in 1996, median gross income was $187)
★ Only about 10% of the population makes more than $1,000 annually, indicating that economic benefits are relatively well distributed*
★ Local boat and restaurant owners capture a disproportionate share of local tourism income (74% of annual revenues)
★ High-revenue leakage (the authors estimate a 91% leakage of gross revenues- pg. 132) to buying supplies from external sources (fuel, motors, etc.) as well as a loss of income to non-local travel agencies and privately owned boats from Puno.
★ Regulated market structure (cooperative regulations and community laws)
★ Locals had a high perception of economic benefits (on survey 89% claimed benefits)

Local involvement:
★ One of the main attractions for tourists are the weavings—Taquile weavers formed 2 community-run artisan sores (Manco Capac Cooperative) to sell products; 77% of population involved
★ High public involvement in local decision making as well as tourism management and services
★ High support for tourism by Taquile residents
Chapter 6

PROJECT COMPARISON

In general, the literature was lacking sufficient detail beyond the basic facts provided. In addition to specific deficiencies or inconsistencies mentioned in the case study write-ups, several questions remain unanswered concerning the entire group of case studies and are proposed in this section.

The researchers have reported their discovered economic facts or social perceptions, however their units of analysis were never consistently defined. For example, when the case studies suggest that local training was an element of the project, what determines whether or not the training had a lasting impact on the community? How is training effectiveness defined? When the research indicates that the local community benefited economically or socially, who comprises this community? The vendors? The families? Is there a standard method of equitable distribution of community benefits? Some studies suggest numbers of families receiving economic benefits; some suggest overall revenue accruing to the local population-- either way the results could be misleading. For example, as in the case of Komodo National Park, the income accrued to the local community appears significant, however 80% of it is going to a single community (Labuan Bajo) and thus it is difficult to assess overall equitability. It would be useful if economic impacts were standardized or studied against baseline data for clarification and comparison purposes.

The literature has few supporting facts regarding the market structure of each respective community involved with ecotourism. Only one case (Taquile Island, Peru) out of the 14 studied, referenced a cooperative designed to control handicraft sales. Do the other projects or
communities studied have an unregulated market? How do differing levels of coordination and competition affect income generation?

What are the implications of “community benefits”? How can researchers assess if the community is really achieving more benefits than if they had remained untouched by tourists and continued to participate in traditional land uses? How can it be assessed whether they are better off socially? Economically? Additionally, the majority of case studies do not mention whether or not the community had a choice regarding ecotourism development. The studies lack analyses or deductions of the long-term impacts of ecotourism development in each specific locale.

Additionally, the research noticeably emphasizes economic and social impacts, however the compilation of literature used for this paper is clearly deficient in ecological analyses including standard environmental impact analyses (EIAs) and identification of measures to assess or quantify impacts.

The three matrices in the appendix detail the comparative analysis using the aforementioned criteria. Availability of the case study information was inconsistent depending on the focus and scope of the research. The data and statistics from each study were often found to be incomplete, although on the whole the data do provide a rough estimate of the impacts of ecotourism. It is impossible to identify whether the trends are exclusively due to ecotourism or to other factors such as geographic locations, ownership of the conservation area, and political structure.

**Ecological Analysis**

The trends shown in the Ecological Impacts Matrix (Appendix A) indicate that even with adequate management of the protected area, including visitor and local activities, negative ecological impacts consistently arise. Although ecotourism has lower per capita impacts than
more traditional forms of tourism (Buckley, 2001), impacts are generally concentrated in areas with high biological and conservation value.

Monetary reinvestment in the preserve is significantly tied to whether the area has an influential management structure. Without established management, the user impacts are more significant. For example, at Tangkoko Duasudara Nature Reserve in Indonesia and the Galapagos National Park in Ecuador, there is not a well-defined management structure and no restrictions on visitation. Thus negative user impacts at Tangkoko and GNP are much more substantial than at Monteverde Cloud Forest Biological Reserve in Costa Rica and the Annapurna Conservation Area Project in Nepal, where visitation management is a priority. Monteverde and Annapurna include significantly more local participation than the other projects and as a result, reap greater environmental benefits.

Although the development of ecotourism is still relatively recent, there has not been much research assessing the degree of ecological impacts, especially in the long-term. Thus, there are many gaps in the Ecological Impacts Matrix. An essential supplement to the ecotourism research base would be to monitor impacts over the long-run at specific project areas. This would enable measurement of the direct and indirect impact of this type of development. For example, noise disturbance, plant and animal population dynamics, and genetics are less obvious although critical to biodiversity conservation.

Conclusively, the projects considered to be most ecologically successful are Monteverde Cloud Forest Biological Reserve and Capirona. Although different sizes, both projects have been successful in protecting more land than impacted through tourism. The literature detailing the Capirona region lists no negative ecological impacts to date. This is most likely due to their strict management of visitation. Monteverde has also capped their visitation and thus controlled
ecological impact. Both projects provide unrestricted access for locals as well as education programs, thereby promoting local support. The other elements setting these two projects apart from the others is the extent of local control relating to their management structure.

Galapagos National Park and Tangkoko Duasudara Nature Reserve are ecological failures. According to the literature, there are no beneficial environmental outcomes resulting from ecotourism in these areas. Both have uncontrolled visitation policies and a small percentage of revenue generated from visitors is being reinvested in the protected areas. Moreover, both areas have an immense lack of local support. They have experienced a counterattack by locals on the natural resources including illegal resource extraction and poaching.

**Economic Analysis**

Several common themes emerge from the Economic Impacts Matrix (Appendix B). First, several projects reported employment opportunities for locals as well as an increase in household income, however both figures were on the lower side. Several cases revealed that the majority of local businesses in the community, including lodges and restaurants, were *not* locally owned indicating a lack of incentives for the local population to support the project. If the community is not receiving benefits, they may turn against conservation and tourism and deliberately or inadvertently damage the site. Secondly, only one project reported equitable distribution of benefits (Capirona); this project was entirely community-run. Ten projects reported inequitable distribution of benefits either between or within communities and three projects did not have data on this criterion.

One area in major need of improvement is the leakage of revenue from the purchase of goods and services outside the community. While tourism enterprises in adjacent towns cannot
be managed, perhaps if local populations had better training and management skills they would be in a better position to compete with outsiders for jobs. Most of the employment available to locals is either semi-skilled or unskilled. Some towns adjacent to the ecotourism projects experienced minor infrastructural improvements while others (e.g. Galapagos Islands) obtained airports, shops and restaurants as well as improved water and electricity service. Many of the projects had a considerable percentage of locally owned facilities (Capirona, Annapurna Conservation Area Project, Tortuguero) however several project experienced huge revenue leakage due to foreign ownership. The communities adjacent to Komodo National Park, for example, experienced revenue leakage and minimal employment opportunities due to larger external owners and the import of goods and services.

In conclusion, Monteverde Cloud Forest Biological Reserve and Capirona were considered successful from the perspective of local community benefits. The benefits were equitably distributed, and most of the businesses in the community remained locally owned. The majority of the projects had some negative aspects whether it was large revenue leakage, inequitable distribution of benefits- either real or perceived, inadequate employment opportunities for locals, or insufficient ability to generate revenues either due to the market or the loss of access to natural resources.

Social analysis

The trends associated with the Social Impact Matrix (Appendix C) are closely tied to the economic impacts. If the indigenous population is to cooperate with the project, economic benefits must directly accrue to the local economy. The distribution of benefits, whether if equitable or inequitable amongst residents is critical to developing good positive attitudes towards the project. Often the protection of land for ecotourism results in a reduced ability of
locals to use natural resources and thus a loss of traditional income generation. The studies revealed that the indigenous populations who lost access to natural areas traditionally used for cultural livelihoods and activities, also lost indigenous knowledge and cultural interest while accruing only a few (if any at all) benefits. In a sense, the cultures became “commodified” and received nothing in return.

A notable trend relates to local attitudes toward tourism and conservation. This seems to be closely tied to whether the development process is participatory or exclusive, whether training and education are offered, and whether some sort of capacity-building occurs such as handicraft cooperatives. There appears a correlation between participatory projects and a renewed interest in cultural heritage. For example, at Gales Point Manatee, the Carib Territory, and Capirona, the local population was involved at some stage in the planning or development process. Locals have generally embraced ecotourism in these communities and have revived cultural traditions as a result of the presence of tourists in their community. The projects that were not participatory experienced substantial conflict between the project management and the community. For example, at Galapagos National Park, local participation was completely absent and the area witnessed substantial land and water use conflicts between the locals and the tourist industry. Galapagos residents are resolutely not complying with the rules of the protected area.

In conclusion, the major element distinguishing successful projects from the rest is to what extent participatory planning was implemented during the development processes. The literature indicates that when local communities were incorporated into the development process, they experienced a renewed interest in their cultural heritage, strongly supported tourism and conservation, and more showed lasting benefits from locally initiated cooperatives and training opportunities.
Summary

Based on the case studies presented, has ecotourism proven to be a successful avenue of development? Depending on the specific project, ecotourism has both succeeded and failed to meet the identified criteria in this paper. Several cases detail a revival of cultural pride and interest in conserving the local natural resources as well as an understanding of balancing revenue generation with long-term resource use. However, other cases describe immense environmental destruction occurring under the guise of ecotourism. It seems that the predominant objectives of ecotourism (i.e. development that is both ecologically sound and economically beneficial to local community and conservation) are ambiguous and difficult to attain, even by the most dedicated managers.

At some point, environmental preservation is bound to succumb to economic growth, not to mention the depletion of natural resources to meet the basic needs of the local population. If incentives to support the protected area accommodating ecotourism do not reach the communities, they will continue to view the protected area merely as an obstacle to their livelihood and will not experience any incentive to refrain from exploiting the natural resources. These cases have illustrated that local participation and control in protected area decisions as well as ecotourism management do indeed mitigate negative ecological and socio-cultural impacts.
Chapter 7

DISCUSSION AND POLICY IMPLICATIONS

From the literature, it seems many stakeholders have embraced ecotourism without any empirical knowledge of its long-term impacts. It remains a recent phenomenon lacking a standard clear-cut definition. Given the evaluation of case studies in this paper, it is apparent that re-evaluation is needed because the results of some projects suggest that ecotourism may be more injurious than some of its supporters might admit. In general, how should it be determined if an area is even remotely suitable for tourism including the area’s physical, political and social characteristics? Who should be involved in ecotourism policy development? What guiding principles should ecotourism development follow? What types of locations should accommodate ecotourism-- pristine areas where there is the potential to destroy it? What kinds of activities should define ecotourism? It is amazing that these questions are still lingering.

Reliable information?

From the examined projects, it is clear that the lack of consensus over the definitions of ecotourism and characteristics of the ecotourist are producing many interpretive forms of ecotourism in practice. Cater and Lowman (1994) point out that estimates of the economic impact from ecotourism range from $10 billion in 1989 (by the Economist Intelligence Unit) to $200 billion in 1990 (by the Canadian Wildlife Service). Clearly, the estimates of prevalence of ecotourism depend upon whether it is being assessed according to active or passive activities. Weaver (1999: 795) believes that “there is still no sound universal statistical basis for any of the global estimates” of economic impact. A deficiency in quantitative evidence and analysis is resulting in an inability to accurately assess the magnitude and effect of ecotourism on the global market, the local economies embracing it, or the physical impacts on the natural environment.
Standardized data analyzed over time is necessary. Additionally, a clear question remains concerning the distinguishing line between ecotourism and mass tourism. As discussed in Wall’s article (1997), promoting ecotourism draws attention to natural resources and eventually increases pressures upon them. He states that the challenge for tourism planners and managers is not to find a way to manage a relatively small number of visitors in a pristine environment but rather to bring mass tourism to a more enduring point.

**Stakeholders**

Whose initiative should be promoted with ecotourism development? Stakeholders commonly include the local communities, NGOs, protected area administration, tourism officials or associations, tourism companies, and governments. They all have very different priorities for ecotourism development. For example, local communities might exclusively view ecotourism as a means to generate revenues whereas NGOs often have a purely social or conservation focus, each thereby bringing different agendas and conceptions to the table. There is a need for more stability between biodiversity conservation and revenue generation. Planning for the long-term is ideal for ecotourism design and can enforce both economic development and biodiversity conservation.

**An alternative to traditional land uses?**

Ecotourism is considered to be an alternative to more destructive industries. To begin, why not comparatively analyze income generation from ecotourism versus income generation from more traditional land use practices such as logging and agriculture. One goal of ecotourism is to provide long-term resource protection. It is important to consider long-term economic benefits when comparing ecotourism to traditional income generating activities that have shorter term benefits albeit unsustainable. How do policy makers and planners approach promoting long-
term goals of biodiversity planning to populations essentially struggling to survive? Are there better ways to increase short-term economic gains to better compensate locals for income lost from restricting resource extraction?

Ecotourism is often seen as economically feasible because several researchers have described ecotourists as wealthier and with higher trip expenditures that other travelers (Boo, 1990; Wight, 1993). Ecotourists are also described as participating in ecotourism because they feel that it is a morally justified form of tourism (Wight, 1993). They are thus more inclined to purchase local goods and stay in local accommodations. Although this might be true, again there is no obvious empirical evidence to back this up. Is ecotourism simply a marketing scheme, intended to capitalize on society’s increased concern for the environment? Even if there is some evidence of local benefits, the data from the case studies indicate that the number of people significantly impacted by ecotourism is small compared to national populations. These issues could potentially be remedied by offering better financing opportunities to local residents.

**Recommendations for strategic ecotourism planning**

The following recommendations for ecotourism planning relate to the goal of providing long-term biodiversity conservation in addition to opportunities for local involvement and benefits thereby increasing the overall success of the project.

**Institutional**

- Governments must develop national tourism strategies that will incorporate biodiversity conservation through protection and management of natural areas
- National tourism frameworks should be flexible so as to allow for each destination to develop their own sets of regulations applicable to their specific economic, social and environmental situation, while still conforming to the overall national guidelines
- Coordination between different sectors (including national governments and local authorities) and creation of a participatory framework by which ecotourism or sustainable tourism policies may be implemented
- Enforcement of existing policies – Poaching, deforestation, draining of wetlands often occur due to local livelihoods but also to obtain building materials for tourism facilities, such as hotels.
• Protected areas should have an overall tourism development strategy.
• Development of industry standards to provide consistency across ecotourism claims or labels. Industry standards could also be used to more effectively measure compliance against established criteria and thus more concretely define ecotourism practices. However, it would be difficult to determine the best approach to defining and setting standards for ecotourism. How would one definition or set of criteria cut across all situations (e.g. lodge vs. tour operation; cultural differences, physical differences)?

Ecological
• Implementation of more studies for assessment of types of damage to biodiversity exclusively by tourism activity.
• Development of clear methods to evaluate environmental impacts of visitation, etc.
• Strengthen zoning for land uses, clearly delineating areas to be used for tourism
• Control visitation based upon carrying capacity of the area

Economic
• Investigation of the economic valuation of ecotourism and the economic contribution of tourism towards conservation
• Focusing on improving the standard of living of local communities and a better distribution of benefits through strengthening credit-funding programs (low interest rates for sustainable tourism projects, emphasis on local community)
• Development of a program whereby hotels and other tourist facilities finance conservation (e.g. hotels donating a set percentage of earnings to nearby conservation area near their location as often hotels will use adjacent conservation or protected area as part of their enticement)

Socio-Cultural
• Creation of new options and opportunities for local participation
• Offer better training and environmental education for local citizens

In theory, ecotourism contributes direct economic benefits to the local population through such inputs as service or park employment, thereby creating incentives for preservation of the community’s natural resources. In order for there to be an effective and lasting link between natural resource conservation and community economic development, governmental policies must enable local participation and ownership of the projects. Additionally, the localities’ goals and protected area’s goals must be compatible.
Chapter 8

CONCLUSION

The study clearly highlights the importance of including local populations in the planning, development and management of ecotourism, although this is not an easy task. “Local people are often widely distributed over a large geographic area and are not part of any established organization. They are therefore difficult to reach” (Boo, 1999: 188). A participatory planning framework should be implemented in order to minimize negative impacts on the local people and the environment and maximize potential benefits. Collaboration among government representatives, NGOs, the private sector, local conservation organizations and the local communities is essential to developing management frameworks that promote and control tourism over the long-term.

It is not disputed that ecotourism leaves footprints in the host community (Honey, 1999; Honey and Park, 1999; McLaren, 1998). The controversy existing in most developing countries is how to balance the need for short-term benefits with the need to manage and use natural resources over the long-term. A key lesson from this assessment is that ecotourism can work to provide economic gain for the host communities while conserving natural resources. However, countries embracing ecotourism will be challenged to devise strategies that thoroughly incorporate the local community in policy and planning. Successful programs will include education, training, and access to capital for local residents that will provide incentive to encourage their involvement.

There are several determinants influencing the success of the projects emerging from this case study analysis. First, successful projects involve efficient coordination between the government and the local community or have minimal government involvement. Second,
training programs for the host community heavily influence the management capacity of the
protected area as well as the benefits bestowed on the local population. Third, an equitable
distribution of resources is necessary in order to encourage local support for tourism and
conservation and reduce inter- and intra- community conflict. Fourth, the degree of ecological
impact is central. It determines the long-term success of the project as well as the extent to
which tourism improves or destroys the ecology of the area. Fifth, local control and support is
essential. This entails overcoming investment in the host community by outside developers,
poor infrastructure, and national governmental policies.

The projects considered to be unsuccessful in this case study analysis were lacking
community capacity-building opportunities (training, education, credit), appropriate mechanisms
to distribute revenue to communities and protected areas, management capability of protected
areas, use regulations (or enforcement of regulations), and coordination between the agendas of
governments, NGOs and communal groups. Most importantly, according to the case studies, the
deficiencies of unsuccessful projects are entrenched in the absence of mechanisms to encourage
community participation in the planning process.

Ecotourism is still in a stage of relative infancy. Although on paper, the goals and
principles of ecotourism appear reasonably advantageous for all stakeholders, little is known
about its long-term costs. What does it take to effectively manage tourism in a natural area with
an indigenous population nearby and how do planners and governments ensure that the local
populations are accruing the benefits? Maintaining ecotourism as one segment of a diversified
economy is a realistic strategy. Stakeholders of ecotourism development need to recognize that
ecotourism is not a universal remedy. It does not generate enough income to support entire
populations. Moreover, it is completely reliant on changes in the tourism market (i.e. price of
plane tickets). Whether ecotourism does indeed remain a marketing niche within the tourism industry or becomes accepted as a viable development option remains unresolved.
REFERENCES


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Appendix C – Social Impacts Matrix……  102
Appendix D – Vita………………………..  105
Appendix A: Ecological Impacts Matrix

<table>
<thead>
<tr>
<th>Ecotourism Development Projects</th>
<th>Ecological Preservation</th>
<th>Use Impacts</th>
<th>PA Restricted Access</th>
<th>Environmental Education</th>
<th>Tourism Revenues to PA</th>
<th>Management Structure</th>
</tr>
</thead>
</table>
| Community Baboon Sanctuary     | • Increased howler habitat  
• Improved farming practices of farmers | • Trail degradation  
• Guides feed howlers and induce their calling  
• Management plans not legally mandated-- still possible to hunt, log, etc. | • None, no legal mandates | • Yes- for school children, ecotourists, researchers | • Yes | • Weak management committee  
• Insufficient staffing  
• Heavy local involvement |
| Cockscomb Wildlife Sanctuary (CBWS) | • Protects jaguar and other wildlife  
• Protects local watershed | • Significant trail erosion | • Yes, hunting and agriculture illegal | | • Some $ goes back to CBWS | |
| Gales Point Manatee            | • Protection of manatee, unique turtle nesting sites and unique ecosystems | • Increasing boat traffic, use of gill nets threatens manatee | | • Minimal; goal is mainly protection of resources | | • Complicated management-both private & public land |
| Monteverde Cloud Forest Biological Reserve | • Protection of unique cloud forest and 1000s of flora and fauna species  
• Community group purchased land to serve as conservation buffer | • Creation of new trails; erosion and root trampling  
• Potential changes in animal habits due to human activity | • No, locals enter for free | • Yes, Natural History Program | • 95% returned to reserve | • Local control  
• Policy limits and regulation to help control visitation  
• No gov’t restrictions on tourism devlpt. |
| Tortuguero National Park       | • Protection of turtle nesting beach, tropical rainforest and canals | • Disturbance of nesting sea turtles | | • Yes, private tours | | • Government manages TNP  
• CCC manages Turtle Research Station |
| Carib Territory                | • Community conservation & watershed mgt project | • Land clearing | N/A | | N/A | • Community management |
| Galapagos National Park        | • Over use of sites  
• Flora and fauna disturbed by human activities  
• Reports of floating trash – plastics have strangled sea lions and birds  
• Indirect impacts--extraction of resources by locals | • Yes, this creates controversy as locals are still extracting resources | | • Education of local population and visitors of natural history of Galapagos. | • 40% of entrance fee revenue goes back to GNP | • Gov’t has done little to limit growth and development or restrict illegal harvesting |
<table>
<thead>
<tr>
<th>Location</th>
<th>Objective</th>
<th>To Date, No Significant Ecological Impacts</th>
<th>No</th>
<th>Yes, Rainforest Education</th>
<th>100%</th>
<th>Communal Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capirona</td>
<td>Rainforest preservation</td>
<td>To date, no significant ecological impacts</td>
<td>No</td>
<td>Yes, rainforest education</td>
<td>100%</td>
<td>Communal management</td>
</tr>
<tr>
<td>Tangkoko Duasudara Nature Reserve</td>
<td>Primate behavior affected, Harassment of wildlife by guards, Illegal hunting, Litter, Forest fires, Unrestricted visitation</td>
<td>No</td>
<td>&lt;2%</td>
<td>Hunting is a problem but park does not have financial support to control, Agricultural encroachment is a threat, Tourists are unrestricted- no management plans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Komodo National Park</td>
<td>Protection of Komodo dragon and its environment</td>
<td>Until 1994, goats used as bait to attract Komodo dragons and tourists to feeding site having negative effect on dragons</td>
<td>No</td>
<td>No regulations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Makalu-Barun National Park and Conservation Area</td>
<td>Preservation of a large tract of land, Wildlife conservation</td>
<td>No</td>
<td>No</td>
<td>Joint management between the government (DNPWC) and NGO (Mountain institute), Some restrictions on local use of land; seeking to ensure sustainable extraction of natural resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annapurna Conservation Area Project</td>
<td>Increased wildlife populations, Decreased deforestation, Litter and sanitation controlled with better facilities, Alternative energy systems to minimize firewood use</td>
<td>No</td>
<td>Yes, Visitor information centers and minimal impact code</td>
<td>100% stays with ACAP</td>
<td>NGO (KMTNC)-Government partnership, Little involvement with Nepalese tourism industry</td>
<td></td>
</tr>
<tr>
<td>Royal Chitwan National Park</td>
<td>Preservation of rhinoceros and tiger habitats and populations of wildlife</td>
<td>Yes</td>
<td>50% of park revenues distributed to local communities affected by park</td>
<td>No limits on visitation, No restriction on tourism facility development outside park</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taquile Island</td>
<td></td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix B: Economic Impacts Matrix

<p>| Ecotourism Development Projects | Household Income | Distribution of Benefits | Type of Employment | Infrastructure Development | Local Businesses | Revenue Leakage |
|--------------------------------|------------------|--------------------------|--------------------|---------------------------|-----------------|----------------|----------------|
| <strong>Community Baboon Sanctuary</strong> | • Only 32% of community respondents feel economic benefits (not yet considered significant by community) | • Inequitable distribution of income between members and communities (70% goes to Bermudian Landing) | • Increased tourism-related enterprises (housing, meals, guided tours) | • Inadequate physical infrastructure (paved roads, signs) | • Locals providing tourist facilities- encouraged diversification |
| <strong>Cockscomb Wildlife Sanctuary</strong> | • 67% locals receive individual benefits | • Handicraft sales -87% profit in 1988-1991 | • Local businesses | • Infrastructure developed to support sanctuary |
| <strong>Gales Point Manatee</strong> | • 24% receive direct benefits including wage paying job or other income generating activity | • Locals perceived inequitable distribution | • Local businesses | |
| <strong>Monteverde Cloud Forest Biological Reserve</strong> | • Yes, many residents employed | • Locals employed directly (hotels) and indirectly (agriculture for local restaurants) | • Tourism revenues reinvested in infrastructure and facilities | • About 30 locally owned hotels and restaurants | • Foreign investors are beginning to show interest in Monteverde |
| <strong>Tortuguero National Park</strong> | • Increase -57% of households were directly employed in host services | • Inequitable- profits from tourism not shared with national park or community services | • Increased opportunities-TNP and CCC | • Community has not benefited from any community services | • 70% of businesses are local are staffed by locals |
| <strong>Carib Territory</strong> | • Handicraft workers reported profits of about $3800 each year | • Market for handicrafts and canoes | • User fee ($2) for maintenance and access regulation | • Locals providing tourist facilities- encouraged diversification | • Buy supplies from non-Caribs |</p>
<table>
<thead>
<tr>
<th>Park Name</th>
<th>Inequitable</th>
<th>Yes, service jobs although the infrastructure development has encouraged migration to islands.</th>
<th>Inequitable - out of about $1300 spent by tourists, only $102 goes to the local economy</th>
<th>Immense--airports, shops, restaurants, and hotels; water, sewer, electricity</th>
<th>Tourism provides supplementary revenues for households and community services 75% of locals employed as tour guides, cooks, etc.</th>
<th>Yes, completely equitable Yes- tour guides, cooks, etc.</th>
<th>Yes- tour guides, cooks, etc.</th>
<th>Community members are complete owners and beneficiaries</th>
<th>Roads, telephone and mail service</th>
<th>High- travel companies and accommodations in Manado</th>
<th>50% lost due to import of goods and services 30% lost due to package tourists</th>
<th>95% of lodges locally owned</th>
<th>Yes, lodges purchase supplies from Pokhara</th>
</tr>
</thead>
</table>
| Royal Chitwan National Park | • Limited economic benefits  
  • 6% of locals surveyed employed directly or indirectly with tourism ($600/year income) | • Inequitable – decreases with increase in distance from Suaraha | • Little employment potential | • 61% of hotels NOT locally owned  
  • Hotel industry employed only 1% of working-age population  
  • Significant – advanced hotel bookings made elsewhere; hotels rarely purchase locals goods and services |
|---|---|---|---|---|
| Taquile Island | • 75% of tourism jobs were held by residents  
  • 89% of locals perceived that they were benefiting | • Inequitable- local boat and restaurant owners receive (75%) of income  
  • About 30 houses accommodate most tourists on the island and directly receive all benefits | • Yes, handicrafts (coops), guides, boats | • 2 community-run artisan stores  
  • Local boats, restaurants, lodging  
  • High (91%): buying supplies, non-local travel agencies and boats |
### Appendix C: Social Impacts Matrix

<table>
<thead>
<tr>
<th>Ecotourism Development Projects</th>
<th>Community Education or Training</th>
<th>Local attitudes towards tourism and conservation</th>
<th>Local Capacity Building</th>
<th>Cultural Impact</th>
<th>Participatory planning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Community Baboon Sanctuary</strong></td>
<td>• Limited training to reduce trail degradation</td>
<td>• Yes, positive support for conservation and protection of monkeys (90%)</td>
<td>• CBS membership is voluntary (60% of villagers are members) • Members frustrated b/c they have not been involved in administration</td>
<td>• Locals offer rooms and meals in their homes for overnight visitors</td>
<td>• Yes; idea proposed by villagers in the beginning- they sign a voluntary pledge</td>
</tr>
<tr>
<td><strong>Cockscomb Wildlife Sanctuary (CBWS)</strong></td>
<td>• Business training for women</td>
<td>• Yes, support has increased but still not much appreciation for conservation benefits • 58% when established, now 92% support it (75% for tourism benefits and 17% for conservation benefits)</td>
<td>• Craft/souvenir center created for Women by local council; 15 women participate</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gales Point Manatee</strong></td>
<td>• Training offered by GPPC and Belize Tourist Board</td>
<td>• 50% residents favor project (12% for tourism benefits and 35% for conservation benefits) • Locals perceive lack of support and discontentment – thought to intensify inter- and intra-community differences</td>
<td>• Gales Point Progressive Cooperative (GPPC)</td>
<td>• Renewed interest in cultural heritage, revival of traditional crafts and activities • Residents feel pride with efforts to protect ecological resources including the manatee</td>
<td>• Locals helped generate preliminary ideas • However, American biologists declared zoning plan w/out consulting locals</td>
</tr>
<tr>
<td><strong>Monteverde Cloud Forest Biological Reserve</strong></td>
<td>• Monteverde Institute-trains locals to help establish family hotels and restaurants</td>
<td>• Supportive</td>
<td>• Women’s handicraft cooperative</td>
<td></td>
<td>• Yes, very participatory</td>
</tr>
<tr>
<td><strong>Tortuguero National Park</strong></td>
<td>• Yes, tour guide training program (environmental ed and communication) —enhanced interest in turtles</td>
<td>• 90% of residents are satisfied with protected area status</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

102
<table>
<thead>
<tr>
<th>Location</th>
<th>Key Points</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carib Territory</td>
<td>• Tour guides must have knowledge of local flora and fauna</td>
<td>• Supportive</td>
</tr>
<tr>
<td></td>
<td>• Community formed a management plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Tourism has revived traditions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Cultural exchange- tourists stay among villagers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Caribs produce traditional crafts as their ancestors did</td>
<td>• Yes, community based project</td>
</tr>
<tr>
<td>Galapagos National Park</td>
<td>• Annual guide training course for locals through Research Center</td>
<td>• Many residents have not found it easy to benefit from tourism</td>
</tr>
<tr>
<td></td>
<td>• Conflict over land and water use including illegal harvesting of marine life</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Visitor-local competition for basic services</td>
<td>• No</td>
</tr>
<tr>
<td></td>
<td>• Indigenous culture was impacted when tourism replaced traditional land uses</td>
<td></td>
</tr>
<tr>
<td>Capirona</td>
<td>• Not a need</td>
<td>• 100% support</td>
</tr>
<tr>
<td></td>
<td>• Ecotourism project resulted from community’s desire to diversify their economy—now entire community is benefiting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Cultural exchange highly encouraged</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Some cultural traditions revived (ceramic bowl making)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Project is source of cultural pride</td>
<td>• Completely participatory</td>
</tr>
<tr>
<td>Tangkoko Duasudara Nature Reserve</td>
<td>• None</td>
<td>• Attitudes are unknown although expected to be negative</td>
</tr>
<tr>
<td></td>
<td>• Poor- locals typically not allowed to guide</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Locals expected to change traditional livelihoods and resource use while accruing no benefits</td>
<td>• Minimal</td>
</tr>
<tr>
<td>Komodo National Park</td>
<td>• Almost unanimous support for protection</td>
<td>• 92.7% would like to see increased visitation</td>
</tr>
<tr>
<td></td>
<td>• 88.9% would like their children to work in tourism</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 49.7% felt that tourism increased prices for goods and services</td>
<td>• Many respondents (54.5%) had interacted with tourists, either through conversation or selling goods or services</td>
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<td>• Local attitudes are unknown although expected to be positive</td>
<td>• 32.2% felt that tourist was damaging their culture</td>
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<td>• 51.1% did not appreciate dress of tourists</td>
<td>• 51.1% did not appreciate dress of tourists</td>
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<td>• Many respondents (54.5%) had interacted with tourists, either through conversation or selling goods or services</td>
<td>• Not much collaboration among stakeholders</td>
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<td>• Strong—84% support tourism in Makalou Barun</td>
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<td>Makalou Barun National Park and Conservation Area</td>
<td>• Education and training provided for locals</td>
<td>• 30% of respondents- at least one member of their household received training</td>
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<td>• 61% disapproved of changing their natural and cultural resource solely to support tourism</td>
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<tr>
<td>Location</td>
<td>Key Features</td>
<td>Public Involvement</td>
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</table>
| Annapurna Conservation Area Project | • Yes, environmental education within school system for children and study tours, discussions, and training for the local adults  
• Very supportive | • Development of local committees to manage and implement activities  
• Women’s group plays large role in conservation and development activities  
• Artisan’s cooperative | • Yes, key principle of project is local participation in all aspects of the project’s development |
| Royal Chitwan National Park | • Nature guide training and certification program  
• Minimal, they are not receiving significant benefits from tourism or protected area preservation | • Locals do not participate in tourism planning and management | |
| Taquile Island               | • Reluctance in the beginning but once economic benefits realized, tourism is supported  
• Most local services collectively managed (esp. handicrafts and lodging)  
• 77% of population involved in Manco Capac Cooperative (artisans) | • High public involvement in decision making and tourism management  
• Most residents believe that Taquile has been a participatory process | |
Appendix D: Vita

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EDUCATION

M.A. Urban and Regional Planning, May 2002
Virginia Polytechnic Institute and State University, Blacksburg, VA
Concentration: Environmental Policy and Planning
- Trained facilitator for Project Wet, Project Wild and Project Learning Tree
- Graduate Urban Affairs and Planning Association (GUAPA), Co-Chair, 2000-2001

B.S. Forestry and Wildlife, concentration in Natural Resource Recreation,
Virginia Polytechnic Institute & State University, Blacksburg, VA
December 1999 GPA 3.3

ACADEMIC WORK EXPERIENCE

Graduate Research Assistant, Center for Housing Research, Virginia Tech
August 2001- Present
- Assisting in research for HUD sponsored project, “Diffusion Mechanisms in Residential Building Construction”
- Facilitated communication among research team

PROFESSIONAL WORK EXPERIENCE

Community Rivers Program Fellow, American Rivers, Washington, DC
May 2001-August 2002 (full time)
- Assisted in research for a national publication jointly being developed with the American Planning Association, “Ecologically Sensitive Riverfront Development”
- Coordinated workshops in Burlington and Dubuque, Iowa on Ecologically Sensitive Riverfront Design and assisted in research, editing and production of workshop publication “River of Renewal: A Vision for Reconnecting Communities to a Living Upper Mississippi River”
- Supported other aspect of program including research of economic benefits of low-impact development approaches, environmental education, and policy mechanisms
- Assisted the Community Rivers Program Director with daily tasks including presentations and database management
Administrative Assistant, American Rivers, Washington, DC  
January 2000- June 2000 (full time)  
• General administrative and management support  
• Assisted in management of staff communication  
• Demonstrated ability to meet deadlines and handle multiple tasks  
• Demonstrated proficiency in computer applications

Sales Associate, Backcountry Ski and Sports, Inc.  Blacksburg, VA  
June 1999 - October 1999 (part time)  
• Retail sales position  
• Customer service  
• Assisted with inventory

Intern, United States National Arboretum, Washington, D.C.  
Summer 1998 (full time)  
• Awarded internship by Friends of the National Arboretum (FONA)  
• Assisted in design and planning of a youth garden  
• Helped supervise summer program of environmental education for inner city youth

Sales Associate, Laurel Creek Nursery, Christiansburg, VA  
March 1997 - June 1997 (part time)  
• Retail sales position  
• Customer service  
• Participated in nursery maintenance

Counselor, Adventure Unlimited Ranches, Buena Vista, CO  
Summer 1995 (full time)  
• Responsibilities included safely guiding campers into backcountry areas  
• Activities included backpacking, mountain biking, rock climbing, and white water rafting  
• Encouraged team-building and personal growth in cabin groups  
• Environmental education

HONORS AND AWARDS

• Dean’s List (1997-1999)  
• President of the Natural Resource Recreation Society 1998-1999  
• Member of Natural Resource Recreation Society 1996-1999  
• Member of Alpha Zeta, the honor fraternity of the College of Agriculture and Life Science and the College of Forestry and Wildlife  
• Awarded the “Outstanding Member Award” for the Natural Resource Recreation Society in 1999  
• Recipient of Gretchen and Clyde Smith Memorial Scholarship through the College of Forestry and Wildlife in 1998  
• Recipient of the George B. and Mary Emma Ragsdale Endowed Scholarship through the College of Forestry and Wildlife in 1999