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ECOTOURISM AND OTHER SERVICES DERIVED

FROM FORESTS IN THE ASIA-PACIFIC

REGION: OUTLOOK TO 2010

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A NOTE ON LANGUAGE

This report was drafted in US English and converted to UK English for issue by FAO. In the process, even some proper names which should have retained their US style formats may have been inadvertently translated. The Editor regrets any inconvenience this may cause and assures readers that no change to official names was intended.

1. INTRODUCTION

Forest resources are central to conservation and development in the Asia-Pacific region. Not only do forests provide a number of ecosystem services to both the region and the world, they also are resources for economic and social development. The region includes a number of forest "hotspots" of environmental importance, as well as several countries undergoing rapid economic development and continued population growth. These forces make it critical that sustainable uses of forest resources be facilitated.

One of the means of facilitating sustainable use of forest resources is ecotourism. There are numerous definitions of ecotourism, and definitional issues are described further in Section 3.1. For purposes of this working paper, ecotourism is defined as "tourism and recreation that is both nature-based and sustainable."

Ecotourism has been embraced as a tool for generating economic benefits from forests and other natural resources while simultaneously conserving those resources. However, it is not a panacea for sustainable resource use, as benefits have not always been as great as desired while costs have sometimes been greater than expected (Laarman and Durst 1993; Lindberg 1991). The balance of benefits and costs will depend on a variety of factors, including destination appeal and accessibility. However, it also depends critically on how well ecotourism is planned and managed. This working paper provides an introduction to ecotourism and services of forests, together with an outlook and options for future management.

For purposes of this working paper, the products provided by forests are grouped into the following categories:

- timber production;
- special forest products or non-timber forest products, such as rattan and medicinal plants; and
- "services of forests" which incorporates the varied non-physical forest products, as described in Section 2.

This working paper focuses on the third category, and on ecotourism in particular. It should be stressed that though services of forests are less tangible than timber or non-timber forest products, they make highly important contributions to social and economic development.

The working paper is part of the Asia-Pacific Forestry Outlook study, which involves an assessment of the status, trends, and outlook for the forestry sector to the year 2010. Section 2 of the paper provides background on services of forests generally, and Section 3 provides background on ecotourism. These background sections are followed by Section 4, which describes relevant trends and issues, their implications, and options that might be implemented to achieve policy objectives. Lastly, the Annex contains notes on selected countries that provide additional background and illustrate issues.

Naturally, there is substantial variation across countries with respect to services of forests, relevant issues, and future outlook. For example, the concepts and implementation of ecotourism vary across countries, particularly between more and less developed countries. Nonetheless, there are significant commonalities, with general issues and principles relevant in a

variety of situations. This working paper provides a discussion of general issues and principles, while also providing some specifics.

The working paper is inherently limited by the lack of ecotourism statistics. This lack partly results from the nature of tourism flows, which are not as easily measured as timber flows. It also results from the lack of common and easily-applied definitions for tourism generally and, especially, for ecotourism in particular. Lastly, the limited project budget precluded site visits or the contracting of country or topic specialists. For these reasons, the working paper primarily provides an overview, though significant effort has gone into providing illustrative details and data wherever possible.

Throughout the paper, the term "natural areas" is used instead of "forest areas." This usage recognizes that many forestry agencies in the region manage non-forested areas. In addition, the term is used instead of "protected areas" to reflect that not all relevant areas are in public ownership or have legal protection. Nonetheless, many of the sites used for ecotourism in the region are national parks or one of the other IUCN protected area designations.

2. SERVICES PROVIDED BY FORESTS

The Asia-Pacific region is marked by a wide range of geographic and biological diversity. It includes the world's highest mountain systems, the second largest rainforest complex, more than half the world's coral reefs, and a diversity of island systems. Additionally, the region includes segments of three biogeographic divisions. There is consequently a high level of species diversity and endemism (Braatz 1992). However, this diversity and endemism is coming under increasing threat. According to Braatz (1992:1), "unless immediate, decisive steps are taken to counter the effects of deforestation and other forms of natural resource destruction in the Asia-Pacific region, much of Asia's biodiversity will be irreversibly lost within this generation."

Biodiversity loss is occurring through a combination of factors such as poverty, population increases and models of economic development that incorporate nature as a resource for exploitation. In this region, conservationists face "the twin challenges of development and under-development.... The region's countries are grappling with difficult choices governed by geopolitical, economic and demographic forces" (IUCN Bulletin 1993:12).

This section provides an overview of the various services of forests available within the Asia-Pacific region. Its aim is to introduce this variety within the context of services of forests being contested. That is, services of forests, their use and their conservation, may mean different things to different groups across the region. An example of this is the question of protection from what and for what? For instance, when conflicts arise between uses, such as ecotourism and indigenous use, which should take priority?

Services provided by forests cover a wide range of ecological, political, economic, social and cultural considerations and processes. This diversity means that there are no easy management solutions, and management is not a technical, mechanical process but one that must necessarily incorporate a variety of competing interest groups and views.

2.1 Categories Of Services

Broadly speaking, services of forests can be categorized according to a number of criteria that incorporate specific processes. It should be noted that these categories are not exhaustive, nor are they discrete.

Ecological services

There are a number of components to the broad range of ecological services that forests provide. According to Sousson, Shrestha and Uprety (1995), these include (c.f., World Bank 1997):

- the regulation of water regimes by intercepting rainfall and regulating its flow through the hydrological system;
- the maintenance of soil quality and the provision of organic materials through leaf and branch fall;
- the limiting of erosion and protection of soil from the direct impact of rainfall;
- modulating climate; and
- being key components of biodiversity both in themselves and as a habitat for other species.

Whilst these services are important, this report is more concerned with those that have a more specifically human dimension: economic and sociocultural services.

Economic services

Clearly, forests form the basis of a variety of industries including timber, processed wood and paper, rubber, and fruits. However, they also contain products that are necessary to the viability of rural agricultural communities. These products include fuel and fodder, game, fruits, building materials, medicines and herbs (Sousson, Shrestha and Uprety 1995).

Additionally, grazing occurs within forests, and local woodlands are used to satisfy basic needs. Rural people also grow crops on temporary plots within the forest, often on a rotational basis. These forest products contribute to a diverse rural economy and security when times are difficult. Therefore, the loss of these resources undermines the viability of agricultural practices in the developing world (Sousson, Shrestha and Uprety 1995).

Sociocultural services

Knudston and Suzuki (1992) have explored the protective function of culture within a comparative perspective. Others note that, for millennia, humanity has had a social and cultural basis for protecting nature. Forests are home to millions of people world-wide, and many of these people are dependent on the forests for their survival (Sousson, Shrestha and Uprety 1995). In addition, many people have strong cultural and spiritual attachments to the forests. Therefore, forest destruction undermines the capacities of these people to survive economically, culturally and spiritually.

The issue of indigenous knowledge is also important. Many local people understand how to conserve and use forest resources. It has been argued that forests currently are being destroyed, in part, because of the non-forest dwellers' lack of knowledge about how best to exploit the vast diversity of medicines, foods, natural fertilizers and pesticides that forests contain (Posey 1993).

Spirituality is important as well. The Hindu viewpoint on nature, for example, is based on a recognition that nature and its orders of life (such as trees, forests and animals) are all bound to each other. Thus we can understand services of forests within the Hindu cosmology to include religious values. Other indigenous cosmologies involve a highly-important role for forests and other components of the natural world. Thus, indigenous belief systems have a major protective role in a culture's relationships with the natural world, and in nature's relationship with a culture.

Scenic and landscape services and values

This more general set of services highlights ideas of aesthetics and beauty as components of services of forests. For example, the Himalayas provide a service within this context, and one within which ecotourism operates. From a tourist's perspective, these values may be high on their decision making priorities, which would indicate protection of these services are important for ecotourism. Scenic and landscape values also may be important for residents.

The relative importance of the various services

It is extremely difficult to compare the importance of the various services provided by forests. In part, this is due to the fact that there is no universally accepted common metric that can be used in such measurement. However, economists and others have tried to measure various services, economic and otherwise, using the metric of economic value. It should be stressed that non-economists often oppose the use of this metric and that the metric requires strong assumptions. Nonetheless, estimates of the economic value of various services of forests does provide one indication of their importance relative to each other and to timber production and non-timber forest products.

Recently, Costanza et al. (1997) estimated the economic value of various services of forests at the global level. *These values should be considered extremely rough estimates 1) because of the assumptions involved in their calculation and 2) because they are based on global,*

rather than regional, evaluations. Their estimates of annual economic value for services of the forest are:

Service	Value (1994 US\$ ha⁻¹ yr⁻¹)
Nutrient cycling	361
Climate regulation	141
Raw materials	138
Erosion control	96
Waste treatment	87
Recreation	66
Food production	43
Genetic resources	16
Soil formation	10
Water supply	3
Disturbance regulation	2
Water regulation	2
Biological control	2
Cultural	2
Total value (\$ ha⁻¹ yr⁻¹)	969

Though these estimates should be treated with caution and represent value that partly accrues to people living outside the region, they indicate the significant importance of services of forests.

2.2 Relationship Between Services of Forests and Forest Production

Conflicts arise between the relative importance of services compared to other factors, such as production values. In one respect, conflict can be seen as arising out of different values related to forests, some of which are subtle and relate to cross-cultural differences in interpreting protection or use. Issues surrounding rights of access by logging companies in countries, such as Papua New Guinea, with customary tenure systems provide examples of conflicts arising over competing values related to services of forests, the rights of indigenous people, and land tenure.

In the specific context of ecotourism, there have been some positive outcomes from forest production. For example, forestry roads enhance access to areas for ecotourists, and small clearcuts can enhance views and can be used as camping places. Moreover, harvest of selected

trees within an area can enhance the experience for some visitors (further discussion of silvicultural effects on visitor experiences is provided by Brunson (1996) and Mattson and Li (1994)).

However, extensive clearcuts will reduce or eliminate demand for most types of ecotourism. Put simply, ecotourists are motivated to experience a natural environment that is perceived as intact and generally pristine. Though some level of environmental degradation may be overlooked or tolerated, noticeably degraded landscapes will be unappealing to most visitors. As Clark (1987) suggests, the overriding question is not whether ecotourism should be integrated with other resource uses, but where, when and how such integration can be achieved.

2.3 *Institutional and Policy Environment*

Across the region, national and state governments largely determine how forests can be used. This is an approach to management that often has been implemented at the expense of indigenous or local management and control. This often has meant a loss of control at the local level, either by indigenous groups themselves or by local people who live in the forests or use its services, thereby potentially creating a situation in which certain services of forests (such as spiritual or religious values) are ignored or not recognized within the forest policy context.

However, there have been policy initiatives that reflect a movement away from a centralized top-down approach to management and government intervention. Two of examples of these initiatives are 1) the strengthening of protected area management and 2) a movement towards social and community forestry. These initiatives are described in Section 4.1.

2.4 *Issues In Maintenance of Services of Forests*

The wide range in services of forests highlights the diversity of forest "uses," and reinforces the idea that, for many people, forests have more than economic value. Thus, we are sometimes left with the tension between diverse forest uses, which is intertwined with priorities and the way forests are valued.

The immediate value of forests for timber continues to dominate considerations of forest management by individuals, corporate owners and even governments that represent the public trust. The reasons are many, and include tax policies, ownership of land, tenure issues, economic exigencies, greed, and corruption.

Dwivedi (1992) argues that viewing forests as a "resource" leads to an excessive weight being applied to economic value, and that it is crucial to now search out a new concept of forest "resources." There are signs that this is occurring. It is possible to see that the concept of "ownership" of forests is changing, in recognition that forests are an important part of the global commons. The public consequently has an important interest in forests and their conservation, not only because of the dependence of life on forests but for other interests such as ecotourism (Woodwell 1993).

Some of the major issues related to services of forests are geopolitical. Though forests are physically located within nation states, issues surrounding their protection go well beyond borders (Maini and Ullsten 1993). This means global geopolitical relations play an important part in the policy context of forestry resource management in the Asia-Pacific region, whether through the calls for international treaties on the banning of hardwoods, green consumerism, or access to the genetic resources of forests by private companies. For Maini and Ullsten (1993), many geopolitical issues can be distilled into four contexts which set the scene for forest management and forest service maintenance:

- The industrialized countries, which are responsible for major deforestation, are advocating strong measures to conserve and protect the world's forests. Many developing countries are rightly concerned that the industrialized countries' preoccupation with tropical forest issues is inconsistent with the amount of attention being paid to global warming and forest decline in developed countries.
- Many developing countries view attempts to protect forests by locking up forest resources as an intrusion on sovereign rights.
- The capacity of developing countries to protect biodiversity is dependent on receiving additional funding and technologies from richer countries.
- Many developing countries have expressed concern at the desire of some industrialized countries to gain free access to genetic resources.

Many geopolitical issues are thus related to more general relationships between nation states. It is often suggested that the development of agricultural lands has been at the expense of forests. This process often involves privatizing communally owned forests and grasslands (Repetto 1993). Two major issues related to services of forests arise out of this. First, because the traditional land rights claims of indigenous and local communities frequently are ignored or not included, land at the frontier is often an open access resource. Because of this market failure, the private price of frontier land cannot and does not reflect the value of services performed by forests (Repetto 1993).

The second relates to the argument that one needs to clear-cut in order to open up agriculture. Because clear-cutting is associated with agriculture, and because in many countries of the Asia-Pacific there are high levels of rural poverty, it is relatively easy to suggest that poor people are the cause of some forest destruction. Just how much depends on the ways in which researchers interpret their information and the paradigms they use, the level of poverty and so on. But this approach, which has been highlighted in research in countries such as Nepal and India, often fails to look at the causes of poverty. Therefore, the emphasis on the relationship between agriculture and forest use may provide only a partial picture, and therefore a partial solution.

Social and cultural issues vary across regions and across cultures within regions. The Asia-Pacific region shares with other regions this diversity, only some of which can be addressed here:

- *Issue: inter-generational responsibilities and the rights of forest dwellers, indigenous people and communities living in and around forests and who are dependent on them.* There are a number of specific components under this issue, including relocation and resettlement of populations, perceptions by the state (that are reflected in policies) that local or indigenous people are "backward" because of their beliefs and/or level of socio-economic development, and the uses of indigenous knowledge and issues associated with the transfer of intellectual property rights.
- *Issue: the impact of forest destruction on norms and values of indigenous and local cultures as well as the impact of cultural change on forest use by these people.* In many cultures within the Asia-Pacific, shrines and initiation rite ceremonies, taboos and other cultural values have developed to protect trees, shrubs and the sacred places themselves. Whilst this protective function has religious or spiritual significance, it also acts as an important mechanism for the reinforcement of local cultural values and, often, as a mechanism for conflict resolution. The destruction of forests, the relocation and resettlement of forest dependent communities and broader processes of social change serve to undermine these value systems and their broader community function.

2.5 Summary of Issues Related to Services Provided by Forests

Dominant values of forests have come to be equated with economic resources in an extractive industry that has contributed to forest loss regionally. As part of this, the social, cultural and ecological components of services of forests have been largely unrecognized or ignored.

The search for economic development in the region is an important one, but pathways towards development have environmental and social costs in terms of the destruction of services of forests. In this context, one person or group's economic development can be another person's or group's loss of culture, religion or beliefs. Attempts at drawing some people into the economic mainstream may result in the marginalization of others.

What is needed is a mechanism whereby the diversity of services that forests provide can be protected, while forests can still provide economic benefit to local and indigenous people, countries and others within the region. Such an approach would need to recognize the diversity of services from forests, but would also need to recognize the sociocultural basis for these services, especially as they relate to indigenous and local people's rights. It would need to broaden out the predominant concept of forests that emphasizes economic considerations to include broader functions as well as provide a means to replace, at least partially, the economic benefits that have to be foregone to maintain the broad range of services of forests. It would also need to ensure that economic and social development occurs within the region by emphasizing the rights of local people. Ecotourism can be one such mechanism.

3. ECOTOURISM

Visitors have long been travelling to natural areas under the guise of recreation and tourism. This has led some observers to question whether ecotourism is simply a new name for an old activity (Wall 1994). However, several changes apparently have occurred in the last decade. First, for reasons discussed in Section 3.3, there has been growth in visits to many natural areas, particularly in developing countries. Second, many economic development professionals increasingly have viewed natural-area visitation as a tool for providing employment in regions that have experienced decline, or lack of development, in other industries.

Third, many conservation and resource management professionals increasingly have viewed natural area visitation as an avenue for enhancing natural area finance and providing conservation-related benefits, particularly to residents living near natural areas. Fourth, there has been increasing attention paid to improving the sustainability of all tourism activities, including those occurring in natural areas. Thus, although ecotourism may not represent an abrupt departure from historic recreation and tourism, it does represent a change in the level of visitation for many areas and a change in the goals that various stakeholders attach to this visitation.

The Australia case exemplifies the development of the ecotourism phenomenon (Lindberg and McKercher 1997). In the late 1980s, ecotourism was an unknown entity that was just beginning to emerge in the popular lexicon. Its growth was spurred by the ongoing debate over tourism and the environment and as a direct result of the enthusiasm for ecologically sustainable development (ESDWG 1991). At first, its potential market base was seen to be small although, as a new product, its growth potential was seen to be large.

However, this niche concept changed in the early 1990s. The term ecotourism struck a chord with the tourism industry, the travelling public, and with private and public sector agencies charged with the promotion of tourism products. Ecotourism became a buzzword. The explosion of interest in ecotourism led to the emergence of a lively debate among academics and industry leaders about the merits of the activity. Ecotourism conferences resulted in the formation of a national ecotourism association, the Ecotourism Association of Australia. In the space of four years, the Commonwealth government (Allcock et al. 1994), state governments (DCE 1992), and even regional associations (NPWS 1996) produced a variety of ecotourism policies designed to encourage the industry's development. This same period saw rapid expansion in the number of ecotourism operators and the emergence of specialist tour wholesalers and retail travel agents to market ecotourism products (Richardson 1996; Southern 1996).

By the mid 1990s, ecotourism, as a concept, began to enter a period of maturity. Many of the claims made in earlier years began to be disputed, and the legitimacy of many players to call themselves ecotourism products was challenged. The travelling public either has become more aware of what ecotourism encompasses or more critical about the idea to accept blindly the claims that mass tourism destinations are ecotourism destinations. Assumptions regarding the benefits of ecotourism have been challenged through empirical research (Lindberg, Enriquez, and Sproule 1996; Driml and Common 1995). As a result, a more realistic understanding of what the product entails and the benefits it can provide is emerging.

3.1 Ecotourism, Definitions, Concepts and Visitor Types

Much attention has been paid to the question of what constitutes ecotourism, and numerous concepts and definitions exist (Ballantine and Eagles 1994; Blamey 1995; Bottrill and Pearce 1995; Buckley 1994). The Ecotourism Society, based in the US and the most international of the ecotourism organizations, defines ecotourism as responsible travel to natural areas that conserves the environment and improves the welfare of local people. The Australian National Ecotourism Strategy defines ecotourism as Nature-based tourism that involves education and interpretation of the natural environment and is managed to be ecologically sustainable. Numerous other definitions exist around the world.

The variability in conceptual definitions like these is further complicated by the difficulty of moving from a conceptual definition to an operational definition. For example, a conceptual definition may involve sustainability, but when one tries to measure whether someone is an ecotourist or some tourism activity is ecotourism, a more precise definition of sustainability is needed. What are the criteria one uses to determine whether the activity is sustainable and thus qualifies as ecotourism?

Most conceptual definitions of ecotourism can be reduced to the following: "ecotourism is tourism and recreation that is both nature-based and sustainable," and it is this definition¹ that is used here. Three features of this definition merit further discussion. First, the definition clarifies the descriptive and the prescriptive components of the ecotourism concept. The nature component is descriptive or positive in the sense that it simply *describes* the activity location and associated consumer motivations. The sustainable component is prescriptive or normative in the sense that it reflects what people *want* the activity to be. An important point is that, as used here, sustainability incorporates environmental, experiential, sociocultural, and economic dimensions.

Second, this basic conceptual definition incorporates more complex definitions. For example, some definitions focus on minimizing negative environmental and cultural impacts while maximizing positive economic impacts. Such a focus is a means to the end of achieving sustainability. Likewise, the definitional focus on environmental education tends to reflect a desire to satisfy tourists or to use education to reduce negative environmental impacts. In the former case, it is a means to the end of achieving a sustainable experience. In the latter, it is also a means to the end of sustainability. Because most components of ecotourism definitions either focus on the goal of sustainability or on means to achieve that goal, it is practical to use the simple conceptual definition of ecotourism being sustainable nature-based tourism and recreation.

Third, and related to the second feature, by focusing on ends (the desired condition of sustainability), this definition forces critical evaluation of what constitutes ecotourism. For example, is sport hunting ecotourism? Many observers feel that hunting is not ecotourism, but under this definition it would be if it met the sustainability criterion. Though hunting will be inconsistent with concepts of sustainability in some natural areas (or may be rejected on other grounds), it may be appropriate in others. Similarly, a large commercial group of tourists paying an entry fee to visit a hardened visitor centre and associated rainforest boardwalk may

¹ The rest of this section shows that there is significant diversity in definitions of ecotourism and in the characteristics of ecotourism experiences. Typically, and as used here, most tourism activities that occur in natural areas are loosely considered ecotourism. In practice, ecotourism is concerned with making all nature tourism activities more sustainable—with achieving the conceptual definition presented above.

qualify as ecotourists to the same degree as a small group of visitors following low-impact principles in a pristine wilderness.

Given the importance of sustainability within the ecotourism definition, a fundamental question is “What is sustainability?” In simplified terms, tourism sustainability is postulated to result from a positive overall balance in environmental, experiential, sociocultural, and economic impacts (“experiential impact” is used to describe the effect of visitors on each other and “sociocultural impact” is used to describe the effect of visitors on local residents). Thus, tourism activities that generate more positive net benefits would be more sustainable, in general, than tourism activities that generate fewer positive net benefits.

The focus on benefits also clarifies ecotourism-related objectives. Historically, many sites have sought to increase the number of tourists, but this objective slowly is giving way to increasing tourist expenditure (a positive benefit), which does not always require increasing the number of tourists. Hopefully, this objective will progress to one of increasing income generated in the region of question (again, which need not involve an increase in expenditure). Ultimately, the objective should be to increase net benefits, a measure of benefits less costs. This refinement of objectives to focus on net benefits enhances the likelihood that ecotourism will be sustainable.

With respect to visitor types and activities, a key consideration is the diversity within the ecotourism market. Ecotourists may differ greatly in several aspects, including:

- distance travelled;
- length of stay;
- desired level of physical effort and comfort;
- importance of nature in trip motivation;
- level of learning desired;
- amount of spending;
- desired activities; and
- personal demographics.

For example, ecotourism experiences can range from 1) a foreigner spending thousands of dollars coming to Australia on a commercial tour to visit the Great Barrier Reef and the Wet Tropics rainforests to 2) a local resident camping over the weekend at an adjacent national park. Ecotourists might engage in a wide range of activities, including trekking (hiking, bushwalking), climbing, camping, hunting, photography, sight-seeing, fishing, birdwatching, whale viewing, and general exploration of remote natural areas.

Of particular interest, visitor surveys (e.g., Eagles, Ballantine, and Fennell 1992) and anecdotal reports indicate that many ecotourists feel it important for their visit to contribute to conservation and local development. Though this is not important for all ecotourists, it does present additional motivation for businesses and government agencies to support conservation and development efforts.

Lindberg (1991) provides a typology of nature/ecotourism types, though many other typologies are possible:

- *Hard-core*: scientific researchers or members of tours specifically designed for education, environmental restoration, or similar purposes.

- *Dedicated*: people who take trips specifically to see protected areas and who want to understand local natural and cultural history.
- *Mainstream*: people who visit the Amazon, the Rwandan gorilla park, or other such destinations primarily to take an unusual trip.
- *Casual*: people who partake of nature incidentally, such as through a day trip during a broader vacation.

3.2 *Actors in the Ecotourism "System"*

Ecotourism often involves numerous actors, including:

- *Visitors*;
- *Natural areas and their managers*, including both public and private areas;
- *Communities*;
- *Businesses*, including various combinations of local businesses, in-bound operators, out-bound operators, hotel and other accommodation providers, restaurants and other food providers, and so on;
- *Government*, in addition to its role as a natural area manager; and
- *Non-governmental organizations*, such as environmental and rural development NGOs.

The relevant actors will vary across sites. For example, local communities may be present at some sites, but not others. Likewise, businesses may play a large role at some sites, but little or no role at others.

A common phenomenon is that ecotourism can generate both symbiosis and conflict between the actors. The potential for ecotourism to result in symbiosis between conservation (e.g., natural areas) and development (e.g., businesses) has been widely touted, but the potential for conflict should not be ignored. For example, natural area managers and ecotourism businesses have a shared interest in conserving the natural environment. However, there often is conflict regarding the point at which tourism activity jeopardizes this conservation.

3.3 *Overview of Tourism and Ecotourism in the Asia-Pacific Region*

This section provides quantitative and qualitative information regarding tourism and ecotourism in the Asia-Pacific region. The statistical data are based on World Tourism Organization (WTO) and World Travel and Tourism Council (WTTC) estimates. In addition, the WTO figures in particular generally are for international tourism and do not include domestic tourism, which often is quite substantial.

More importantly, readers should remember the inherent limitations of tourism and ecotourism statistics. There are a several problems associated with measuring tourist flows and resulting economic impacts (WTO 1997). One of these problems is the lack of a universal definition of tourism. *Thus, the data presented here should be treated with caution.*

Caution is even more important when one turns to ecotourism, as definitions of this activity are even less universal. There have been relatively few attempts to develop an operational definition of ecotourism, one that allows the number of ecotourists or their economic impacts to be measured. Therefore, there have been very few estimates of the importance of ecotourism, either in absolute terms or as a proportion of tourism generally. Moreover, for practical reasons, the estimates that have been made typically are based on definitions focused on the nature component, with little or no consideration of the sustainability component. Thus, estimates typically reflect nature tourism rather than ecotourism. *In short, currently it is all but impossible to estimate with any accuracy the importance of ecotourism in the Asia-Pacific region.*

Given these important caveats, the following information provides an indication of tourism and ecotourism in the region.

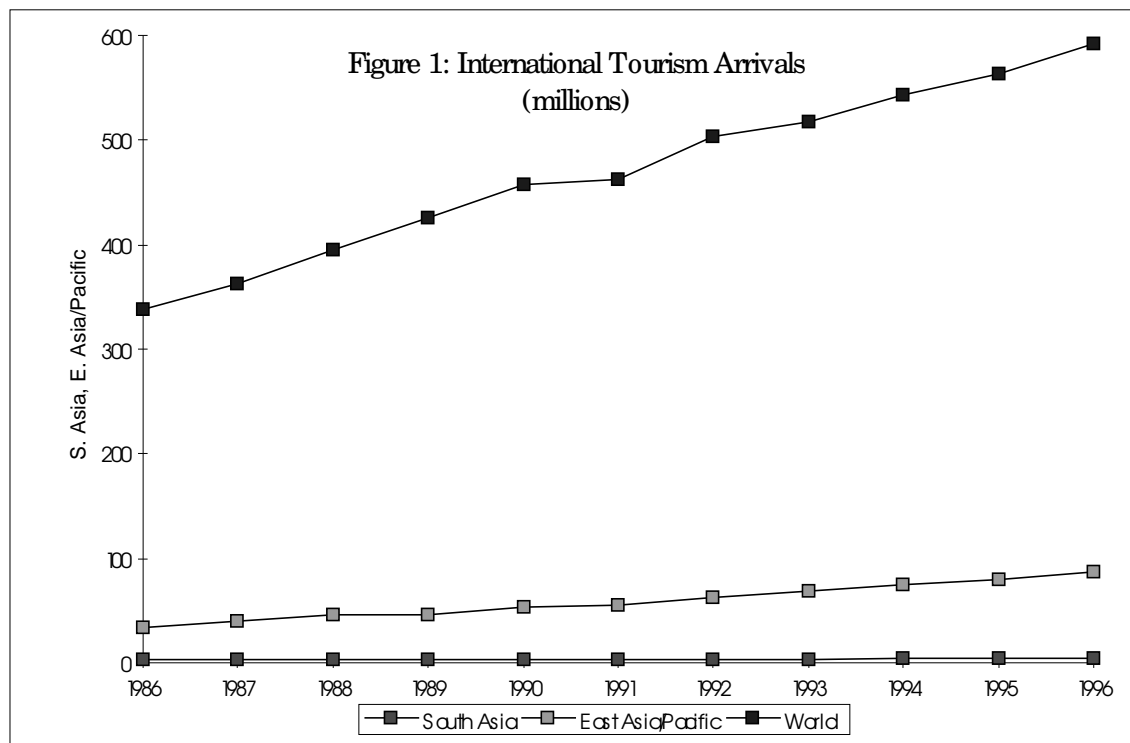
Tourism in the Region

As noted by the WTO (1996), the Asia-Pacific region has experienced rapid tourism growth during the past decade. The absolute and relative growth in arrivals and receipts is shown in Figures 1 and 2, respectively.

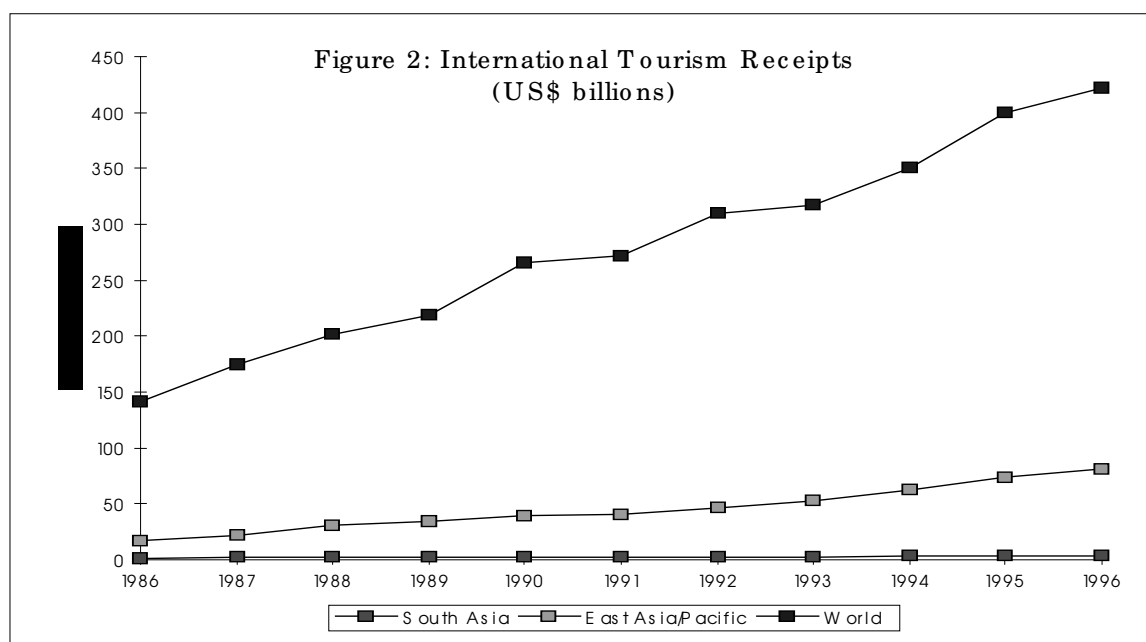
As illustrated by the figures, tourism in the East Asia and Pacific region has grown much faster than in the South Asia region, and somewhat faster than global tourism. WTO (1997) estimates that the East Asia and Pacific region had 87 million international arrivals in 1996, with South Asia having 4.5 million international arrivals in that period. These arrivals generated US\$80.8 billion and US\$4.0 billion in receipts, respectively². The importance of tourism relative to other economic sectors is illustrated by the share of tourism receipts in services and merchandise exports (WTO 1997:18):

² The Asia-Pacific region thus accounted for about a sixth of world international arrivals and nearly a quarter of receipts in 1996 (editor).

Region	Share of tourism receipts in services	Ratio of tourism receipts to merchandise exports
Northeast Asia	30.3%	3.6%
Southeast Asia	42.3%	8.8%
Australasia (AU + NZ)	46.7%	13.9%
Other Oceania	260.4%	63.5%



Source: WTO (1997)



Source: WTO (1997)

Though tourism plays a particularly important role in Oceania, these figures indicate its importance throughout the East Asia and Pacific region. WTTC (1997) estimates of travel and tourism's impact on regional output are (includes domestic tourism, amounts in US\$ billions):

Northeast Asia	751
Southeast Asia	105
South Asia	46
Oceania	67

Within the East Asia and Pacific region, the top ten countries in terms of international tourism receipts, excluding transport, for 1996 are (WTO 1997:51, amounts in US\$ billions):

Hong Kong	10.8
China	10.2
Australia	8.7
Thailand	8.5
Singapore	7.9
Indonesia	6.1
Korea (Rep.)	5.4
Japan	4.1
Malaysia	3.9
Macau	3.5

The top ten East Asia and Pacific countries in terms of average annual growth rate for receipts, 1986-1996, are (WTO 1997:40, 43, 46):

Indonesia	26.3%
Australia	20.9%
China	20.9%
Vanuatu	20.9%
Macau	20.8%
Malaysia	19.9%
Thailand	19.6%
N. Mariana Is.	17.0%
Hong Kong	16.8%
Singapore	16.2%

Importantly, the region is not solely a recipient of visitors from outside the region. Indeed, the following figures for market share (percent of total arrivals in East Asia and the Pacific

coming from each source region, 1996) indicate that countries within the region generate most of the region's tourism arrivals (WTO 1997:54):

East Asia/Pacific	79.3%
Europe	11.4%
Americas	6.9%
South Asia	1.6%
Africa	0.5%
Middle East	0.4%

Using a different country grouping, the Pacific Asia Travel Association (1996) reports that 61% of the international arrivals in the Pacific Asia region originated from Asia, up from only 45% a decade ago.

The current importance of intraregional travel is illustrated by the case of Malaysia. As of 1994, the ten largest markets for Malaysia were, in decreasing order (MCAT 1995):

Singapore (by far the largest)
 Thailand
 Japan
 Taiwan
 Indonesia
 UK
 Brunei
 Hong Kong
 Australia
 China

The future importance of intraregional travel is illustrated by efforts by national tourism organizations and the private sector to increase such travel. For example, Tourism Malaysia's bimonthly publication *Malaysia Tourism* summarizes efforts to attract the Japanese (March/April and September/October 1996 issues), Chinese (March/April and July/August 1996), Indonesian (September/October 1996), and Indian (July/August 1996) markets.

Future Growth in Tourism in the Region

As noted by the WTO (1997: 10, 34), the reasons for regional tourism growth include:

- rapidly growing income;
- freer intraregional travel;
- increased leisure time;
- dynamic trade and investment;
- government promotion measures, such as launching "visit years"; and
- political stability in many of the region's countries.

Many of these factors are expected to continue, with the result being continued tourism growth into the future. Indeed, the East Asia and Pacific region is expected to surpass the Americas to become the world's number two tourism region by 2010, with 229 million international arrivals

(WTO 1996). Of all the WTO regions, East Asia and Pacific is forecast to have the highest average annual growth rate (7.6%) between 1990 and 2010, with South Asia having the second highest rate, at 6.7% (the world rate is forecast at 4.1%).

The growth in arrivals is expected to result from roughly equal growth in the various source markets, including East Asia and the Pacific countries. Intraregional source market growth is particularly expected from the emerging economies of China, Korea, Malaysia, the Philippines, and Singapore (WTO 1997).

The WTTC (1997) estimates that regional tourism output will increase by the following percentages in the ten years from 1997 to 2007:

Northeast Asia	52%
Southeast Asia	103%
South Asia	119%
Oceania	44%

Ecotourism in the Region

There has been much discussion and debate regarding the size and growth of the ecotourism market. Although supporters of ecotourism, or any other phenomenon, like to provide large estimates, others question this growth in some contexts (Blamey 1995). Estimates of market size depend on the definition used to describe the market. As noted above, the lack of a widely-accepted operational definition of ecotourism hinders estimates of the ecotourism market and prevents effective comparisons across sites. Moreover, because the sustainability component of ecotourism definitions is particularly difficult to measure, most existing estimates are based solely on the nature-based component. Therefore, most estimates of ecotourism really are estimates of nature tourism.

Keeping in mind that estimates should be treated with caution, Ceballos-Lascurin (1993) reports a WTO estimate that nature tourism generates 7% of all international travel expenditure (c.f., Lindberg 1994). Campbell (1994) reports that approximately 20% of all foreign tourists to Thailand (in 1990) visited nature tourism sites. In some countries, such as Australia, the percentage is even higher (Blamey 1995). *Assuming that the Asia-Pacific region follows the global pattern, 7% might be used as an extremely rough estimate of the region's international tourism that can be viewed as ecotourism, with several countries exhibiting higher proportions.*

Lew (1997) divides ecotourism in the region into three zones: 1) South and Southeast Asia, which together comprise the major international destination region, 2) Australia and New Zealand, which have substantial domestic ecotourism industries, as well as a secondary international market, and 3) the peripheral ecotourism areas, including China and Japan to the north, and the Pacific islands to the east.

A thorough evaluation of ecotourism offerings and experiences across the region's countries was not possible given limited project resources. However, one ecotourism operator with many years of experience in Southeast Asia ranks countries in the following decreasing order in terms of ecotourism experiences: Papua New Guinea, Malaysia, Indonesia, Thailand, and the

Philippines. Several other countries are not ranked and do not play major ecotourism roles, including: Laos, Burma (Myanmar), Cambodia, and Vietnam.

Currently, most nature tourists at some sites and for some activities are foreigners, typically from North America, Europe, and Australia/New Zealand. For example, Chudintra (1993) reports that 90% of Thailand's jungle tour clients are foreigners. However, domestic visitation predominates at many sites. For example, Campbell (1994) reports that about 90% of visitors to Indonesia's national parks are domestic tourists, while Chudintra reports that the percentage of such visitors in Thailand increased from 58% in 1986 to 85% in 1990. Further information on adventure and ecotourism source markets is provided in Aderhold (1996) and Wight (1996a; 1996b).

The characteristics of ecotourists and ecotourism vary widely across sites in the region. Nonetheless, Taman Negara in Malaysia illustrates some of these characteristics (DWNP 1996a, 1996b; Stecker 1996). From 1984 to 1993, visitor numbers increased 360%, from 8,200 to 30,000, respectively. Numbers have continued to increase, reaching 36,924 in 1994 and 43,491 in 1995 (an 18% growth rate from 1994 to 1995). Of the 1995 visitors, 48% were Malaysian, 8% Singaporean, 7% British, and 7% German.

The majority of the visitors were male (58%), young (89% under 40 years old), university educated (71%) and of high income. Motivations for visiting the park include:

- To see and experience rain forests (45% of respondents)
- For a holiday (16%)
- To get new experience (10%)
- For relaxation and sightseeing (8%)
- To see wildlife (8%)
- For recreation and adventure (6%) and
- To enjoy the camping life (3%).

Activities undertaken by visitors include (in decreasing order of frequency) jungle trekking, birdwatching, swimming, caving, visiting indigenous forest dwellers, botany, mountain climbing, and fishing. Somewhat more than a third of the visitors were on pre-arranged package tours from Kuala Lumpur, while somewhat less than two-thirds made their own travel arrangements.

Past and Future Ecotourism Growth in the Region

Though estimates of ecotourism's growth are rare, due to the definitional problem, most observers feel that ecotourism has grown faster than tourism generally during the past several years. Based on a survey of ecotourism operators in the region, Lew (1997) found that average annual growth rates have been steady at 10% to 25% over the past few years, and many are projecting higher growth in coming years.

There are various explanations for ecotourism's growth, including:

- increasing environmental awareness and interest, including the desire to be perceived by others as environmentally sensitive;
- increased media exposure to natural areas around the world;
- related to the above two, a desire to see natural areas before they disappear;
- increasing dissatisfaction with traditional tourism destinations and products, and a desire for more educative and challenging vacations;
- desire to go to novel destinations, sometimes as a way to "outdo" others (e.g., to be the first person one knows who has been to Antarctica); and
- easier access to remote ecotourism destinations through development of air routes, roads, and other infrastructure.

Insofar as the increased motivations to experience and preserve natural environments stem in part from more fundamental changes in societal values (Blamey 1995; Inglehart 1990), the continuation of these fundamental changes, particularly in developing countries, should lead to continued growth in demand for ecotourism. Many observers believe that the growth rate for ecotourism will be higher than for tourism generally. Thus, assuming an increase in the proportion of tourism represented by ecotourism from 7% to 10% and assuming that the WTO forecast of 229 million international arrivals by 2010 is accurate, *an extremely rough estimate of the region's international ecotourism arrivals for 2010 would be 22.9 million*. To this, one must add the substantial number of domestic visitors to natural areas.

The ecotourism market is expected to evolve over time. Much of the ecotourism growth probably will stem from intraregional travel (Choegyal 1996; Shukla 1996; WTO 1996; Wylie 1994). As noted above, growth in intraregional travel is expected for tourism generally as incomes rise and infrastructure improves. Moreover, intraregional ecotourism in particular is expected to grow as regional population centres become increasingly crowded and polluted, and as increased wealth and education lead to greater knowledge of, and interest in, the natural environment.

As noted in Section 4, growth in Asian ecotourism source markets will affect the type of experience sought by visitors. In general, it is expected that Asian ecotourists will travel in larger groups and will demand a higher degree of comfort than is the case for western ecotourists. They also may be more interested in ecotourism day trips while lodging and dining in comfortable resorts. An example of this is the Juldis Khao Yai resort and golf course on the border of Khao Yai National Park in Thailand. Asian visitors (mostly Japanese) flock to see the park, play golf, and stay in luxury in the middle of jungle surroundings.

Evolution probably also will result from demographic changes occurring in society. For example, in source countries the "babyboomer" population is ageing, which will increase leisure time amongst this group. However, the group may require ecotourism experiences that are less physically demanding, more easily accessible, and with more comfortable facilities.

In addition, various factors affect the types of ecotourism experiences sought. For example, substantial media attention has been focused on the loss of tropical rainforests, and many tourists wish to visit them partly out of a concern that they may be lost entirely. Future interest in forest visitation may depend on continued media coverage and public concern about forest issues.

Other trends, such as the increased popularity of SCUBA diving, may affect forest-related ecotourism to varying degrees, depending on individual site characteristics. For example, forest areas near dive sites may benefit from add-on trips to the forest by divers. On the other hand, some forest areas may lose visitation as potential visitors choose diving-oriented trips rather than terrestrial-oriented trips. Unfortunately, it is extremely difficult to identify future trends of this sort.

Several other factors, many of them external, may affect demand at individual sites and countries (Brandon 1996; Laarman and Durst 1993; Lindberg and Huber 1993). For example, political or economic instability may cause strong decreases in visitation, an event that has at times affected tourism demand for many countries in the Asia-Pacific region.

In summary, historic data, trends, and expectations indicate that:

- tourism makes a substantial contribution to the region's economy;
- tourism has experienced rapid growth in the region (though less so in South Asia), and this growth is expected to continue;
- ecotourism in the region and globally has grown faster than tourism generally, and this probably will continue over the next several years;
- domestic and intraregional visitors are an important component of the region's ecotourism, and this importance is expected to increase in the future; and
- ecotourism demand will evolve over time, and the region's ecotourism sites will need to adapt to these changes.

3.4 *The Dimensions of Ecotourism*

In order to provide background for Section 4 (ecotourism trends and options), this section describes the dimensions of ecotourism.

Environmental Dimension

By definition, the descriptive component of ecotourism involves the natural environment as an attraction. Conversely, the prescriptive component involves the impacts of visitation on the natural environment. Although most discussions of this dimension focus on negative impacts, ecotourism also can generate positive environmental impacts. For example, some tours involve cleaning trails or undertaking rehabilitation work. Also, ecotourism indirectly can generate positive impacts by increasing political and economic support for natural area conservation and management (Lindberg, Enriquez, and Sproule 1996).

Some argue that ecotourists are motivated to preserve the environment, so one would expect them to generate little or no negative environmental impact. However, as Wall (1994) pointed out:

- ecotourists often go to environmentally fragile areas, such as alpine and arid areas;
- visitation may occur during sensitive periods, such as during breeding or hatching periods;

- visitation by ecotourists eventually may lead to mass tourism at the site, such that the ultimate impact is much greater than the initial impact; and
- visitation may cause off-site impacts, such as the consumption of airplane fuel.

Despite the centrality of the environment to ecotourism, there is relatively little accumulated knowledge regarding ecotourism's impacts on the environment and the effect of these impacts on the ecotourist experience. In part, this is due to the complexity of these impacts, the difficulty of evaluating them rigorously, and the comparative lack of research in this area. Most of the analysis that has been undertaken has focused on North America or Europe and has appeared within the recreation or natural science literatures. Although several recent publications deal with tourism's environmental impacts (Buckley and Pannell 1990; Hunter and Green 1995; Mieczkowski 1995), there also is relevant literature from the recreation field (Hammit and Cole 1987; Knight and Gutzwiller 1995).

Ecotourism's impacts often are categorized using groups like "direct" (effect of the visitors themselves) and "indirect" (effect of the infrastructure or activities necessary to provide the visitor experience) or "on-site" and "off-site". Using the latter groups, some on-site impacts include:

- soil erosion and compaction;
- disturbance of wildlife;
- trampling of vegetation;
- removal of vegetation (e.g., collection of plants or firewood);
- accidental introduction of exotic species;
- increased frequency of fire; and
- litter and vandalism.

Some off-site impacts include:

- reclamation of land for infrastructure (e.g., clearing of forests for hotels);
- generation of solid waste (e.g., rubbish/garbage);
- water and air pollution (e.g., effluent in rivers and oceans); and
- purchase of souvenirs utilizing threatened or endangered species (e.g., black coral).

Given that ecotourism can generate some negative environmental impacts, the critical questions become:

- What are the acceptable levels of these impacts?
- What is the relationship between use and level of impact?
- How is this relationship affected by management activities?

The question of acceptable levels is particularly thorny and has frustrated resource managers and other stakeholders for years. The answer is political rather than technical, and different stakeholders provide different answers.

The relationship between use and level of environmental change (i.e., the impact of ecotourism) is difficult to evaluate, in part because few environmental parameters are amenable to the requirements of experimental design needed to establish causal relationships. As a result,

many studies are correlative rather than causal. The reliance on monitoring as a replacement for experimental analysis is an example of this problem. Monitoring can provide useful information, but one should be careful when inferring causality from monitoring studies due to the potential presence of confounding factors.

The research that has been conducted indicates that use-impact relationships generally are non-linear and vary across parameters. For example, the relationship between use and soil compaction may be different than the relationship between use and wildlife disturbance. Commonly, the relationship is asymptotic curvilinear, with marginal impacts at high use levels being small or non-existent (Hammitt and Cole 1987). That is, a medium number of visitors may cause significant change, but additional visitors may not cause significant additional change. Studies of recovery from impacts indicate that recovery occurs more slowly than the initial impact. Given such relationships, the common strategy of dispersion may be misguided, and concentration may cause less overall impact.

To further complicate matters, several factors may affect use-impact relationships, including:

- level of site hardening;
- types of visitors and their activities;
- characteristics of the organism impacted; and
- timing and location of interaction.

As discussed in Section 4, managers can reduce ecotourism impacts by managing visitor numbers and these other factors.

Experiential Dimension

Most of the attention within ecotourism, and within sustainable tourism generally, has been on environmental sustainability. However, tourism should be sustainable in other dimensions, including the experiential dimension. If the visitor experience is sufficiently degraded there will be a reduction in visitation that jeopardizes sustainability. Despite the relative inattention paid to experiential impacts within the ecotourism literature, they have been a focus within the recreation literature (Kearsley 1995; Manning 1986; Shelby and Heberlein 1986). For some sites, experiential impacts may be a greater limiting factor than environmental impacts (Worboys et al. 1995).

At the most basic level, managers should monitor the quality of the visitor experience to determine what can be done to address concerns and to improve experience quality. Often, experiential improvements focus on the addition (or removal) of specific infrastructure or programmes. However, the experience often depends on how visitors affect each other. Such experiential impacts can be grouped into three categories (Roggenbuck 1992:155):

- *Crowding*, in which the quality of the experience is reduced by visitor perceptions that they saw too many other people during their visit.
- *Conflict*, in which the quality of the experience is reduced by visitor perceptions of incompatibility or animosity with other visitors.
- *Environmental degradation*, in which the quality of the experience is reduced by visitor perceptions of environmental deterioration caused by other visitors.

These impacts, and the associated concept of satisfaction, often are complex, affected by a variety of factors, and can be difficult to measure accurately (Manning 1986; Ryan 1995). Satisfaction is particularly problematic because simplistic measurement of this concept is popular amongst natural area managers yet can provide misleading information. For example, high levels of reported satisfaction may lead managers to become complacent. However, current visitors may report satisfaction while nonetheless desiring improvement in facilities, activities, or conditions. In addition, previous visitors who were unsatisfied during their visit likely would not be represented in the sample of current visitors, as they would have stopped coming to the site, a process known as displacement in the recreation literature. Similarly, potential visitors may never have come to the site due to word-of-mouth or otherwise-obtained knowledge regarding the experience offered.

The concern over environmental degradation, resulting from tourism or other causes, and its effect on the visitor experience is widespread. It has been argued that environmental integrity must be preserved if the visitor experience is to be maintained, thereby providing an additional rationale for conservation. However, the extent to which visitor experiences are affected by environmental degradation has not been well researched, and the research that has been conducted suggests that visitors often do not notice tourism-related environmental degradation (Roggenbuck 1992; Shelby and Shindler 1992). This is an area that would particularly benefit from additional research.

Sociocultural Dimension

As with the natural environment, the sociocultural environment serves as both an ecotourism attraction and a recipient of ecotourism's impacts. If these impacts become, on the whole, too negative, the local sustainability of ecotourism can be jeopardized. In some areas local residents have been sufficiently unhappy with ecotourism development that they sabotaged the natural resource on which this development was based. Many ecotourism activities involve relatively intense interaction between greatly differing cultures, and these differences may exacerbate the negative sociocultural impacts of ecotourism.

The impacts of tourism on host communities, and resulting resident attitudes toward tourism, have been popular research topics in the past several years (e.g., Lankford and Howard 1994; Lindberg and Johnson 1997; Mercer 1994; Smith 1989). In addition, many policy makers are now becoming aware of the need 1) to incorporate local communities into the tourism development and natural area management process and 2) to understand and address the negative impacts on communities.

Though the difference between cultural and social impacts is blurry, one grouping might include the following as cultural impacts (Brandon 1996:17):

- commodification of culture, in which cultural symbols are treated as commodities to be bought and sold;
- changes in group social structure, the way in which lives are ordered and patterned;
- changes in cultural knowledge, the body of information possessed; and
- changes in the way in which cultural property is used and viewed.

The following grouping is of common social and sociophysical impacts. Depending on how tourism is developed, these impacts might on balance be positive or negative, and this balance may affect resident attitudes toward tourism (Lindberg and Johnson 1997):

- economic--tourism can generate a wide variety of economic benefits (such as jobs) and economic costs (such as inflation).
- disruption--tourism can generate an increase in traffic congestion, crowding in stores and other areas, and crime.
- recreation facilities--tourism can increase both the number of recreation facilities and the demand for such facilities (recreation is used broadly here to include outdoor recreation, urban entertainment, and related activities).
- aesthetic--tourism can contribute to an aesthetically pleasing environment, for example, by catalyzing waterfront revitalization; however, it can also detract from an aesthetically pleasing environment by, for example, leading to construction that is deemed inappropriate or by increasing the amount of litter or vandalism.
- interaction with non-residents--tourism can lead to satisfying relationships with non-residents, even if those relationships are brief.
- interaction with residents--tourism can affect local social relationships among residents, such as by reducing the friendliness of local residents.
- community/culture--because tourists often are motivated by the desire to experience the host community and its culture, tourism can affirm that culture and lead to community pride; it also can disrupt local cultures, particularly when international tourists visit remote areas with little historic foreign contact.
- influence over community decisions--studies have shown that residents are more supportive of tourism when they have been able to influence the tourism development process.

These impacts, and resulting attitudes, can strongly affect the viability of ecotourism. For example, commercial tourism activity in natural areas in Australia is undergoing a period of rapid expansion. In Victoria's Alpine National Park, the number of licenses granted to tourist operators has increased four-fold in the past five years to more than 110. This level of growth, and the perception that park policy now favours tourism interests over use by local residents, has resulted in antipathy toward tourism (McKercher 1996). This may lead to ecotourism becoming the next target for the national park movement, thereby jeopardizing access privileges to natural areas.

Economic Dimension

The final dimension is economic. There are various stakeholders in ecotourism, from operators to natural area managers to local communities. One thing they have in common is that they often seek economic benefits from ecotourism, whether it be sales and profits for operators, user fee revenues for natural area management, or jobs and income for local communities.

With respect to natural area finance, many public natural area systems around the world have encountered severe financial difficulties as the number of national parks and other areas has grown while funding has remained stable or declined (Eagles 1995; Reynolds 1995). As a result, many area managers and environmentalists have turned to ecotourism as a source of

revenue, as a means to at least cover the ecotourism-related park costs that historically have been financed by governments.

There have been numerous studies of user fees in the ecotourism context (e.g., Laarman and Gregersen 1996; Lindberg and Enriquez 1994; Lindberg, Enriquez and Sproule 1996; Mak and Moncur 1995; Tisdell 1996). Though a full discussion of this issue is beyond the scope of this paper, several points are worth noting (additional discussion is provided in Section 4). First, the appropriate fee system will depend on the objectives for the area. If the objective is to generate revenue, fees should be relatively high. If the objective is to maximize the number of visitors to provide job opportunities for local businesses, then the fees should be low or non-existent.

Second, there are strong economic reasons for charging user fees, including that ecotourism generates costs that would otherwise need to be financed by non-users (Lindberg, Enriquez and Sproule 1996; Yong 1996). In the case of developed country visitors to developing country public natural areas, it is particularly inappropriate for relatively poor local non-users to subsidize the visits of relatively wealthy users (Lindberg 1991).

Third, most analyses conclude that current fee levels at most sites could be increased with little or no impact on the number of visitors. In cases where fee increases would reduce the number of visitors, such increases may remain appropriate as a means to maximize total revenue and/or reduce negative environmental, experiential, or social impacts. Fourth, often, there are opportunities for increasing non-fee revenues, such as through donation programmes or through souvenir sales.

With respect to job creation, natural areas provide many benefits to society, but few are tangible. Ecotourism-related jobs are one of the most tangible benefits provided by these areas. In some cases, these jobs can provide direct alternatives to practices, such as poaching of forest products, that threaten natural area conservation. In other cases, the jobs will simply, but importantly, diversify local economies (Lindberg and Enriquez 1994). As ecotourism jobs increase, it is likely that support for the natural areas providing the jobs will increase (Han and Guo 1995; Lindberg, Enriquez and Sproule 1996). Conversely, if ecotourism is perceived to generate more costs (e.g., reduced access to the area and its resources) than benefits, it may reduce local support for natural areas.

The economic impacts of tourism, or any economic activity, can be grouped into three categories: direct, indirect, and induced. *Direct impacts* are those arising from the initial tourism spending, such as money spent at a restaurant. The restaurant buys goods and services (inputs) from other businesses, thereby generating *indirect impacts*. In addition, the restaurant employees spend part of their wages to buy various goods and services, thereby generating *induced impacts*. Of course, if the restaurant purchases the goods and services from outside the region, then the money provides no indirect impact to the region, it *leaks* away. Figure 3 illustrates some of these impacts and leakages.

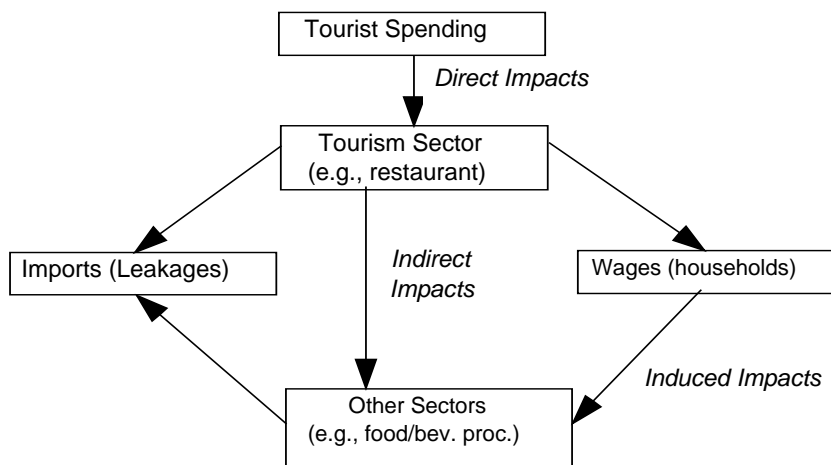


Figure 3: Tourism's Economic Impact

Several studies have assessed the local employment benefits of ecotourism (Lindberg, Enriquez and Sproule 1996; Powell and Chalmers 1995; Shackley 1996). Not surprisingly, the level of benefits varies widely. In part, this is due to variations in the level of direct impact (tourist expenditure), which may depend on the quality of the attraction, access, and so on. In part, this is due to variations in the level of linkage (or, conversely, the level of leakage), which may depend on the size of the economy and other factors.³ The following estimates provide indications of the percentage of tourism spending leaking away from host country economies:

- 70% in Nepal
- 60% in Thailand
- 55% for the typical developing country

More than 90% of tourism spending is thought to leak away from communities near most nature tourism sites (Lindberg, 1991; Brandon, 1996; see also Soemodinoto, Lubis, and Oktaviany 1996).

Though the high level of leakage should be considered and should be reduced where possible, one should remember that this leakage not only results from the nature of the tourism industry, which requires substantial expenditure before arrival on-site, but also from the nature of the remote communities where ecotourism occurs. Other economic activities in these communities probably also will exhibit high levels of leakage simply because the local economies are small and not very diverse. Moreover, though the number of jobs created will be low, in rural economies even a few jobs can make a big difference. Still, ecotourism benefits should not be oversold, or there may be a backlash as reality fails to live up to expectations.

³There is often wide variation in leakage estimates across sites. This is partly a result of the type of tourism development and the size of the economy being evaluated. Small-scale nature tourism tends to use more local goods than does large-scale traditional tourism. However, smaller economies may have more leakages because a lower diversity of goods is produced in small economies than in large economies. Variation in leakage estimates may also be due to definitions and methods used.

4. OUTLOOK: ISSUES, TRENDS, IMPLICATIONS, AND OPTIONS

This section describes several issues and trends, and their implications, in the services of forests and ecotourism fields. For each of these, one or more options are presented for achieving objectives given the trends, with ecotourism objectives focusing on sustainability in the dimensions described in Section 3.4. Issues and options relevant to tourism generally, such as infrastructure development and promotion, are not addressed in detail. Rather, this section focuses on issues and options that are particularly relevant to ecotourism and may be overlooked by traditional tourism planning and development. The issues tend to be interrelated, such that the grouping is somewhat arbitrary and is used as an organizational tool.

Many of the options will be familiar to readers. They are commonly-noted means for achieving the potential benefits of ecotourism. It is recognized that political and economic realities may hinder implementation of these options and thus achievement of ecotourism objectives. In short, ecotourism rhetoric does not always translate into ecotourism reality. Nonetheless, the options are presented here to offer a vision of future possibilities and to guide those actions that are feasible. Many of the issues relate to achieving a balance between private and public objectives, between providing economic and other benefits from natural areas and conserving those areas.

4.1 Preserving Services Derived from the Forest: Protected Area and Social Forestry Approaches

Issue/trend: Though forest production provides important economic benefits in many of the region's countries, it (and other activities) also negatively impacts services of forests and ecotourism potential. Therefore, there is a need to implement programmes that maintain or enhance services of forests and ecotourism potential.

Options: Two options for maintaining and enhancing services derived from forests and ecotourism are implementation and management of *protected areas*⁴ and *social forestry* programmes.

Protected areas and their management

Protected area systems can be seen as conservation mechanisms that incorporate social and cultural factors alongside legal, economic and political mechanisms and ecological insights. The movement towards a more inclusive policy context that integrates local people and their rights within protected area management frameworks is indicative of this.

In a report outlining the role of protected areas in the Asia-Pacific region, Braatz (1992) prioritized the need for integrated national strategies and investment focusing on programme

⁴ Elsewhere in the world, notably in southern Africa, sometimes successful efforts have been made to bring wildlife into agricultural areas and basing tourism on this (Editor).

development rather than species preservation. Braatz has identified three major objectives that will be crucial to the protection of biodiversity in the Asia-Pacific region:

- modifying policies that adversely affect biodiversity;
- reconciling local people's needs with protected area management; and
- ensuring the sustainability of investments.

In relation to participation, Braatz suggests there are three countries well suited to demonstrate the importance of participation:

- Indonesia because of its importance for biodiversity and its foreign assisted development programme;
- India because of its active NGOs and strong participatory process; and
- Papua New Guinea because some 97% of land there is under customary tenure.

Finally, in relation to sustainability of investments, Braatz suggests ecotourism and forest development as priority components.

Movements towards a community/social forestry approach

Many government agencies and non-governmental organizations in the region (for example, several in Nepal and India) are assessing the usefulness of community and social forestry approaches. In the specific context of policies and policy directions, these represent, at least potentially, an acknowledgement of the rights of local populations and the movement towards a policy context that incorporates a more inclusive range of interests and values.

Social forestry is seen as an important option for forest protection and the maintenance of services of forests (World Bank 1997). At least potentially, it exemplifies the characteristics of community involvement, participation, and development of some degree of self-reliance. In addition, it provides opportunities for reforestation and the maintenance or even enhancement of biodiversity with benefits accruing at the local level. It can also enhance the possibility for tourism and ecotourism. Social forestry programmes are those which are designed as to:

- motivate large numbers of people to plant trees;
- promote the kind of tree growing that best supplies firewood, small timber, grasses and income; and
- provide increased benefits to the poorer strata in society.

These programmes are especially aimed at involving farmers and the landless. Social forestry can incorporate a wide variety of activities, including farmers growing wood to sell or use for firewood, and individuals earning income from the gathering, processing and sale of minor forest products such as fruits nuts, mushrooms, herbs, basketry materials, honey, and vines. It can also include government and other groups planting trees on public lands to meet local village needs.

Unlike in conventional production forestry, where the focus is on the wood that trees produce, a social forestry approach focuses on people, on community involvement and on the trees that

provide direct and indirect benefits locally. The approach therefore is used to create immediate economic and social benefits to local people or communities from their immediate locality.

According to Gregersen, Draper and Elz (1989), social forestry is important for the following reasons:

- *Environmental protection connection.* Deforestation causes decline in agricultural land quality, soil degradation, flooding downstream results in loss of crops, and so on.
- *Agricultural productivity.* Social forestry can contribute to the livelihood of the poor by improving soil, providing food supplements, and providing wood for construction, fencing, fibre, shade, and fodder. Social forestry also can provide income for farmers and rural communities and can help raise people from mere subsistence. In many parts of the world, agroforestry, or the integration of tree growing into farming systems, is a main tool in social forestry programmes involving farmers. Agroforestry is a collective name for all land use systems and practices in which woody perennials are deliberately grown on the same land management unit as crops and/or animals.
- *Fuelwood.* Fuelwood is the primary source of energy for poorer urban households and for the vast majority of rural households in developing countries.
- *Employment.* Whilst social forestry cannot solve the problem, it can contribute to increasing locally available jobs and income.

However, social forestry is not a panacea. The assumption that local knowledge and management is preferable to western scientific knowledge and centralized management does not always hold true. Likewise, the role of women within social forestry does not always take into account the reality of family and class power relationships.

In summary, social forestry is an important option for resource management approaches incorporating a local development framework. At least potentially, it exemplifies important characteristics such as community involvement, participation, and building some degree of self-reliance. In addition, it provides opportunities for reforestation and the maintenance or even enhancement of biodiversity with benefits accruing at the local level. In this context, it also can enhance the possibility for tourism and ecotourism.

It is probable that protected area establishment and social forestry programmes will expand in the future. However, as noted in Section 4.4, a critical issue will be the level of financial and political support for both approaches, and thus the wealthier countries of the region probably will achieve the most progress in this regard. Protected area and social forestry programmes are not the sole options for preserving services of forests, but they can make important contributions toward this goal. If they are not effectively implemented, alternate approaches must be sought if this goal is to be achieved.

4.2 Need for Increased Research and Utilization of Results

Issue/trend: Ecotourism occurs within a competitive and complex environment, and this competition and complexity probably will increase in the future. As a result, the collection and utilization of information increasingly will be critical if effective policies and programmes are to be developed and implemented.

Options: Enhanced implementation of ecotourism-related research and utilization of research results. The research focus will depend on local information needs. However, a general recommendation is that topic areas be expanded beyond the common focus on identification and management of environmental impacts to include identification and management of social, economic, and experiential aspects, with the latter two categories including market research.

Insofar as research provides valuable information in decision-making processes, the conduct of research and use of results will enhance a site's ability to benefit from ecotourism while reducing its negative impacts.

4.3 Importance of Social Issues in Management

Issue/trend: There is a global tendency for protected area staff to be trained in the natural sciences, particularly biology or ecology. However, it has become clear that the challenges natural area managers face often are more social and political than ecological and technical, and it is likely that future challenges also will be significantly social/political in nature (World Bank 1997). As noted by Fazio and Gilbert (1986), natural resource management is 90% managing the public and 10% managing the resource. In particular, ecotourism has a technical ecological component (e.g., its environmental impact), but it also has a significant social and political component.

Due to their training, and associated world view, it is natural for ecologically-oriented staff to seek technical solutions to problems that are at least partly socio-political. The focus on carrying capacity is an example of this. Likewise, planning and management tends to focus on the natural environment rather than on the human environment, and on visitation in particular.

In addition, often it is difficult for natural area staff to work effectively with tourism professionals, who typically have very different training, priorities, and personalities. As a result, it is difficult to develop the trust and personal relationships that contribute to effective cooperation. Lastly, often it is difficult for staff to work effectively with local communities.

Options: As part of the skill enhancement noted in Section 4.5, there may be a focus on developing and/or recruiting social science skills amongst natural area staff. An increased focus on social issues and corresponding staff skills will enhance the ability of natural area managers to respond effectively to ecotourism and broader conservation challenges.

4.4 Continued Funding Difficulties in Natural Areas

Issue/trend: There has been a trend in many countries of stable or decreasing government funding for natural area management, despite increased pressure on these areas, including increased visitation (Eagles 1995; Reynolds 1995). This imbalance between available resources and management needs may lead to deterioration at many natural areas.

To varying degrees, developing countries in the region have benefited from bilateral or multilateral (e.g., GEF) funding for natural area management. Moreover, economic growth in many countries may lead to increased financial and political support for natural areas in the future. Of course, this will vary across countries, in part based on varying levels of economic

development. For example, funding for natural area protection and management is more likely to increase in Malaysia than in Burma or Laos.

However, any increase in funding may be offset as expenses increase. In particular, ecotourism generates financial and non-financial costs for natural areas (Lindberg, Enriquez, and Sproule 1996). The historic and projected increases in ecotourism mean that these costs are likely to increase. However, ecotourism also provides a potential source of revenue. Though fees have been instituted or increased at various sites in the region, in general Asia-Pacific remains behind Latin America and Africa in terms of generating ecotourism-related funding for natural areas.

Options: Where the need for revenue outweighs other ecotourism objectives (such as the desire to provide open access to all visitors), visitor fees can be implemented/increased.

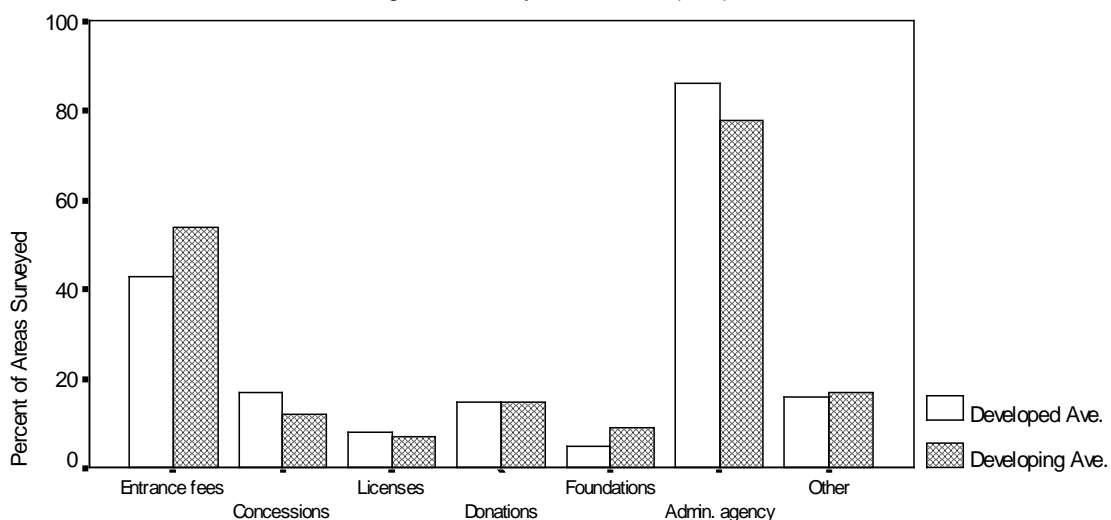
Collection and retention of fees not only increases available funding, but may also increase support for ecotourism amongst natural area managers. Many agencies responsible for natural areas have had strong conservation ethics of “resource protection” at all costs (see Section 4.3). Managers often are ambivalent and even hostile to the idea of tourism. This is made worse by tourist revenue being transferred to the central treasury. It is also reinforced by low budgets, few staff, and “all the tourist problems”. Thus, retention of fees at the local level probably would increase managerial support for ecotourism.

At the most basic level, ecotourism can help address natural area funding difficulties only when fees are charged and when they benefit the area financially, usually through retention of fee revenue directly by the area. A recent survey of protected areas around the world indicates that only about half of the areas responding to the survey collected fees at that time (Figure 4) (Giongo, Bosco-Nizeye, and Wallace 1994).

Figure 4: Revenues Sources Used By Protected Areas

Developed and Developing Country Averages

Source: Giongo, Bosco-Nizeye, and Wallace (1994)



Though there has been a trend toward implementation of fees over the past several years, many areas still charge little or no fee. Moreover, it is common for revenues from fees that are

charged to be directed back to the general government treasury, thereby providing no direct benefit to the natural area.

An example of a site that charges fees but receives little direct benefit is the Dinghushan Biosphere Reserve (DBR) in China. DBR received an estimated 13.5 million yuan (approx. US\$1.7 million) in entrance and related fees in 1995. However, this revenue has made little contribution to reserve management, as only 5% is allocated to the management agency (most of the money goes to the local government tourism bureau). Thus, substantial revenue is generated, but the revenue primarily has contributed to infrastructure development by local government rather than to environmental interpretation, visitor management, or general reserve management.

It is worth noting that results of a visitor survey at DBR (Lindberg et al. 1997) indicate visitor support for a greater portion of entrance fee revenues to be dedicated toward reserve management, as opposed to local government. When asked how revenues from entrance fees should be distributed, 18% selected the "100% to conservation, research, and education" option while 43% selected the "75% to conservation ... and 25% to construction for tourism" option. Both options would represent a substantial change to the current distribution.

A similar distribution situation was found in study of tourism at Tangkoko Duasudara Nature Reserve in Indonesia. Kinnaird and O'Brien (1996 cited in Brandon 1996) found that the Department of Forestry, which manages the reserve, receives only 2% of ecotourism revenues, and the reserve itself receives only a fraction of that.

Mt. Everest in Nepal, where the climbing fee is US\$50,000, provides an excellent example of capturing potential fee revenue (Gurung 1996). Though few sites are able to charge such high fees, the distribution of revenue from this fee to conservation programmes serves as an example for other sites. In addition, a portion of the US\$700 per person fee for ten days of trekking in the Mustang region of Nepal goes to conservation and development programmes, while the 1993 amendment to Nepal's Wildlife Conservation Act provides for the distribution of 30% to 50% of protected area revenue to surrounding communities (Brandon 1996).

If it is determined that fees should be charged, there are various ways they might be applied, including:

- *Entrance fee*: collected when tourists enter the site.
- *Admissions fee*: charged for admission to a specific facility, such as a visitor centre.
- *Use fee*: charged for use of a specific object, such as rented equipment, or opportunity, such as a camping place.
- *License or permit*: like a use fee, this includes fees such as hunting or fishing permits.
- *Sales and concessions*: includes 1) profits from natural area sales of souvenirs, lodging and others goods or services, 2) license fees from concessions to sell these goods and services on site, and 3) revenues from licensing area logos and trademarks.

Experience in various countries suggests that:

- Fee systems will be most efficient if, within overall objectives, flexibility is provided for each site to implement the fee structure most appropriate to local conditions (that is, a single fee structure for the whole system may not be efficient).

- Earmarking at least a portion of fee revenues directly to the area collecting them (as opposed to the general government treasury) encourages efficient collection and enhancement of visitor experience quality.
- When fees are earmarked, this portion of the site's income becomes dependent on cyclical variations in visitation, such that an endowment should be considered as a means to even out income over such variations.
- Multi-tier fee systems, in which some groups pay more than others, can be used to reduce concerns about equity; for example, foreigners might pay more than nationals, or pensioners might pay reduced fees.
- In areas with low visitation and/or multiple entry points, it simply may not be practical to collect entrance fees, though alternative systems (e.g., annual passes) can be used.
- The responsiveness of demand to fees may be reduced by "hiding" fees in larger expenditure items (such as by incorporating fees as part of the price of a whole tour) or by explaining the importance of fee revenue for maintaining the natural attraction.
- Often, there are opportunities for increasing non-fee revenues, such as through donation programmes or through souvenir sales.

Depending on how they are implemented (as well as on site characteristics and other factors), fees have the potential to significantly supplement traditional natural area funding sources. If they are not implemented, ecotourism may make natural areas worse off because of the costs imposed by this activity.

4.5 Ecotourism Management: Low Level of Funding and Reliance on Simplistic Strategies Like Carrying Capacity

Issue/trend: The previous section notes the problem of insufficient natural area funding. With respect to ecotourism in particular, many countries and sites have devoted insufficient funding, political support, and research/analysis to managing ecotourism given the complexity of this activity with respect to both the natural and social environments. One of the results of the lack of support in the face of increased pressure is the reliance on simplistic management strategies such as carrying capacity.

Options: At the basic level, an important option is to provide to natural area managers the funds needed to implement the types of management strategies described in Section 4.6. These funds will need to be supplemented by the development of staff skills, through training of existing staff and/or through hiring of new staff (see Section 4.3).

Next, a commitment to planning at various geographic levels may be made (e.g., at the individual natural area, national, and even international levels). In particular, effective planning requires explicit statements of ecotourism-related objectives and ongoing monitoring to determine whether those objectives are being achieved (Chudintra 1993; Lindberg, McCool and Stankey 1997; Yong 1996). UN FAO (1988), Inskeep (1991), MacKinnon et al. (1986), and WTO and UNEP (1992) are examples of resources available to guide and facilitate planning efforts.

Of particular concern is the popularity of the carrying capacity concept. Though this concept is appealing in its simplicity and helps draw attention to the possibility of "overdeveloping"

ecotourism, it simply is not adequate to deal with the complexity found within the ecotourism context. Therefore, it is proposed that this concept be avoided in favour of alternate frameworks that focus on identifying and maintaining desired conditions (these conditions might be environmental, experiential, social, and/or economic; for further discussion, see Harroun and Boo 1996; Lindberg, McCool and Stankey 1996). Alternative frameworks not only are more appropriate, but also may be more accepted by the tourism industry, as the focus on conditions rather than numbers encourages management actions that reduce negative impacts per visitor rather than the number of visitors.

Moreover, planning processes, such as the Limits of Acceptable Change system (LAC), that involve standards can be used to avoid the tendency, through multiple small developments, for tourism to undergo an undesirable amount of succession. For example, a wilderness site may slowly become more developed as the site is hardened, more and different types of people come, and hardening and infrastructure development continues. By setting standards reflecting wilderness qualities at an early stage (e.g., a low level of encounters with other visitors), management has a guide and rationale for implementing actions consistent with the standard (e.g., restricting the number of visitors to the site) or rejecting actions that are inconsistent with the standard. Succession, and thus the value of good planning, is also relevant at the community scale. Pattaya (Thailand) has been used as an example of tourism that gradually developed well beyond its small village origin (Chudintra 1993).

The recognition of ecotourism's complexity and the devotion of sufficient funding and support to its management will greatly enhance the likelihood of achieving ecotourism objectives in the long term.

4.6 Growth in International and Domestic Visitation

Issue/trend: As noted in Section 3.3, the expected trend to 2010 is for continued ecotourism growth within the region. This growth can lead to increased impacts, both positive and negative, on natural areas.

Options: Strengthen visitor management in natural areas in order to achieve ecotourism objectives. Several strategies for doing so are provided below.

Much has been written about the management of tourists, particularly in natural areas (Cole, Petersen, and Lucas 1987; Hammitt and Cole 1987; Harroun and Boo 1996; Knight and Gutzwiller 1995; WTO and UNEP 1992). On-site management options include:

- *Site hardening*, such as building boardwalks.
- *Selective marketing and restrictions on activities*, such as marketing non-motorized uses (e.g., trekking/hiking/bushwalking rather than Four-Wheel Drive use) and restricting motorized use.
- *Managing behaviour*, such as through education and persuasive communication (including use of visitor guidelines) -- everything from keeping appropriate distances from animals to carrying out rubbish.
- *Overall limitations on use*, such as a maximum number of visitors per period (e.g., day or year) for the site.
- *Selective limitations on use*, including:

- * Refuge zoning, such as permanently prohibiting visitation in certain geographic areas.
- * Buffer zones, such as prohibiting visitation within X meters of active bird nests or within Y meters of whales while whale watching.
- * Temporal limitation, such as limiting visitation by season or time of day.

Of course, a combination of these strategies might be used. For example, visitors might be allowed within 50 m of bird groups during non-nesting periods, but only within 150 m during nesting periods. In addition, management of behaviour and spatial limitations can be achieved passively through trail/track and infrastructure design and layout rather than solely through more intrusive visitor guidelines. Though user fees typically are promoted as a way to generate revenue, they are also a potential management tool insofar as they can be used to limit use overall or distribute use spatially or temporally (e.g., high fees during peak visitation seasons).

Much attention recently has been directed at low impact design, construction, and management of visitor-related infrastructure in natural areas (CDOT 1995; Hawkins, Wood and Bittman 1995; US NPS 1993). Significant potential exists for the indirect environmental impacts of tourism to be reduced through utilization of alternate energy sources, the implementation of recycling programmes, and so on. The substitution of kerosene for firewood in Nepal is a widely-cited example of reducing such indirect impacts.

For both experiential and social reasons, it is recommended that buildings be designed in harmony with the local architecture and use traditional construction materials. Unfortunately, in many ecotourism areas, such as in Namche Bazaar in the Everest region of Nepal, lodges have been constructed of cement, which is unattractive to many western visitors.

Governments can play important roles in managing the environmental impacts of tourism infrastructure and operations through regulation and incentives. For example, in Malaysia the government has granted various incentives, such as pioneer status and income tax exemptions, to promote tourism investment. These incentives could be used to encourage environmentally sensitive practices, such as energy and waste minimization.

Strategies for managing environmental impacts also can be used to manage experiential impacts. For example, conflict often is caused by visitor behaviour, in which case there may be opportunities to manage conflict by managing behaviour through visitor education and guidelines. At the most general level, crowding can be managed by limiting the number of visitors.

A site might disperse and spatially limit certain activities to reduce crowding or conflict. For example, motorized activities might be allowed in some areas, but only non-motorized activities in other areas. If the area is of limited size, managers may need to determine the most appropriate or desirable activity, and then market and manage for that activity. The strategy of dispersal illustrates the potential for conflict between strategies to manage environmental versus experiential impacts. It may be sensible to *concentrate* use to minimize the real extent of environmental impacts, but it may be sensible to *disperse* use to minimize experiential impacts.

With respect to increasing positive economic impacts, the issue of user fees and natural area finance is discussed in Section 4.4. With respect to increasing jobs and other economic benefits, the traditional approach is to increase the number of visitors. Given that negative

impacts (environmental, experiential, sociocultural, and economic) correspond, to varying degrees, to visitor numbers, generally it will be preferable to increase local benefits by:

- increasing spending per visitor;
- increasing backward linkages (reducing leakages); or
- increasing local participation in the industry.

Spending per visitor can be increased through, for example, provision of handicrafts where such provision does not currently exist (Healy 1994). Backward linkages can be increased through greater use of local agricultural and other products (Lindberg and Enriquez 1994; Telfer and Wall 1996).

Though visitor management traditionally focuses on environmental and experiential impacts and, to a lesser degree, economic impacts, social impacts on local communities may have at least as great an effect on sustainability as do these other impacts. As one ecotourism operator put it, "ecotourism cannot be achieved if development is opposed by the community" (Jarvie 1993:55).

Probably the best way to minimize negative social impacts and enhance local economic benefits is to ensure local involvement in, and control over, tourism development (Brandon 1993, 1996; Brohman 1996). There are obstacles to local involvement, including local factionalism and a tendency toward centralized government planning. Moreover, this involvement may make tourism development slower and more expensive. However, it also probably makes it more sustainable. As noted by Brandon (1996), local residents can (and should) decide what level of tourism they want, what cultural practices they wish to share, and where tourists will be allowed to go. Several different levels of community involvement are possible, from full local development of facilities to partnerships or joint ventures with industry, to delegation of rights in exchange for fees. The Annapurna Conservation Area Project (ACAP) in Nepal is a commonly-cited example of effective local development of ecotourism.

The local involvement process should include education about probable tourism impacts so that residents can make an informed decision regarding the desirability of tourism. Lastly, development should keep in mind the impacts listed in Section 3.4/Sociocultural Dimension and should pursue opportunities for minimizing costs and maximizing benefits. For example, reduced access to resident recreational areas (e.g., beaches) is a commonly-cited cost of tourism, so continued resident access to these areas should be preserved.

Future increases in visitation can bring important economic and other benefits. However, it also can generate increased negative impacts. If effective visitor management is implemented, the benefits can be enhanced while the negative impacts are minimized. Indeed, in some cases it may be possible, through effective management, to reduce negative impacts from current levels despite an increase in visitation. On the other hand, if visitor management is not strengthened, increased visitation may severely jeopardize resource management and other objectives.

4.7 *Change in the Visitor Market*

Issue/trend: As noted in the previous section, the number of visitors is expected to increase at many of the region's natural areas. In addition, it is expected that the types of visitors (the visitor market) will change.

One of the primary changes will be in the balance of western and Asian visitors (with Asian visitors being both domestic and intraregional). Though growth is expected for western ecotourists, faster growth is expected for Asian ecotourists, such that the latter will comprise a larger proportion of all visitors. In general, Asian visitors are more likely to prefer larger group sizes, relative comfort, and easy site accessibility. They may seek forest-oriented experiences, but are more likely to do so in the context of trips taken for other purposes, such as golfing or diving.

Moreover, there often is divergence between the on-site experiences sought by Asians and westerners, and this will compound the need for effective management. The issue of divergent experiences is illustrated by the case of Dinghushan Biosphere Reserve (DBR) in China (Lindberg et al. 1996). Visitor survey results suggest that many DBR visitors (almost all of whom are domestic) are motivated by the opportunity to view scenery in the reserve, as well as to learn about nature. These motivations lead to support for restricting activities, including infrastructure development, that might threaten natural features. Nonetheless, observation of visitor behaviour in DBR suggests that these responses should be interpreted cautiously and with due regard to the cultural context. For example, there is a much higher tolerance for littering in the reserve than would be the case in many western reserves.

Moreover, cross-cultural evaluations of human relationships with the natural environment suggest that, relative to western cultures, eastern cultures tend to favour human manipulation of nature in order to enhance its appeal, in contrast to preservation of nature in a pristine state (Kellert 1996). Thus, DBR visitors may be more tolerant of human changes to the nature reserve than would be true of visitors in many western reserves (this tolerance extends to the acceptance of, and possibly preference for, buildings with modern material like concrete rather than more natural materials like wood).

Though little empirical research has been conducted on cross-cultural motivations and desired experiences in ecotourism settings, observation and discussion with researchers and reserve managers in many countries suggest that substantial cross-cultural differences exist. The example of litter suggests that perceptions of depreciation and environmental degradation caused by other visitors varies across cultures. Similarly, perceptions of crowding may vary across cultures. Of the 242 respondents (in the DBR visitor survey) who reported that they saw at least 200 other people during their visit, fewer than 25% selected the number 5 or higher on a scale of 1 to 9, with 1 being "not at all crowded" to 9 being "extremely crowded." The reserve is located within two hours of a city of six million people, and it is unlikely that visitors expect a wilderness experience. Nonetheless, the level of crowding in the reserve probably is much more tolerable to Chinese visitors than to western visitors.

Of course, there is variability within cultures, with certain individuals and groups in Chinese society being more sensitive than others to environmental degradation and crowding. For example, Xing (1993) notes the high levels of visitation at Wuyishan, Changbaishan, and Huangshan reserves (with the latter having more than 10,000 visitors per day during peak periods) and observes that such visitation levels, and associated infrastructure, may devalue the natural beauty of the reserves.

Other trends also will cause changes in the visitor market. For example, the population in many source countries is ageing. Though older visitors may still seek ecotourism experiences, they are more likely to desire more comfort and greater site accessibility than their younger counterparts.

Options: Ecotourism is a business and, therefore, the ecotourism product needs to adapt to changes in the marketplace (or choose to accept static or declining visitation if adaptation will lead to changes that are unacceptable with respect to other management objectives). Thus, if natural areas are to take full advantage of ecotourism, they will need to evaluate the market most suited to the ecotourism product offered, as well as tailor the product to the desired market as far as practical and desirable. It may be difficult to simultaneously satisfy markets with disparate desires and tolerances, such that a variety of spatially or temporally separated ecotourism experiences may need to be offered within or across natural areas.

4.8 Continued or Increased Competition, Particularly for International Visitors

Issue/trend: Though regional ecotourism visitation levels are expected to increase, competition for these visitors also is expected to increase as new destinations are developed and as visitors become more sophisticated and discriminating in their choice of destinations. On the supply side, various countries in the region, such as Mongolia, have begun developing their ecotourism potential. On the demand side, many visitors are seeking more than a generic visit to a rainforest. They may search for specialized itineraries, trips involving significant contact with local communities, and high-quality interpretive programmes (discussed in Section 4.9) (Wood 1997). Increased sophistication and expectations have been noted for westerners, but also will be increasingly true for Asian visitors in the future.

Thus, sites not only have to attract visitors in the face of increased supply, but they also have to provide a high quality experience once the visitors arrive, thereby helping to attract future visitors through word-of-mouth referrals.

Options: One innovative option for reaching potential visitors in a competitive marketplace is the World-wide Web (WWW). Though the Web offers small ecotourism companies the opportunity to reach visitors around the world, Web marketing must be done well to be effective and should not be viewed as a panacea for attracting visitors (Johnson 1996). Numerous ecotourism operators and government agencies already are on the Web. For example, Samoan ecotour operators can be found at <http://public-www.pi.se/~orbit/samoa/eco-oper.html> while the Tasmania (Australia) Parks and Wildlife Service is at <http://www.parks.tas.gov.au/>. National parks and hill resorts are contained in the Malaysia Tourism Promotion Board site at: <http://tourism.gov.my/>. Marketing efforts generally, and Web marketing in particular, provide excellent opportunities for public-private partnerships.

In addition, destinations can maintain and enhance the quality of the visitor experience and offer the visitor something different than other sites and/or what the same site offered previously. Some sites have a natural advantage with respect to offering unique experiences. For example, only China can offer giant pandas in their native habitat. However, other sites can develop competitive advantages through, for example, enhancing access or predictability,

enhancing trip quality through improved interpretation, developing or linking with complementary attractions, and so on.

Increased competition, increased expectations on the part of visitors, and the apparent trend for ecotourists to be less likely than sun and sand tourists to make repeat visits presents substantial challenges to natural areas. A flexible, business-oriented approach to marketing and trip quality can help ensure continued visitation and visitor satisfaction. If sufficient action is not taken, traditional ecotourism destinations in the region may lose their market share to new destinations as they are developed. For example, Choegyal (1996) states that Nepal has lost market share to regional competitors.

4.9 Importance of Interpretation

Issue/trend: As discussed in previous sections (4.6 and 4.8), there is a need to more actively manage visitors and to enhance the quality of the visitor experience.

Options: Implement interpretive programmes as a means for achieving both of these objectives.

Development of interpretive centres and other interpretive material has occurred at many sites within the region. For example, the Malaysia Department of Wildlife and National Parks recently constructed interpretive centres at Bota Kanan and Sungkai (DWNP 1996a). However, interpretation has been largely neglected at many sites in the region (Lindberg et al. 1997; Campbell 1994). For this reason, and due to its importance in ecotourism, it is discussed in some detail here (further discussions are available in Ham (1992) and other interpretation resources). Though the focus here is on using interpretation to manage visitors and enhance the visitor experience, it also serves to develop a keener awareness of an area or issue and to promote public understanding of the natural area management agency and its policies.

Put simply, interpretation seeks to help people understand and appreciate the environment through various communication processes. Interpretation is more than just providing information or explaining the environment (Wylie 1994). Tilden (1977) defines interpretation as "an educational activity which aims to reveal meaning and relationships through the use of original objects, by firsthand experience and by illustrative media, rather than communicate factual information." The concept of interpretation is illustrated by the saying, "through interpretation understanding, through understanding appreciation, through appreciation protection".

The following are some of the considerations for effective interpretation (expanded from Allcock et al. 1994):

- the level and type of education will depend on the interests and expectations of the tourist and will include a broad range of educational opportunities through interpretation, interactive and participative approaches, and the use of various media;
- the interpretive component may acknowledge the natural and cultural values of a destination and also can address issues such as resource management and the role and attitude of the host community;

- content can include information and orientation, rules and regulations, activities, local flora and fauna, ecological processes, management issues and the cultural history and prehistory of the area (in short, topics can be broad and varied, and are only limited by the imagination of the interpreters); and
- interpretive material should be easily accessible, accurate and stimulating to encourage responsible behaviour and an ongoing interest in the environment and conservation after the visit.

The "art" of interpretation has been well-developed in many countries, but planning has been slower to progress. It has frequently been omitted, ad hoc (Upitis 1991) or in many cases reinvented. However, planning for interpretation can help managers:

- decide what they want to achieve, by identifying what opportunities are offered to raise public awareness, and what management issues can be addressed through interpretation; and
- work out the most effective and efficient way to achieve goals.

Proper planning is required for effective evaluation, and thus effective strategic planning. Upitis (1991) summarizes the questions that should be asked when planning interpretation:

- why communicate?
- what is the objective?
- what is the message?
- who is the audience
- how/when/where is the best way to communicate with the audience?
- what have we achieved?

Interpretation can be included as part of the management planning process of the site, rather than being considered as an afterthought. Interpretive considerations can have a major influence on the placement of facilities, such as trails/tracks and campsites.

The range and type of interpretation will vary considerably from country to country as well as site to site. In Asia and the Pacific, interpretive services have traditionally been fairly basic, and often have been designed for a limited domestic market. Interpretation is one area in which consideration must be given to the differences between domestic and international visitors. This is not just a challenge in terms of language, but also in terms of the type of media, style of presentation, and the content. Often, there will need to be provision for multilingual interpretation, whether in the written media or guides.

Interpretation also can be a valuable tool to increase the awareness and understanding of local people who may live adjacent to the natural area. Interpretation can illustrate how they can contribute to the protection and sustainability of the area's natural resources upon which they may depend for subsistence or income. Indeed Ceballos-Lascurain (1996) suggests that there is increasing evidence to indicate that on-site interpretive programmes in developing countries have an important strategic environmental education function.

Ceballos-Lascurain (1996) goes on to describe the case study of the Kanah National Park interpretive centre in India. The interpretive centre was created entirely by local staff and

utilized local resources. The development of this highly successful interpretive centre has resulted in a number of spin-offs. It has demonstrated the abilities of the Indian staff and has encouraged other park managers to develop their own interpretive services. It has given interpretation a higher profile within the Indian parks system and has allowed the continued development of expertise in planning, design and development of other interpretive facilities. It is also significant that this project was developed as a partnership between the managers and the local people who had been relocated from the park when it was designated.

The effective implementation of interpretive programmes can greatly enhance the visitor experience, thereby making the site more competitive. In addition, interpretation can be used to manage visitors in a non-intrusive manner, thereby reducing negative impacts and increasing positive impacts. Moreover, it can be used to raise the general awareness and level of support for resource management policies and agencies.

4.10 Importance of Partnerships Among Ecotourism Actors

Issue/trend: Almost every ecotourism observer notes the importance of forming partnerships among ecotourism actors. Such partnerships not only promote the setting of balanced objectives, but also promote achievement of these objectives through utilization of the varied skills and contributions each actor can make. For example, government clearly has an important role in ecotourism, but the private sector and NGOs offer skills, flexibility, and political independence that government agencies and local communities may lack. Moreover, the private sector and NGOs may be more efficient in achieving objectives, even in such traditional public sector activities as conveying the importance of conservation to surrounding communities.

Despite significant barriers to forming and maintaining such partnerships, the fact that they can provide substantial benefits but currently are relatively rare leads many observers to expect a future increase in partnerships.

Options: Though the roles of actors within a partnership will vary across sites, Eagles (1995) provides some broad categories of roles that each sector might take on. The *public* sector role in ecotourism typically is to:

- provide environmental protection (the natural area itself);
- provide infrastructure, such as roads and airports;
- provide security and enforcement;
- monitor and control impacts;
- allocate access;
- provide information, such as through interpretive programmes; and
- resolve conflicts.

The *private* sector role in ecotourism typically is to:

- provide accommodation and food;
- provide transportation, such as busses and airlines;
- provide information, such as guides and brochures;

- promote sites to potential visitors; and
- provide consumer products, such as souvenirs.

Various types of partnerships might be pursued, with national or regional ecotourism councils as one option. A specific example of public-private partnership is the formation of the Nepal Tourism Board, with representation from both the private and public sectors (Gurung 1996). An example of inter-agency cooperation is the Joint Committee on Nature Attraction Utilization in Indonesia, with representation by the Directorate General of Tourism and the Directorate General of Forest Protection and Nature Conservation (Nababan and Aliadi 1993). Joint marketing between natural areas, regional/national tourism agencies, and ecotourism businesses is another example of opportunities for partnerships to achieve mutual objectives in a cost-effective manner.

More extensive partnership opportunities also exist and likely will expand in the future. These include co-management of natural areas (e.g., government-NGO and government-local communities) and joint ventures between the private sector and local communities (Christ Forthcoming; Pfister and Jubenville Forthcoming).

Depending on the type and effectiveness of the partnership, it can be an important means for achieving ecotourism and natural area management objectives more efficiently or in ways that individual actors alone simply cannot do.

4.11 Greater Private Sector Roles in Management of Natural Areas

Issue/trend: For a variety of reasons, including private sector pressure to access natural areas and lack of public sector funding for natural area management, there is a trend toward greater private sector roles in the management of natural areas. These roles vary across countries, but often involve private sector management of infrastructure and activities within parks.

The greater private sector role can increase funding for infrastructure development. Moreover, it can bring skills, including hospitality and tourism management skills, that may be lacking in natural area management staff. However, this trend also may jeopardize natural area conservation objectives. When private concessionaires lead infrastructure development, there may be a loss of economic benefit and management control. Important revenue-generating opportunities may be lost by natural area management agencies by offering "crown jewels" of tourism in concessions that do not reflect true financial value.

Options: The value of private sector participation should be recognized (see Section 4.10), but this participation must be balanced with conservation objectives if the latter are to be achieved. New public-private relationships need to be explored. Rather than react to lack of funding by inviting private sector leadership, other options may be pursued. One of these options is for the public sector to charge user fees and to take on a greater role in infrastructure. For example, it may be possible to follow the common hotel owner-management relationship, with public agencies investing the capital needed for infrastructure development and ownership, but with private companies hired as managers.

In simplified terms, natural area managers face three options with respect to pressure for increased private sector roles. First, the natural area can resist this pressure and retain the

status quo, which limits negative impacts and loss of control, but also limits ecotourism-related benefits (e.g., additional revenue). Second, the natural area can follow a traditional concessionaire model, which may generate some additional revenue and may obviate the need for the natural area management agency to be involved in tourism itself. However, the revenue benefits may be less than their potential, and control may be lost.

Third, more creative relationships may be explored, such as the hotel model noted above. Though such an option would require some natural area agency involvement in tourism, this commitment likely would be repaid in terms of retention of control and greater financial benefits.

4.12 Pressure to Use Natural Areas for Activities that are Not Nature-Dependent

Issue/trend: Related to the previous issue/trend, there is pressure to use natural areas for activities that are not nature-dependent. For example, golf courses have been proposed, and in some cases developed, in several national parks and other protected areas in the region.

At the same time, the supply of natural areas with little or no environmental degradation continues to decline. Therefore, it should be questioned whether it is either environmentally desirable or economically efficient to locate non nature-dependent activities in natural areas preserved for conservation or nature tourism purposes.

Options: In simplified terms, two options are to allow or to not allow non nature-dependent infrastructure and activities in national parks and similarly-designated natural areas. If they are allowed, the natural areas may gain concession fees and/or political support, but negative environmental and experiential impacts may outweigh these benefits. Insofar as the infrastructure and associated activities are less dependent on intact ecosystems than is the case for ecotourism activities like birdwatching, it may be better to locate them outside protected areas for both economic efficiency and conservation reasons.

4.13 Professionalization of Operators and Desire to Exclude Those Not Meeting Professional Criteria

Issue/trend: There is a trend toward enhancing the skills of ecotourism operators as part of the need to ensure high quality visitor experiences and to sustain the economic viability of these operators. Simultaneously, many "*bona fide*" ecotourism operators (those that adhere to ecotourism principles) are trying to differentiate themselves from operators who use the label solely as a marketing tool.

Options: Recognize the inherent difficulties for ecotourism operators, arising from the nature of small scale businesses operating in remote regions, and provide appropriate assistance through government agencies, industry associations, and vocational and/or university training programmes.

The following section describes some ecotourism operator difficulties and needs, using the Australian context as an example (Lindberg and McKercher 1997). Though there is variability across countries, similar difficulties exist elsewhere (Yong 1996), and several observers stress

the importance of enhancing professionalism amongst ecotourism operators (e.g., Chudintra 1993).

Best estimates suggest that about 600 businesses are involved in the Australian ecotourism sector (Cotterill 1996). Dozens of new operators are entering the industry monthly and a similar number likely are deciding to leave the sector. Cotterill's profile of the industry suggests that (in Australia):

- the industry is comprised of small operators with most having four or fewer staff;
- the average life of enterprises is 10 years; and
- each operator primarily provides either day tours or extended tours to one to three natural areas.

The industry faces many operational issues that will affect the long term viability of many businesses. Given a goal of sustainability, the industry as a whole, if not individual operators, must remain viable. A major issue for the sector is the lack of business expertise on the part of new entrants (Cotterill 1996). Most new entrants have little practical business or business planning background, and many also are woefully under-capitalized. Business planning emerged as one of the three most critical issues identified by Australian tour operators in a survey of new eco and adventure businesses conducted by the Victorian Tourism Operators Association (VTOA 1995). Information needs include basic business planning, business development, marketing issues, accounting and book keeping, accessing finance, pricing, booking and reservations procedures, taxation issues, cost control and new business development. Indeed, the issues identified by the ecotourism sector are similar to those identified by the small business in general (Meredith 1993; Reynolds, Savage and Williams 1994).

The lack of business expertise affects all aspects of the ecotourism operation including such fundamental issues as product development. Cotterill's (1996) research identified the need to package products better, coordinate itineraries, and improve product quality and presentation. The ecotourism sector is unique in that it serves small numbers of clients, often has a limited number of trips, and often is constrained by seasonality issues. As a result, gross revenues often are low and the industry as a whole faces seasonal cash flow crises.

Marketing often emerges as a key issue for ecotourism businesses. Traditionally, ecotourism products have not been marketed effectively through the travel trade (Wild 1996). Many operators do not understand how the travel trade works. Moreover, many have not developed their pricing structure to accommodate the up-to-30% commissions demanded by wholesalers and inbound operators. On the other hand, the travel trade largely has been uninterested in selling ecotourism products. The inbound, wholesale, and retail travel system is geared to selling mass tourism experiences in which large numbers of people purchase carefully packaged and standardized products. Until recently, few travel agencies have been interested in selling specialist tourism products (Richardson 1996; Southern 1996).

Practical operational problems that affect the profitability of some ecotourism operations also were identified. Cotterill (1996) cited the need to ensure product consistency. He notes that in some locations the accommodation is substandard for the quality and price of the experience offered. The end result is deficient product quality, which threatens to reduce consumer satisfaction. Although many ecotourists are prepared to *rough it*, the facilities and services

must be at suitable standards. A more strategic approach to planning the tour and a better understanding of satisfying client needs would address this weakness.

In a similar manner, the effective hiring, management, training, and rewarding of staff emerged as a significant issue in the Cotterill (1996) study. The first imperative is to determine the appropriate staffing level. Some larger businesses have a client to staff ratio as high as 20:1. For specialist products, the client-staff ratio can be as little as 2:1. The second imperative is to find enough suitably skilled staff to perform the necessary duties. Sourcing suitable staff in rural areas can be a problem, and training staff is costly. The third imperative is efficient employment in the face of seasonality. Like most tourism businesses, ecotourism operators experience peak periods in which large numbers of staff may be needed. During the rest of the operating season, a few key staff people may be suitable for operating the business. In the off season, an organization may have no need for any salaried staff.

Finally, Cotterill's (1996) research identified a number of personal issues as important factors that limit the commercial profitability and, in some cases, viability of ecotourism operations. The greatest personal challenge facing all small business operators is the risk of burnout. This risk is especially strong with ecotourism operators who may face the gruelling combination of a heavy work load, a lack of support systems, and a lack of financial resources to hire additional staff. Many ecotourism businesses offer their trips on weekends, yet they also must work a full Monday to Friday schedule to operate the office, prepare for trips, and be available to answer customer inquiries. As a result, operators may find themselves working seven day weeks for the entire operating season.

To some degree, these weaknesses and difficulties can be overcome by appropriate assistance through government agencies, industry associations, and vocational and/or university training programmes.

Accreditation has been pursued in part as a means to exclude businesses that do not follow ecotourism principles. The term "ecotourism" has become a positioning statement and a politically correct form of mass tourism. As such, virtually any type of tourism activity has claimed to offer an ecotourism experience. In Australia, bus tours that once were sold as day sightseeing trips from Sydney or Melbourne now are being marketed as ecotourism experiences because the tours stopped at wildlife parks. Yet there was no change in the tour itinerary nor the qualifications of interpretive staff. Locations outside Australia have followed similar paths (Wight 1993). Golf resorts in Hawaii became ecotourism resorts (Remington 1994). Singapore, possibly the most urban of all nations, promoted itself as an ecotourism destination because of its renowned zoo (STPB 1993). The Desaru resort being developed in Johor, Malaysia will have 12 hotels with 5,000 rooms and three golf courses, yet will "promote ecotourism" by setting aside 242 of the 1,600 hectares as a natural reserve (Manam 1996). South Pacific island nations like Fiji and Western Samoa began to promote themselves as ecotourism destinations, though three years earlier they had been positioned as mass tourism resort destinations.

The danger of abusing the ecotourism label comes not so much from large resorts using the term, because consumers presumably will be able to easily determine the type of experience they are purchasing. Rather, the confusion occurs when operators working in natural areas use the term while not complying with ecotourism principles. Such operators may be able to underprice those complying with the principles and may provide inferior experiences that,

through negative word of mouth, can jeopardize demand for site and thus the viability of other businesses.

Accreditation is an option that enables consumers to identify those operators that comply with ecotourism principles. Australia is in the process of implementing such an accreditation programme, and more information can be found at <http://lorenz.mur.csu.edu.au/ecotour/neap.html>. The pluses and minuses of accreditation programmes, and the different types of such programmes, have been widely debated (for example, see Basiuk 1996 and Kumar 1996), and the experience of implementation in Australia and elsewhere can be used to guide future accreditation efforts.

4.14 Tendency for Dominance by Larger Operators and Those Located in Regional or National Centres

Issue/trend: There is a tendency, particularly for developing countries within the region, for ecotourism to be dominated by larger operators and/or those in regional or national centres. This results from economies of scale, differential access to capital, and the tendency for individuals with the necessary entrepreneurial and linguistic skills to be located in such centres.

Often, larger operators play important roles as intermediaries between consumers and small local operators. However, the dominance of larger operators can work against the goal of providing local economic benefits. Moreover, there is a common perception that large and out-of-region operators are less environmentally and socioculturally sensitive than smaller and/or local operators.

Options: Recognize the reasons for dominance by larger operators (and the important roles they can play), but implement programmes to facilitate local involvement where practical and desirable. Various options for achieving this include (see also Brandon 1993; Lindberg and Huber 1993):

- *Local involvement in planning and management.* This was discussed in Section 4.6.
- *Local training.* This training would cover a range of topics, including general overviews of the ecotourism industry, hospitality management (including hygiene), relevant language skills, interpretive material, cross-cultural considerations, and so on. Training can be based on existing tourism programmes, such as those conducted by the Malaysian Tourism Promotion Board, but should be supplemented with material specifically for ecotourism (Yong 1996). This training also is relevant to guides and businesses from outside local areas.
- *Provision of local capital through microcredit and other programmes.*
- *Facilitation of outreach to visitors and to other sectors of the ecotourism industry, such as inbound operators.* One of the key needs for local businesses is to reach potential visitors directly or through inbound operators. For many ecotourism sites, it is important to identify appropriate marketing outlets. For example, getting information into "backpacker" guidebooks may be more important than putting glossy brochures in tourist centres.
- *Natural area requirements that local guides be used.*

Opportunities for greater local benefits from ecotourism exist not only within the ecotourism industry itself (such as guides or operators), but also within related industries. For example,

training and capital might be targeted at developing the type, quality, and reliability of agricultural products used by local restaurants and lodges. Various resources relating to business development, community ecotourism development, and guide training are available, including Bushnell (1994), Pedersen (1995), and Pond (1993).

Finally, innovative strategies for small operator marketing can be pursued. One strategy, that of utilizing the World-wide Web, was noted in Section 4.8. This is an important potential strategy, but its usefulness should not be overstated, as it may become more and more difficult for small operators to become noticed on the Web as the number of sites proliferates. Indeed, it is possible that the Web ultimately will favour larger operators that are able to establish and maintain a higher Web profile. Again, partnerships may play a critical role here. Groups of operators, possibly in conjunction with natural area management agencies, can pool resources for combined sites that may be more attractive and useful to consumers than would be sites for individual operators.

4.15 Summary of Issues, Trends, Implications, and Options

Various demographic, tourism, and other trends will present challenges and opportunities for the region's natural area managers into the future. To some degree, these trends will put pressure on managers to maintain and improve their present activities. However, they also will put pressure on managers to take on new and different responsibilities and perspectives. For example, effective resource management will require increasingly greater social and political skills.

An overarching issue is the need for ecotourism to be dealt with in a business-like approach in terms of reacting to changes in the marketplace and satisfying ecotourists as customers. There are two general options for doing so: either natural area management agencies can take on this responsibility themselves or they can invite the private sector to do so in a partnership mode.

It should be stressed that this does not mean that important resource management objectives should be sacrificed to the desires of tourists or the tourism industry. Indeed, it may be critical for natural area managers to cultivate additional political support for such objectives in order to resist desires that are inconsistent with the objectives. Rather, it means that a more flexible, business-like approach can be taken within the constraint of achieving these objectives. Such an approach will enhance the probability that ecotourism objectives will be achieved into the future.

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ANNEX - COUNTRY ECOTOURISM NOTES

This section contains a variety of country reports, arranged alphabetically. Due to the difficulty of obtaining current and/or detailed information without site visits (which were not possible for this project), the amount of information inevitably is limited. In addition, the statistical limitations discussed in Section 3.3 make it impossible to provide meaningful quantitative trends in ecotourism. Some country-level trends in general tourism are provided for 1994 to 1996 in WTO (1997).⁵

Many of the countries exhibit the trends and qualities discussed above, such as non-existent or under-funded interpretive programmes. Because they were incorporated into previous sections, and detailed country-level information was largely unavailable, these trends and qualities will not be presented in detail for individual countries. The country reports are not comprehensive, but are included to further illustrate concepts and provide basic background information regarding ecotourism in each of the countries.

⁵Country-level tourism estimates in this section generally are from national tourism offices and may differ somewhat from WTO estimates in Sec 3.3 due to differing years, differing definitions, and other factors.

COUNTRY NOTE: AUSTRALIA

Services of forests are sometimes a subject of controversy and contested in a number of arenas in Australia:

- cultural attachments to place and sacred sites;
- sustainable hunting and gathering by indigenous groups;
- moral and ethical positions on the rights of nature; and
- aesthetics and landscape values.

In addition, and often in direct conflict to those advocating the above positions, there is a well organized forest industries alliance that seeks to use forests for production purposes, and a labour based movement that is concerned about timber-related job losses.

The National Forest Policy Statement (NFPS 1992) quotes the Ecologically Sustainable Development Working Group on Forest Use as specifying three main requirements for forest use:

- maintaining the ecological processes within forests;
- maintaining the biodiversity of forests; and
- optimizing the benefits to the community from all uses of forests within ecological constraints.

The fact that protection of native forests in Australia is such a contested issue is indicative of the difficulties in operationalizing such aims as "community benefit," especially within a context where "community" is so contested.

This represents a good example of the ways in which different interest groups have acted upon competing values related to forests and services of forests, and is indicative of the ways in which these competing interest groups frame their arguments to be heard on the public agenda in Australia. Forests and their services are at the centre of a considerable amount of public debate and controversy over management, activities and actions.

The Office of National Tourism (1997) reports tourism generated export earnings of AU\$13.1 billion (US\$10 billion) in 1995, representing an increase of 17.2% on 1994. This figure is projected to increase to AU\$21 billion by the year 2000. The industry accounts for some 500,000 jobs, or around 6.6% of Australia's workforce. In 1995, there were over 3.7 million international arrivals, with an expected increase to 6.3 million by the year 2000. Still, domestic tourism accounts for about 75% of total tourism expenditure.

Japan, Southeast Asia and New Zealand currently are Australia's three largest tourism markets. Though Japan is expected to remain the single largest market, tourism from other Asian countries is becoming increasingly important. Tourists from Asian countries other than Japan accounted for 26.3% of all visitors in 1994.

As noted by King and McVey (1994:5), "Australia's appeal in the international marketplace has been based on its unique flora, fauna and landscape," and images of nature figure prominently

in Australia's promotional material. However, the country has gone beyond simply marketing ecotourism and has made a significant commitment to research, government policy, and industry development.

Numerous studies of ecotourism visitors (e.g., Blamey 1995) and, increasingly, ecotourism impacts (Buckley and Pannell 1990; Powell and Chalmers 1995) have been conducted. The Commonwealth Department of Tourism (now the Office of National Tourism) developed a National Ecotourism Strategy (Allcock et al. 1994) and allocated funding for ecotourism infrastructure development, environmental management, and other projects through the Forest Ecotourism Programme and the National Ecotourism Programme. In addition, various tourism and land management agencies within state governments have undertaken ecotourism evaluations and/or developed ecotourism strategies (e.g., Chapman 1996).

The national Ecotourism Association of Australia (EAA) was formed and includes members from the industry, government agencies, universities and other groups. Several ecotourism conferences and workshops are held each year at different geographic levels. In addition, a WWW site has been developed for ecotourism professionals, both in Australia and internationally, at: <http://lorenz.mur.csu.edu.au/ecotour/EcoTrHme.html>.

Though the national government in many respects led the way in ecotourism, this is changing as the Labour government was replaced by the Liberal/National government in early 1996. The new government continues to support ecotourism, but at a lower level than was the case for the Labour government. Thus, the EAA and industry groups like the Australian Tourism Operators Association (ATO) will need to take leadership roles. This is happening, as illustrated by their collaboration, with support from the Commonwealth, on the National Ecotourism Accreditation Programme (NEAP). This programme, which is industry based rather than government regulation, currently is being implemented and may serve as an important precedent for other countries.

Despite widespread interest and support for ecotourism in Australia, there remain significant points of controversy (Figgis 1996). Government funding for natural area management, though higher than for many countries in the region, remains inadequate, and indications are that it will generally decrease rather than increase. As a result, there is a trend towards user pays and greater roles for the private sector. The state of Victoria (most natural areas are managed by the states rather than the national government) recently has corporatized its service delivery functions, while the state of Queensland is pursuing private sector management of park visitation.

Though there are benefits to both user pays and private sector roles, there also are concerns. For example, user pays is contrary to the traditional goal of free access to all. Moreover, it may increase pressure to satisfy interest groups. Figgis (1996) cites the case of the Four Wheel Drive registration levy in Victoria. This helps to fund track (road) maintenance, but it may also increase pressure to accommodate the Four Wheel Drive lobby in its desire to keep tracks open when they otherwise would be closed. Likewise, there is concern that when managing infrastructure and activities, the private sector will be less attentive than public agencies to conservation objectives.

COUNTRY NOTE: CHINA

Forests have long been cleared for agriculture to feed China's population, and recently loggers have moved in to clear-cut for timber products (Taylor 1994). The implications for conservation can be gauged with particular reference to panda protection. Many of the reserves that protect pandas were proclaimed in the 1960s and 1970s, after clear-cutting had occurred. Unfortunately, pandas will not re-establish in recent clearcuts because of reduced bamboo supply, so clear-cutting needs to be stopped in panda habitat (Taylor 1994). This is a concrete example of conflict between production and services of forests. However, evidence suggest that it is possible for loggers and pandas to coexist, as forests of fir, hemlock, spruce and birch that were selectively cut have a thick carpet of arrow bamboo that pandas can use. Selective cutting may not harm panda habitat, particularly when tree planting is done where slopes are gentle, as that is where pandas prefer to eat (Taylor 1994).

Many forestry issues have resulted from China's opening up of the economy to global market forces and from the movement towards a form of private property. China's economy continues to grow, averaging 13% since the late 1980s, and its forest resources are coming under increasing threat (FAS Online). Production is shifting from the north-east's state-owned forests to collective owned farms in the south (FAS Online). Whilst the depletion of forest resources has aggravated erosion, desertification and stream sedimentation, the planting of the "four arounds" (around houses and villages, alongside roads and waterways) has provided a concrete example, at least in some areas, that reforestation has been possible.

In the more general sense of cultural dimensions to forest service maintenance, forest dwellers are seen as minority nationalities. These people have come under a state whose attitude was to develop "backward" peoples. Hence, it would appear that there are concerns related to the maintenance of services of forests that are founded in indigenous people's value systems.

In recent years, China has experienced rapid expansion in tourism development and strong increases in domestic and international visitation (Bailey 1995; Xing 1993). In part, this growth has resulted from the political and economic environment encouraging a more market driven industry (Zhang 1995). Though visitation may plateau in certain international source markets, tourism overall is expected to continue its growth. In order to encourage future growth, the China National Tourism Administration will pursue tourism themes that will change each year (UPI 1997). These will begin in 1998 with the "China Urban and Rural Tour" promotion and will continue in 1999 with "Ecotourism."

China is expecting a record 52 million tourists each year during the promotion, with expected earnings of more than US\$30 billion. This growth presents a number of challenges, including the need to more widely distribute tourism (Yongwei 1995). With 90% of China's tourism receipts being earned in cities and an overwhelming concentration of tourism destinations in coastal regions, the partial focus on ecotourism could help decentralize the tourism industry by dispersing tourism to rural areas (Wen and Tisdell 1996). However, as in other countries, the expected growth in ecotourism will put additional pressure on natural areas in China, as discussed in Section 4.6.

China has been rated highly in ecotourism value (Herath 1996). Almost 7% of China's total land area is legally protected, with many of the nature reserves located in non coastal areas.

Amongst the first "conservationists" in China were the early Taoist and Buddhist religious orders, many of which sought isolated, mountainous areas to practice principles of harmony with the environment. These traditions meant that areas surrounding religious sites were conserved while other areas in China were cleared for agriculture or other economic activities. This has led to the presence of religious and cultural sites within many of the country's reserves. In more recent times, the growth in reservation of natural areas has been steady, with the number of nature reserves expanding from 34 in 1983 to 763 in 1993 (Han and Guo 1995). Of these, ten have been included in UNESCO's international biosphere reserve network.

Lindberg, et al. (1997) provide an overview of ecotourism in China. Ecotourism issues there include:

- Adoption of the biosphere reserve as the dominant protected area model. This model is consistent with China's level of population and priority on economic growth. It provides for local involvement and local economic benefits, two objectives consistent with ecotourism.
- Difficulties of coordination amongst agencies involved in nature reserves. Most reserves are under the management of the Ministry of Forestry, but several other agencies also manage reserves. Moreover, additional agencies play important supporting roles.
- Control over tourism development within reserves often rests with local government, and ultimately the communist party, rather than with the *de jure* management agency. This complicates efficient management and, as in the case of Dinghushan Biosphere Reserve, reduces allocation of ecotourism revenues toward conservation, environmental education, and visitor management.
- There appears to be widespread support for tourism by local communities. Residents value the benefits of job creation and the development of tourism-related infrastructure (e.g., roads and airports). Conversely, there appear to be relatively few negative impacts, perhaps because tourism has been developed only recently and because most tourism remains domestic, such that impacts resulting from pronounced cultural differences between hosts and guests have not been great. However, in some areas tourism development has led to reduced resident access to resources, which can lead to negative feelings toward tourism.

Several other issues were raised in other sections of the paper. For example, there is a general lack of interpretation and it may be difficult for sites to cater to both domestic and western visitors.

COUNTRY NOTE: INDIA

Forests form an integral component of Indian culture, religion and folklore. As Raja (n.d.:1) suggests:

Indian epics are strongly based on episodes in forests, portrayed wildlife as holy creatures, and saints led their whole life in huts called "ashrams" made of wood and leaves. Indians worshipped trees, and their sages meditated under them. Ayurvedic medicine, developed through centuries of knowledge on the medicinal effects of plants, depends on forest trees and herbs to find cures for ailments. Ancient scholars educated and trained their younger generation at their homes situated inside forests, on the basis of which Rabindranath Tagore ... founded the open air university at Shantiniketan in more recent times.

Raja (1996) argues that India is approaching stability in forest cover by successfully protecting what is left. He suggests that this is a result of approaching the problem in a variety of different ways, including:

- legal measures, such as the Indian Forest Policy;
- improved forestry research and education, with the development, for example, of the Indian Council of Forestry Research and Education (ICFRE);
- technological advancement in forest management, especially in increased capacity for inventory;
- participatory management, including programmes such as Joint Forest Management (JFM), village woodlot programmes and the like (Furze, De Lacy and Birckhead 1996); and
- environmental awareness and NGO activity that has occurred as a general result of environmental concerns being placed on the public agenda.

In the context of partnerships being formed with local people, JFM has been suggested as a successful approach to forest management and the maintenance of a broad range of services of forests. According to Sarin (1993), JFM has seen the development of a number of different local institutions that are concerned with the protection and management of forest areas, including:

- groups emerging out of local initiatives (autonomous village institutions);
- groups promoted and mostly regulated by forest departments under JFM programmes; and
- government or NGO sponsored development groups that have assumed the additional responsibility for forest protection and management.

JFM represents a policy and local development context for the establishment of forest management and protection mechanisms.

COUNTRY NOTE: INDONESIA

Indonesia is comprised of 13,667 islands and extends a distance of 6,000 km from the westernmost tip of Sumatra to the eastern border of Irian Jaya. Though the climate is equatorial, it can be cold in the mountains, with permanent glaciers existing in the highest peaks of Irian Jaya. Two-thirds of the country is classified as forest land, and the country contains tremendous biodiversity, with up to 17% of the earth's species. The country contains some 1,600 species of birds, including the Bird of Paradise, Cockatoos, Hornbills, and Kingfishers, 500 species of mammals, 10% of the world's flowering plant species, and 663 of the world's endemic or rare species (Nababan and Aliadi 1993 and other sources).

According to official statistics from the Directorate General of Tourism, international visitor arrivals in Indonesia have increased by more than 400% over the decade 1985 to 1994, with total arrivals in the latter year being just over 4 million (for historic data, see Nababan and Aliadi 1993). Tourism receipts were US\$5.2 billion in 1995, and continued growth in both arrivals and receipts is expected. The government hopes that tourism will be the country's largest foreign exchange earner by 2005, with a projected 11 million international arrivals spending at least US\$15 billion (for further information on economic aspects, see Soemodinoto, Lubis, and Oktaviany 1996).

Tourism remains primarily focused on beach and culture, with Bali by far the most popular destination. The most popular packages combine Bali, Central Java, North Sumatra, and South Sulawesi, though there are government plans to expand visitation on the islands of Lombok, Bintan, and Biak. Singapore is the largest tourism source country, while approximately one-third of international visitors come from the U.S., Canada, and Europe combined. However, visitor surveys indicate that most nature/eco tourists come from Europe, followed by North America and Australia (Nababan and Aliadi 1993).

Tourism policies for the current 5-year plan (Pelita VI, 1994-1999 [MTPT 1993]) call for:

- tourism to support quality of life improvements;
- internationalization;
- enhanced use of technology in the tourism product component;
- encouraging development in remote areas; and
- promoting the preservation of natural resources as well as culture.

National parks and nature reserves in Indonesia fall under the authority of the Directorate General Forest Protection and Nature Conservation (PHPA) (see Sekartjajrariri 1993 for additional background on Indonesian parks). As in some other regional countries, the protected area concept in Indonesia is said to differ from that in western countries, with less focus on wildness (Hitchcock, King, and Parwell 1993:319). Indeed, the Indonesian term for national park (Taman Nasional) can be translated as national garden. PHPA goals for nature tourism are (Nababan and Aliadi 1993):

- to encourage conservation efforts at nature-oriented tourist sites and the surrounding environment in order to ensure the sustainability of site attractions;
- to optimally use the typical and unique potential of each site as tourism attractions;

- to promote employment in addition to business opportunities; and
- to advance national cultural values in the international community and to counter current negative impressions about tropical forest management in Indonesia.

The 1990s have seen increased development of national parks for tourism, with almost all parks now providing at least basic tourist facilities, and with substantial investment in some parks, including Gunung Leuser, Way Kambas, Ujung Kulon, Baluran, Meru Betiri, Komodo, and Wasur. At present, tourists pay between Rp. 1,000 and Rp. 2,000 (US\$0.45 to US\$0.90) to enter national parks. Thirty percent of resulting revenues go to nature conservation in the province as a whole, while none is earmarked directly to the park being visited to support management or facility development. As noted in Section 4.4, there are prospects for increasing this fee and channelling a greater percentage to local conservation and development.

Despite recent development in Indonesian natural areas, attention appears focused on traditional concepts of tourism, rather than ecotourism. As Cochrane (1996) notes, "the potential for an alternative model remains largely unexplored, with insufficient understanding of the requirements of ecotourists and few concrete examples of ways in which this sector can contribute to the preservation and management of Indonesia's natural heritage." Nonetheless, some businesses and other groups within the country have embraced ecotourism principles. For example, Kalpataru Adventures allocates 30% to 70% of its tour revenues from foreign tourists to purchase of local community accommodation and transportation (A. Soemodinoto 1996 personal communication).

Attention to ecotourism has been increasing recently. The first national community-based ecotourism workshop, "Community-Based Ecotourism: Opportunity or Illusion?" was held in Bogor in April, 1995. It was organized by PACT Indonesia in collaboration with the Indonesia Environmental Forum (WALHI). The workshop drew 65 participants from different sectors, including NGOs, communities, policy makers, tour operators, and ecotourism specialists, and has laid the foundation for increased communication amongst ecotourism actors in the country. It also led to the second workshop, held in Bali in July, 1996, which resulted in the "Bali Declaration for Ecotourism," an agreement to form the Indonesian Ecotourism Society in order to:

- increase awareness to conserve the natural tourism resources in Indonesia;
- develop environmental education material for tourists that visit ecotourism destinations; and
- stress the need for local community benefits.

In addition, the non-profit Indonesian Ecotourism Network (INDECON) was initiated by the Institute for Indonesian Tourism Studies, Conservation International-Indonesia Programme, and Bina Swadaya Tours. INDECON was organized to facilitate networking between ecotourism actors interested in promoting effective and appropriate ecotourism in Indonesia. INDECON defines ecotourism as "responsible travel to protected natural areas as well as unprotected natural areas, which conserves the environment (natural and cultural), and improves the welfare of local people."

COUNTRY NOTE: MALAYSIA

According to Hurst (1990), it is difficult to provide a discussion of "Malaysian" forest policy or use because of the diversity of policy contexts that exist, especially given the relative autonomy of the subnational level of government. Though the factors that have impacted on deforestation have included poverty, economic institutions, and public policy, their specific roles are much more debated.

However, it is clear that wood production is a major focus of forestry in this country, which generates wood-products exports in excess of RM13 billion (US\$5.2 billion) (Nair 1996). Overlogging of up to 300% of set quotas has been recognized and blamed on state government needs for timber sale royalties. Impacts of this type of logging on indigenous people have also been recognized (for example, Hurst 1990).

On 1 November 1996, Sabah partially lifted its ban on log exports because state timber revenue has continued to dwindle from a high of 65% of total revenue (Nair 1996). Despite the obvious economic motivation for logging, there also has been increased attention given to ecotourism in forest, as well as marine, areas.

In 1995, there were 7.5 million tourist arrivals in Malaysia, with over half of these coming from neighbouring Singapore (Tourism Malaysia fact sheet and Tourism Malaysia (1997)). Tourism receipts totalled RM9.2 billion (US\$3.7 billion). Tourist arrivals grew 50% during the Sixth Malaysia Plan (1991-1995). Continued growth is expected, with Seventh Malaysia Plan (1996-2000) forecasts that arrivals and receipts will total 12.5 million and RM15.7 billion, respectively, by the year 2000.

Future growth is expected to focus on increased visitor volumes and return visits, as well as targeting of higher spending and longer staying tourists. Some of the strategies for the Seventh Plan include:

- diversification of product and services, including ecotourism, agro-tourism, and rural homestays;
- effective promotion and marketing;
- greater private sector investment and participation in innovative tourism products;
- increased involvement of local populations;
- improved access to and within the country;
- provision of infrastructure and amenities at designated sites; and
- enhanced skills training.

As in Indonesia, Malaysia's tourism products and services are still aimed at mass tourists. However, products and services for ecotourism are increasing, awareness of ecotourism principles and potential is increasing, and the government has emphasized ecotourism through development of the National Ecotourism Policy.

The national Ministry of Culture, Arts and Tourism (MOCAT) and the state governments are responsible for developing and promoting tourism generally. Natural areas are managed by a

variety of agencies, including the Wildlife and National Parks Department, Sabah Parks, and the National Parks and Wildlife Office of the Forest Department (Sarawak).

Though there have been annual variations, visitation levels at selected natural areas like Kinabalu Park, Taman Negara, and Telok Bahang Recreation Forest have generally shown increases, often substantial, during the 1975 to 1991 period (Mohd Nor and Wayakone n.d.). Visitation data for Taman Negara were presented in Section 3.3. Other parks receive much higher levels, with Kinabalu recording 301,924 visits and Sepilok Forest Reserve (known for its orangutan rehabilitation centre) recording 71,549 visitors in 1992 (actual visitation is thought to be even higher; Empau and Ayim 1994).

Mohd Nor and Wayakone (n.d.) estimate that 7% of all Malaysian visitors can be viewed as ecotourists, with a higher percentage in Sabah and Sarawak. They note that "tropical rainforests are the country's greatest ecotourism assets due to their unique and special biodiversity and the great concern of the world community of the disappearance of these forests." Many forests are easily accessible, with, for example, tourists able to visit the rainforests of the Forest Research Institute of Malaysia (FRIM) within an hour's drive of Kuala Lumpur. At FRIM, visitors are able to walk in the forest canopy along one of three canopy walkways in the country.

COUNTRY NOTE: NEPAL

Whilst the extent and causes of forest loss in Nepal may be debated, there is little argument that it is an ongoing issue. The conventional wisdom of deforestation in Nepal relates to the impact of subsistence families. The realization that a majority of households rely on biomass products led many observers to conclude that firewood consumption by subsistence farmers was the cause of rapid deforestation and desertification observed both in semi-arid and mountainous regions.

Critics have questioned the fundamental assumption that environmental degradation is caused by subsistence farming families. Three significant alternative causes of the environmental difficulties in Nepal often are overlooked: the geological characteristics of the region, illegal timber harvesting, and rapid modernization stimulated by the development process itself.

Recently, calls for the integration of indigenous knowledge into agroforestry projects have become more common. This is at least partially caused by the need to better target research, ethical concerns about participation and power, and the recognition that indigenous knowledge systems are a potentially important source of understanding as complement to scientific knowledge. Incorporating this knowledge into development may be achieved through farmer participation in research planning and implementation, external survey of local needs as a basis for planning, and an active synthesis of indigenous and scientific knowledge (Walker, Sinclair and Thapa 1995).

Stevens (1993) provides an important view on services of forests and forest management within Sherpa culture. In the past twenty years there has been increasing international concern about environmental change in the Sagarmartha (Everest) region, including that tourism and changing Sherpa lifestyles and land use have resulted in a deforestation crisis. These conclusions have enormous implications for local resource policy and for Sherpa life. Yet, according to Stevens, major deforestation has not taken place recently, and old deforestation has been mistaken for recent change. Therefore, the assumptions about the traditional Sherpa lifestyles and forest management have had to be revised.

In the Terai, issues are different. Land ownership patterns with resultant levels of landlessness and near landlessness (L/NL) continue to exert pressure on forests. Change may be occurring with the movement towards Department of National Parks and Wildlife incorporating buffer zone management strategies and assessing the potential for this as a mechanism for forest preservation through community forestry. However, the problems remain related to funding of forest initiatives (in particular the national park systems) coupled with in-migration and entrenched landlessness, so there are no easy solutions.

Since the 1950s, there has been a tremendous growth in mountaineering and trekking tourism in Nepal. In 1988, 266,000 foreign tourists arrived in Nepal, with Indians comprising the largest group (27%) (Parker 1993). While Indians visit for pilgrimages, luxury holidays, and buying sprees, non-Indians primarily visit for culture, sightseeing, natural history and a variety of sporting activities. Using the latter two categories to represent nature tourism, Parker (1993) reports that 77,539 nature tourists, 31% of all tourists, visited Nepal in 1987. However this figure probably underestimates the number of nature tourists.

In 1988, tourism was the country's leading foreign exchange earner, and about 11,000 people were directly employed in the tourism sector (Wells 1993). Wells estimates that US\$26.8 million in tourist expenditure (1988) is attributable to the country's protected area network. Fees are collected by various government agencies for activities such as trekking, rafting, and mountaineering, as well as for visiting national parks. However, for many years, the Annapurna Conservation Area fee was the only one specifically utilized for environmental and development purposes. Implementation of the 1993 amendment to Nepal's Wildlife Conservation Act, as described in Section 4.4, should lead to a greater distribution of ecotourism-related revenue toward community development.

The Annapurna Conservation Area Project (ACAP) represents a widely-cited innovative approach to community participation in natural resource management (e.g., Brandon 1996). Established in 1986, it was the first attempt to develop a central management plan to strike a balance between the needs of local people, tourism development, and nature conservation. The management of the area has been delegated to the King Mahendra Trust for Nature Conservation, a non-government organization. ACAP has encouraged local participation in natural resource management, in contrast to the top-down approach of regulations by outsiders, mainly the Nepal Army in Chitwan and Sagamartha.

Through the ACAP, local people benefit from fixed prices for food and lodging. ACAP also has introduced lodge management courses to improve service quality and energy-efficient applied technologies, such as backboiler water heaters. The area has been established as a multiple use area (hunting and collection of forest products are permitted) and involves delegation of management authority to the village level. The aim of the project has been to reduce the environmental impacts of visitation while simultaneously increasing the economic benefits from tourism.

A similar programme has been developed in Makalu-Barun. The priority is on increasing and diversifying incomes to reduce pressure on the core area. Activities include supporting ecotourism, promoting weaving and papermaking from indigenous natural resources, production and marketing of handicrafts, and improved agricultural production (Odell 1996). Handicraft and production activities are estimated to generate local revenues of some Rs. 500,000 to 1,000,000 (US\$10,000 to US\$20,000) or between Rs. 1,000 and 2,000 per family involved (approximately 10% of average per capita income). The trekking programme is estimated to generate approximately Rs. 4 to 5 million. While the national park collects a US\$12 fee from all entering trekkers, these visitors spend an average of US\$10 per day in the local communities for supplies, porters, lodging, food, and handicrafts.

Odell (1996) goes on to note that the programme has led to increasing local environment awareness and improved local management of community forests, grazing lands, and natural resource conservation. Resident support for conservation is illustrated by 1) the local arrest of a poacher who was turned in to authorities, 2) the confiscation and reporting by local people of illegally harvested lokta bark used in manufacture of handmade Nepali paper, and 3) a petition by communities formerly opposed to the establishment of the park to be included within the project area.

There are several governmental and non-governmental agencies involved in ecotourism in Nepal, including the Department of National Parks and Wildlife Conservation, Department of Forestry, Nepal Army, Trekking Agents Association of Nepal and the Department of Tourism.

In 1990 there were 82 registered trekking and mountaineering agencies (Parker 1993), yet a survey indicated that few were incorporating environmental awareness in to their programmes.

Problems identified by trekking agencies include the need for education of personnel in the tourist industry on environmental issues, fuel depots, litter control, medical assistance and demand for agricultural produce on major trekking routes. Congestion on main trekking routes is also perceived to be a problem especially in the three main areas of Annapurna, Sagamatha National Park, and Langtang National Park.

Tour guides are required to be licensed and registered with the Tourist Guide Association of Nepal. They are required to complete a nine week training course through the Department of Tourism, though this has been reported as inadequate (Parker 1993). There is a need for additional specialized training, such as naturalists and refresher courses (see Section 4.14).

The negative environmental impacts increase when the movement and behaviour of tourists are not well managed. This is especially problematic in Nepal with independent trekkers. There is considerable debate in the Nepal industry over the advantages and disadvantages of independent trekkers and group trekking. Some argue that groups are less damaging as they burn kerosene (though many do not provide it for their staff and porters) and have licensed guides. Groups have less cultural impact on the villages because they are self contained. However, many groups do not contribute to the local economy, as they bring their food supplies and porters from Kathmandu. In comparison, independent trekkers contribute to the local rural economy because they stay and eat in locally run lodges, but they are more difficult to manage and monitor than group trekkers.

Tour guides are the key to educating tourists regarding environmental and cultural impacts. There needs to be training of "environmental guides" who can accompany trekking groups and particularly those to environmentally fragile areas. Currently, many of the guides accompanying trekking groups originate from Kathmandu and have limited knowledge of the specific areas. The use of guides from the area where the trekking is undertaken can improve this deficiency and is particularly important in the newly opened trekking areas which have not yet experienced significant impacts from tourism.

COUNTRY NOTE: POHNPEI

As noted by Van't Slot (1996:1), "sustainable tourism development is even more critical in the Pacific islands than in the continental regions of the world because the impact of any development is greatly magnified on islands." He goes on to note that Pohnpei (located in the Federated States of Micronesia) is showing signs of impact from a spectrum of development threats. This impact is expected to increase as US development funds from the Compact of Free Association will expire in 2001, thereby putting greater economic pressure on natural resources.

The tourism industry in Pohnpei is small, but has increased in the 1990s as Micronesia has become more popular as a dive destination.⁶ Though tourism is seen as one option for replacing lost Compact funding, there is concern that most of the benefits from tourism in the region have gone to Kolonia Town, rather than local communities (Van't Slot 1996). Still, ecotourism is seen as an important option and is being pursued on various levels. The College of Micronesia has held ecotourism workshops and training programmes focused on interpretive guiding.

Pohnpei has fewer sandy beaches than other Pacific islands, so forest ecotourism offers an alternative to beach tourism (Dominica provides a parallel example in the Caribbean). However, as is true for some other Asia-Pacific destinations, the forests of Micronesian islands, such as Pohnpei, will rarely be the primary attraction for visitors, but have great potential to complement dive sites and other primary attractions (Wylie 1994).

Pacific islands must overcome distance from markets, difficulties of devoting sufficient marketing resources by small destinations (which illustrates the value of cooperative marketing on the regional level), and competition with existing regional and extra-regional attractions if they are to successfully develop ecotourism, or tourism generally. Thus, while several locations offer ecotourism potential, it is important not to become too optimistic (Wylie 1994; Valentine and Wylie 1993; Van't Slot 1995).

Agroforestry also has the potential to serve as a tourism attraction, as well as to serve as a means for generating local inputs for the restaurant sector (see Section 4.6). For example, visitor in Rota pay US\$35 (as of 1993) for a fruit-tasting agroforestry tour there (Valentine and Wylie 1993). In addition, there is potential to combine marine and forest resources, such as using sea kayaking tours that emphasize forest and cultural issues, including traditional construction of outrigger canoes.

⁶Though not a focus of this working paper, dive tourism in the region illustrates the importance of forests not just for forest ecotourism, but also for marine and other forms of tourism, as well as for non-tourism industries (e.g., Hodgson and Dixon 1988).

COUNTRY NOTE: THAILAND

According to Lohman (1993), forest cover in Thailand has declined rapidly since the 1950s, with particularly severe declines in the central and north-east regions. The causes of this decline include logging, development projects, and conversion to agriculture. State policy towards forests, commercial logging, and geopolitical threats have been suggested as underpinning this decline (Lohman 1993). However, pressures for new approaches to land and forest rights are continuing to grow. According to Lohman (1993), these are the result of grassroots attempts at changing the nature of forest management and use. Some of the most visible of these has been with the securing of local control over community forests.

There appears to be a strong need for systems of land management in Thailand to be more collaborative and bottom up, sensitive to the variety of local needs that forests serve. But this is not straightforward, as there are a variety of local levels, each with different needs and wants, and different levels of forest service reliance (Lohman 1993). The task is to provide a mechanism that continues the tradition of grass root activism.

Tourism Authority of Thailand (1997) statistics indicate 7 million international arrivals, the majority from East Asia, with 1995 total revenue of Bt190 billion (US\$7.7 billion). Tourism is the country's largest foreign exchange earner, and continued growth is expected despite concerns that tourism is marketed better than it is managed (Muqbil 1995). Chudintra (1993) conservatively estimates that approximately 20% of foreign visitors in 1990 participated in nature tourism activities, though this includes small-scale beach tourism. Most of the "nature tourists" are from the US, Europe, Australia and New Zealand, while tourists from East Asia and the Pacific tend to prefer city activities.

Perhaps Thailand's most famous ecotourism activity is jungle trekking in the northern mountainous area. Trips are led by a guide, often include rafting or elephant rides, and last three to five days on average (Chudintra 1993). Visits to national parks are also popular. National parks are managed by the Forestry Department, and Chudintra reports the following figures:

Year	Number of National Parks	Visitors (millions)
1986	58	4.4
1987	64	5.9
1988	69	6.8
1989	73	8.1
1990	85	9.5

As noted in Section 3.3, the domestic proportion of national park visitors has been increasing and stood at 85% in 1990 (most of these are students travelling in large groups during summer vacation or long holidays) (Chudintra 1993).

Chudintra (1993) notes that tourism has generated many positive impacts, including new jobs and stronger awareness of nature conservation. However, it has also generated negative impacts, including inflation (land and general goods) and changes in social values. For

example, younger generations in hilltribe areas have been influenced by tourism profits and have become more commercial and materialist-minded than prior generations.

The development of mass tourism within national parks has been a contentious issue in Thailand and exemplifies the difficulty of finding an appropriate balance between conservation and development. It is worth noting that an Institute of Ecotourism has been established at Srinakharinwirot University and that international ecotourism conferences have been held, with the second being in July 1996. That conference involved 150 delegates from 20 countries, as well as 80 Thai students.

List of Working Papers already released

APFSOS/WP/01	Regional Study - The South Pacific
APFSOS/WP/02	Pacific Rim Demand and Supply Situation, Trends and Prospects: Implications for Forest Products Trade in the Asia-Pacific Region
APFSOS/WP/03	The Implications of the GATT Uruguay Round and other Trade Arrangements for the Asia-Pacific Forest Products Trade
APFSOS/WP/04	Status, Trends and Future Scenarios for Forest Conservation including Protected Areas in the Asia-Pacific Region
APFSOS/WP/05	In-Depth Country Study - New Zealand
APFSOS/WP/06	In-Depth Country Study - Republic of Korea
APFSOS/WP/07	Country Report - Malaysia
APFSOS/WP/08	Country Report - Union of Myanmar
APFSOS/WP/09	Challenges and Opportunities: Policy options for the forestry sector in the Asia-Pacific Region
APFSOS/WP/10	Sources of Non-wood Fibre for Paper, Board and Panels Production: Status, Trends and Prospects for India
APFSOS/WP/11	Country Report - Pakistan
APFSOS/WP/12	Trends and Outlook for Forest Products Consumption, Production and Trade in the Asia-Pacific Region
APFSOS/WP/13	Country Report - Australia
APFSOS/WP/14	Country Report - China
APFSOS/WP/15	Country Report - Japan: Basic Plan on Forest Resources and Long-Term Perspective on Demand and Supply of Important Forestry Products
APFSOS/WP/16	Country Report - Sri Lanka
APFSOS/WP/17	Forest Resources and Roundwood Supply in the Asia Pacific Countries: Situation and Outlook to Year 2010
APFSOS/WP/18	Country Report - Cambodia
APFSOS/WP/19	Wood Materials from Non-Forest Areas
APFSOS/WP/20	Forest Industry Structure and the Evolution of Trade Flows in the Asia-Pacific Region - Scenarios to 2010
APFSOS/WP/21	Decentralization and Devolution of Forest Management in Asia and the Pacific
APFSOS/WP/22	Commentary on Forest Policy in the Asia-Pacific Region (A Review for Indonesia, Malaysia, New Zealand, Papua-New Guinea, Philippines, Thailand, And Western Samoa)
APFSOS/WP/23	Asia Pacific Forestry Sector Outlook: Focus On Coconut Wood
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