CI POLICY PAPERS

CONSERVATION INTERNATIONAL

The Green Host Effect

An Integrated Approach to Sustainable Tourism and Resort Development

James E. N. Sweeting
Aaron G. Bruner
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1999

MISSION STATEMENT

With the explosion of our planet's population and the radical conversion of natural lands for living space, farming land and waste disposal, the ecosystems that have traditionally supported human societies are severely stressed. Ultimately at risk are the air we breathe, the water we drink, the soils and seas that feed us, and the living creatures that give us fibers, medicines and countless other products.

Conservation International (CI) believes that the earth's natural heritage must be maintained if future generations are to thrive spiritually, culturally and economically. Our mission is to conserve the earth's living natural heritage, our global biodiversity, and to demonstrate that human societies are able to live harmoniously with nature.

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FOREWORD

Tourism development in the planet's richest ecosystems is expanding at an increasingly rapid rate. In the next decade, international tourist arrivals will increase to more than 1 billion per year, with much of this growth focused on destinations in the humid tropics, home to most of the world's biological diversity. This rapid expansion represents both a threat to fragile ecosystems and an opportunity for harnessing resources for conservation and community development. Conservation International (CI) has recognized that the most effective approach to ensuring the long-term survival of key natural areas is an integrated strategy of development and conservation that combines intelligent policy instruments, sound science and the use of innovative technology and practices with the establishment of protected areas and environmental education. Compared to other economic development options, tourism has many advantages. When planned and managed effectively, tourism development can have minimal negative impact on natural environments and can act as a catalyst for social development and biodiversity conservation.

CI has worked for more than a decade with governments, communities, NGOs and the private sector to create innovative methods for using tourism as a tool for biodiversity conservation, and to promote industry use of best practices and standards in critical ecosystems. Through this experience, we have seen the need for principles of sustainability, which have been widely used by ecotourism businesses, to be adopted throughout the tourism industry as a whole. Numerous tourism businesses are already incorporating environmental concerns into their strategic planning and operations, responding in part to increasingly environmentally conscious travelers. Ecological certification and systems of industry best practices and standards are being extensively promoted through pioneering industry initiatives, although the conservation of biodiversity is still not included in many of these programs. As part of CI's strategic approach to tourism for the next decade, it will be crucial to develop alliances between conservation organizations such as our own and tourism developers, to produce model ventures that combine sound business practices, equitable distribution of social benefits and biodiversity conservation.

This paper reviews both the effects of traditional tourism development models on critical ecosystems, and technologies and practices for minimizing the negative impacts of tourism while increasing its positive contributions to conservation and development. The document is intended to be used as a tool for the private sector and governments who will need to work together to ensure the sustainability of tourism developments. It is also meant to be a resource for communities, conservation organizations, development agencies and NGOs to be informed participants in the tourism development process. Finally, it is an invitation to all stakeholders to become "Green Hosts," by considering environmentally and socially responsible tourism development as a more appropriate development approach. We welcome your input and comments on this work and look forward to effective partnerships that will replicate the experiences and standards described here.

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EXECUTIVE SUMMARY

This document offers recommendations for responsible tourism and resort development in the tropics, to both minimize the industry's negative environmental and social impacts and increase the overall positive contribution of tourism to conservation and local well-being. It first reviews a series of management practices and technologies that developers can use to increase the environmental and social sustainability of their developments. The report then examines a series of planning and policy tools for governments to guide the development of tourism in their countries. Although these are principally public sector tools, their effective implementation will depend on the informed participation of the private sector, non-governmental organizations (NGOs), development agencies and local communities.

The paper is designed primarily to be a resource for private and public sector actors seeking to develop tourism responsibly. However, it will also prove useful to local groups, NGOs and other stakeholders who will be working with developers and governments to promote the conservation of the ecosystems and communities surrounding tourism developments. While this paper focuses primarily on coastal and terrestrial tourism in developing tropical areas, many of its recommendations will be useful in other situations and ecosystems. Furthermore, although we believe these recommendations offer a broad survey of current thinking and technology on the subject, each development and each ecosystem or community is unique. These recommendations therefore should be used only as a starting point to guide the development of any environmental and social practices and policies.

The State of the Tourism Industry

In just the last 50 years, international tourism has grown from an occasional pastime of the rich and adventurous to one of the world's largest industries, generating hundreds of billions of dollars and millions of jobs globally. Encouraged by lower costs, easier access, fewer restrictions and increasing wealth and leisure time, tourists are taking to the road, sea and sky in greater numbers than ever, and the industry is expected to grow rapidly in the next decades. In this section we offer an overview of current trends in the tourism industry and the evolving characteristics of tourism and tourists, both globally and within the tropics.

Although most of the industry has seen growth in the last few decades, nature-based tourism in the tropics is increasing much faster than the industry as a whole. This trend raises a serious potential threat to fragile tropical ecosystems. The reasons that many people visit these areas—unspoiled beaches, lush rainforests, rare wildlife and unique cultures—are the very reasons that it is globally important to ensure their continued conservation and health. From a conservation perspective, tourism can be a much more benign development alternative to large-scale logging or agricultural development, and has the potential to mobilize resources to actively conserve biodiversity. Therefore, it is vital that any resorts or other infrastructure are developed in a responsible manner, at a scale that is appropriate to the local ecological and cultural situation. In all cases, tourism development should not proceed in areas that are simply too environmentally or culturally sensitive to withstand development.

Private Sector Practices for Mitigating Negative Impacts and Increasing Positive Benefits

Development of resorts and other tourist facilities involves the construction of large-scale infrastructure, increased resource demands and an influx of new people, ideas and cultures. Without the proper precautions, these changes can have a serious impact on local environments and communities. Although many of these impacts are beyond the control of any individual developer, there is a great deal that the private sector can do to improve its overall effect on surrounding ecosystems and cultures. Creating responsible tourism developments requires a shift in thinking to include environmental and social parameters in all aspects of design, construction and operations. Understanding the long-term implications of resource use and management decisions will help to ensure that tourism development is compatible with long-term sustainability goals and can result in significant economic benefits for the developer.

In this section, we look at specific phases and aspects of tourism developments and offer recommendations for ways to minimize their negative effects and promote their positive contribution to conservation and community well-being. We have divided these aspects into two main areas: the impacts of infrastructure and facility development, including land-clearing, construction, design and landscaping choices; and the impacts of operations and tourist presence and activities, ranging from water and energy use, waste disposal and sewage treatment, to recreation, transportation and interaction with local people.

Promoting Responsible Tourism Development Through Participatory Land-use Planning

The serious potential negative impacts of tourism development can often be avoided or mitigated through comprehensive land-use planning at a national, regional and local level. Planning will be most effective in areas where the tourism industry is just beginning to evolve, but it is also a useful tool for more developed locations. While land-use and zoning decisions are ultimately the provenance of the government, in all cases decisions should take place in the context of a participatory process, involving all relevant stakeholders, from the private sector to local communities and NGOs. Broad participation allows a government to take advantage of an array of skills and knowledge, understand local desires and minimize future conflicts.

In this section, we present a three-step process for developing a national or regional tourism land-use plan. These steps include setting objectives for development and assigning roles; determining individual priority areas for tourism development, conservation and community well-being; and synthesizing priorities to form a final, comprehensive zoning plan. Once priorities have been set at a national or regional level, they can be used as the basis for more detailed planning on a local level.

Public Sector Policy Tools for Mitigating Negative Impacts and Increasing Positive Benefits

The success of any land-use plan will depend on the effective implementation by governments of appropriate policy tools and strategies to ensure that development is compatible with long-term environmental and social goals. Effective policy will depend on the capacity, training and resources of government sectors responsible for regulating tourism, and increasing this capacity should be a priority of any tourism policy strategy. Standards and guidelines should be formalized in specific legislation and then implemented through both traditional and innovative programs, including direct regulation, economic and financial tools that increase incentives for the private sector to improve its practices, and awareness-building among all stakeholders. A strong set of monitoring and enforcement tools will be the final piece of an effective tourism policy strategy.

In this section, we discuss the factors that are necessary for the development of national tourism policy, including increased public sector capacity and increased public education and awareness. We then survey a series of policy tools that governments can use to promote responsible tourism development. Next, we discuss ways in which governments can increase the positive contributions of their national tourism industries to conservation and community development, and conclude with a look at mechanisms to monitor and enforce policy strategies. While not every recommendation in this section will be appropriate or feasible in every destination, they offer a useful introduction to the various options from which governments can choose.

Recommendations

At the end of this document, we offer a compilation of the specific recommendations that are listed in each section. The following is a summary of the general principles that guide the specific recommendations. While some principles may seem more specific to a particular sector or location, they can all be used as general guidelines for the development of a responsible and appropriate tourism sector in any destination.

- *Develop national, regional and local land-use plans.* To ensure that tourism development is appropriate to local conditions and promotes long-term conservation and community welfare, governments should implement a national and regional planning process that designates zones for land-use based on tourism, environmental and social priorities. This process should include

the setting aside of areas that will not be developed at all. Land-use plans will be most successful if they are created in a participatory process, involving all relevant stakeholders, from the private sector to NGOs and local communities.

- *Conduct early and thorough environmental and social impact assessments.*
  Understanding the potential environmental and social impacts of a project before it is begun will help developers determine how best to mitigate these impacts. Such evaluations should be conducted by the private sector, in close cooperation with the public sector, as early as possible. In some cases, the project as it was originally conceived will pose too big a threat to local environments or communities and will need to be reworked or relocated. Early knowledge of such a situation can save considerable time and expense for a developer.

- *Ensure that development is appropriate to the specific location.*
  What might be a responsible and beneficial development in one location will be totally inappropriate in another. Thus, development decisions should be based on the specific characteristics of a particular destination, taking into account the relative sensitivity of the local environments and cultures, the degree of previous development, available natural resources and proximity to existing infrastructure and capacity. Preliminary assessments and land-use plans can help to determine the appropriateness of any planned developments.

- *Design an environmental and social strategy to guide operations.*
  Each development should create a set of environmental and social principles that will guide purchasing decisions, management practices and other operations. This strategy should be designed as early as possible to ensure that these principles are utilized in all phases of development. In many cases, it will be useful to formalize these principles in a written plan, spearheaded by a designated environmental manager or management team.

- *Promote education and awareness-building among all stakeholders.*
  The success of any environmental and social strategies or regulations will depend on a clear understanding of the reasons behind them. Both the public and private sectors should be involved in informing each other, as well as guests, staff, school children and local people, about environmental and social issues and their relation to tourism development. Increased awareness will translate into greater support for environmental and social strategies, fewer negative impacts and more positive interaction between the tourism community and local people.

Island of Coron, Palawan, the Philippines

Photo: Haroldo Castro

- *Use and dispose of resources in an efficient and responsible manner.*
  The resource demands of tourism development in a tropical environment are usually many times greater than that of the existing local communities. Increased resource needs can mean additional stress on the environment and greater damage from pollution and waste disposal. All resources, from water to energy, should be utilized in the most efficient way possible, minimizing use and promoting recycling and reuse. When it comes time to dispose of used resources, from solid waste to sewage, developments should use the most effective technologies to minimize their impact on their surroundings.

- *Minimize the negative impact of tourist activity on local ecosystems and cultures.*
  The presence of tourists can have a profound environmental and social impact on areas surrounding developments. Both private sector developers and government regulators should work to ensure that activities such as transportation and recreation do not cause extensive ecological damage and that tourist interaction with local communities has a positive and beneficial effect.

- *Identify ways to increase local benefit from tourism.*
  The people whose lives can be most impacted by tourism development—local communities—often see little benefit from this development. Responsible tourism development does not mean only minimizing adverse effects on local communities. Equally important, tourism offers an opportunity to increase the benefits that local people receive from development, from jobs and business opportunities to improved public infrastructure and greater access to health care, education and other services.

- *Increase public sector capacity to manage and regulate the tourism sector.*
  The success of government environmental and social strategies depends on the ability of government officials to effectively implement and enforce regulations. Resources should be dedicated to increasing this government capacity through education, training and coordination among and within different ministries. In some cases, multilateral development agencies may offer opportunities for funding and technical support.

- *Enact environmental and social legislation to guide development.*
  A responsible tourism strategy should be supported by national and local environmental and social regulations that formalize guidelines and goals into law. These laws should be supplemented by more specific tourism sector legislation. Formal monitoring and enforcement programs can help to ensure that regulations are effective and to suggest areas for improvement and change.

- *Utilize economic and financial tools to promote responsible tourism.*
  In addition to direct regulation of the tourism sector, the government should take advantage of economic and financial mechanisms that will help to ensure available funding for conservation, while at the same time providing financial incentives for the private sector to implement responsible development strategies. These tools can include performance bonds, trust funds, taxes, offsets and fees.

- *Cooperate with other sectors and stakeholders.*
  The two central actors in the development of a responsible tourism sector are the private sector and the government. Although they can often be at odds, it is important for the private and public sector to work closely together to create development plans and implement environmental and social strategies. In addition, these two sectors should work closely with other stakeholders, including NGOs, local communities and development agencies, to ensure that the knowledge and opinions of all parties are fairly represented.

CHAPTER 1
Introduction

In the last half century, international tourism has grown from an occasional pastime of the rich and adventurous to a central source of employment, foreign capital and cultural exchange for many countries around the world. However, the industry also brings large numbers of people, increased resource demand, land degradation, pollution and waste into some of the world's most biologically and culturally diverse areas, often causing adverse impacts on the environment and local communities. ■

As tourism has grown, so has awareness about the industry's potential to be both the cause of environmental and social damage, as well as a positive source of support and resources for conservation and community development. During the 1990s, there has been a wide range of initiatives by governments, academic institutions, international organizations and the private sector aimed at increasing the sustainability of the tourism industry. While the results of these efforts have been significant, tourism development continues to degrade natural areas and cause social disruption in many places throughout the world. Moving from ideals of sustainability to responsible practice will require a fundamental shift in the industry as a whole, in coordination with governments, local communities, international development agencies, non-governmental organizations (NGOs) and international tourism organizations.

Protecting the Earth's biological diversity and ensuring that communities in these areas have opportunities to develop and prosper is vital for the cultural, aesthetic and spiritual health of our societies. For tourism developers, the continued health of tropical forests and coastal areas is also good for business: a large portion of the industry depends directly on a healthy environment to provide a quality product. As one industry publication recognized, "…an unspoilt environment is the basis on which the industry is built … take away these qualities and the tourists will not come back."[1] Indeed, in many areas, this prediction has come true, as tourists have abandoned increasingly polluted and degraded areas for more pristine destinations. By contrast, those countries that can preserve and protect their natural resources will be able to achieve long-term success in their tourism sectors.

Although tourism as a major industry has the potential to cause environmental degradation and social disruption, it also represents one of the best opportunities to promote economic development without serious negative impacts. If tourism can be developed responsibly, with careful planning and design, it can provide a relatively non-destructive source of income and development, especially in comparison to other large industries, such as oil, mining, timber, agriculture or manufacturing. Appropriately-scaled tourism offers a tremendous opportunity to provide a less consumptive source of income from natural resources, improve local standards of living, foster cultural exchange and understanding, and promote biodiversity conservation.

While tourism is growing in all parts of the world, this paper focuses principally on tourism development in natural areas in the tropics. Nevertheless, most of its recommendations will be useful and relevant worldwide. Indeed, many of our examples are from non-tropical destinations.

Tourism in natural areas in the tropics is growing rapidly, much faster than the industry as a whole,[2] and the implications for poorly planned and implemented development are particularly high in these areas. In the tropics, the

natural environments that hold the most appeal to tourists—including beaches, coastal zones, islands, primary forests, savannahs and mountainous areas—are also some of the most environmentally significant and fragile ecosystems in the world. These ecosystems are home to a highly complex and rich diversity of species, many of which are found nowhere else on earth. For example, the planet's remaining tropical rain forests contain up to 70 percent of the earth's terrestrial biodiversity.[3] Coral reefs support the highest number of living organisms per area of any ecosystem in the world,[4] providing a home for more than one-quarter of all known marine fish species while occupying less than one quarter of one percent of the planet's total marine area.[5]

These ecosystems also have value to humanity beyond their inherent aesthetic worth. Many manufactured pharmaceuticals are originally derived from plants and animals found in terrestrial tropical ecosystems, and coral reefs are a growing source for medications to treat increasingly antibiotic-resistant bacterial infections.[6] Further, the health of these ecosystems is critical for maintaining climate stability, soil protection, flood control, water purification, carbon sequestration and air pollutant absorption.[7]

These areas are also home to people who depend on local resources and environments for their daily needs. Some changes, such as increased employment opportunities, greater access to public services and improved infrastructure, can be beneficial to local people. However, local communities can also face serious costs from improperly scaled and managed tourism development, costs that are rarely included in any accounting systems.[8] The expansion of tourist infrastructure and the introduction of strangers into relatively isolated areas can have an adverse impact on local resource supplies, disrupt community structures and lead to profound demographic changes. In some cases, tourism development has led to conflicts among local communities, developers, governments and tourists. Although social changes can be more difficult to measure than environmental changes, the environmental and social impacts of tourism development are often inextricably linked.

This document presents a review of current thinking on responsible tourism development in sensitive environments, bringing together a wide body of knowledge in a single resource for private tourism developers and governments responsible for destination management. While Chapter 3 is targeted more toward the private sector and Chapters 4 and 5 more toward the public sector, the ideas presented in each chapter will be relevant to both sectors, as they will need to work closely together to ensure that future tourism development proceeds in a responsible manner. The paper will also be a useful resource for local communities, NGOs, international development agencies and other stakeholders who are seeking to understand the environmental and social issues surrounding tourism development and who will be working with the private and public sectors in moving the industry toward a more sustainable future.

The ideas and recommendations presented in this paper should not be considered definitive, but rather a starting point to guide thinking about responsible tourism. Throughout the text, we refer the reader to additional sources for further, more detailed information about various specific topics. Many of the practices and tools recommended in this paper have already been used by a range of institutions, hotels or other groups involved in some aspect of tourism. Other practices have proven successful in other industries but have had limited application in the tourism sector. Although the tourism industry is made up of many components, our recommendations for the private sector center around hotels and resorts, addressing the other facilities and businesses through their links to hotels. Still, the ideas presented in this paper can also promote the increased use of good environmental and social practices throughout all parts of the tourism industry. We believe that if these practices and strategies are used properly, they have the potential to significantly reduce the adverse environmental and social impacts of tourism and dramatically increase the industry's contribution to both biodiversity conservation and community development.

Kingfisher Bay Resort & Village, Fraser Island, Queensland, Australia

Courtesy Kingfisher Bay Resort & Village

Our discussion begins in Chapter 2 with an outline of recent trends in tourism development worldwide and in the tropics in particular, as well as a look at the forms which tourism development can take, in order to better understand the past, present and future of the industry. In the following three chapters, we outline a series of recommendations for moving toward sustainability. In Chapter 3, we look at ways in which the private sector can work toward mitigating the negative impacts of its operations and increasing its positive contribution to conservation and community development in surrounding areas. In Chapter 4, we briefly discuss national, regional and site-specific planning tools that governments can use, in coordination with the private sector, local communities and other stakeholders, to determine appropriate levels and types of tourism development for a given area. Finally, in Chapter 5, we offer a survey of policy tools and strategies that the public sector can use to control the nature of tourism development and support the evolution of an environmentally and socially sustainable industry.

CHAPTER 2
The State of the Industry

This chapter examines trends in the development of tourism worldwide and in the tropics, to demonstrate the necessity of implementing significant changes in the way tourism develops in the future. Current and emerging trends show that tourism is growing rapidly in tropical regions that harbor some of the highest levels of biological and cultural diversity in the world. If the tourism industry can make fundamental changes in its planning and operation, it will be able to make a strong contribution to the conservation of these areas. If not, tourism will pose a serious threat to the integrity of some of the most critical tropical ecosystems in the world and the well-being of communities that live in and around them.

2.1 THE TOURISM BOOM

Large-scale international tourism is a young phenomenon. In 1950, there were 25 million international tourist arrivals worldwide.[1] In 1997, that number was nearly 25 times larger, with 613 million international tourist arrivals.[2] Excluding transport, these tourists generated US$448 billion in direct receipts.[3]

The World Tourism Organization (WTO) projects that by the year 2010, international tourist arrivals will have increased to 1.018 billion[4] - 71 percent more tourists than in 1996. In terms of direct receipts, world tourism is expected to expand fourfold in nominal terms from 1996 levels, to US$1.55 trillion by 2010.[5]

Furthermore, although statistics on domestic tourism are generally poor or unavailable in many developing countries, evidence suggests that domestic tourists greatly outnumber international tourists. More than three billion people now travel within their own country each year.[6] The total amount of economic activity generated by international and domestic tourism in 1998 is predicted to be US$4.4 trillion,[7] providing employment for 230 million people - about ten percent of the formal workforce worldwide.[8]

This rapid growth has been fueled by several trends. Over the last 50 years, increasing wealth and leisure time in countries around the world, combined with decreasing travel costs, airline industry expansion and fewer restrictions on travel, has made more destinations accessible to more people each year. As international tourism opportunities increased, people who had never before traveled became increasingly interested in the option and began to spend a significant portion of their growing wealth on travel.

At the same time, many developing countries began to actively pursue tourism as a means to create jobs, diversify their economies and earn foreign currency. To stimulate development, governments invested in infrastructure and advertising and provided various incentives to developers. In recent years, as the number of tourists has continued to grow, tourism has become increasingly attractive as a source of private profit and economic development. Many countries in the tropics now rely on tourism as a key source of economic development, and others are seeking to significantly increase the scale of their tourism industry.

2.2 CHARACTERISTICS OF TOURISTS

Not only are there many more tourists today, they are also significantly different from those of 50 or even ten years ago. Increasingly, they are older, better educated and better informed, and have traveled to or visited the same place before.[9] Women make up an increasing percentage of travel-

ers.[10] As a whole, tourists are more aware of the wide variety of experiences available, and are seeking more individualized trips, a wider range of activities and more "authentic" experiences, both environmentally and culturally.

For a huge portion of tourists, the focus of travel is the enjoyment of nature, such as beaches, coral reefs, rain forests and wildlife. This group is estimated to comprise 40 to 60 percent[11] of all international tourists and is increasing at a rate of between 10 percent and 30 percent annually, much more rapidly than the industry as a whole.[12] In the past, "sun, sea and sand" were overwhelmingly the most important features of a nature-based vacation. Nature tourists today are increasingly interested in visiting unspoiled and less-developed areas with a low tourist density,[13] such as rain forests and coral reefs.

Tourists today have a higher sense of environmental and social responsibility and a greater demand for tourism products that do not degrade the environment in which they are located.[14] A study in the Philippines found that 70 percent of tourists were willing to spend an average of US$50 more per trip to conserve the areas they visited.[15] In a range of other countries, tourists have also expressed willingness to spend additional money to ensure that their trips promote conservation of the areas they visit through the creation and management of protected areas. Further, travelers are choosing not to visit or revisit areas that have been degraded. A 1996 poll by Conde Nast Traveler magazine found that 91 percent of its readers were concerned about environmental conditions at a destination when making travel plans, and 25 percent had been forced to change travel plans because of environmental problems.[16]

Nonetheless, many tourism providers have the impression that tourists will not change their behavior based on environmental considerations.[17] This view may be costly in the long run, as current trends indicate that tourists are already changing their behavior and can be expected to continue to do so, especially in the form of choosing to not revisit an area, nor recommend a destination to friends and family. In Acapulco, Mexico, for instance, pollution became so severe at one point that visitation decreased markedly for 15 years before starting to recover.[18] Furthermore, although environmental damage is often not clearly visible and does not openly affect key tourist attractions in the short term, in the longer term impacts can accumulate and destroy basic tourism resources. Many destinations have only recognized the costs of environmental damage after significant and often irreversible damage has been done. Although a sense of stewardship and the desire for a more authentic experience among tourists by no means guarantee the protection of important tourism destinations, they provide a powerful incentive for the private sector, governments, NGOs, planners and local communities to ensure that tourism becomes sustainable.

2.3 TOURISM IN THE TROPICS

While the vast majority of tourists have traditionally gone to Europe and North America, there has been rapid growth in tourist arrivals in the tropics in the last two decades.[19]

East Asia/Pacific

Within the tropics, the fastest growth has been in the East Asia/Pacific region, where tourist arrivals increased at an average annual rate of more than 9 percent between 1980 and 1996.[20] This growth was catalyzed by increasing industrial power, which allowed a rapidly growing middle class to travel more frequently within the region. However, the

TABLE 2.1: GROWTH IN WORLD TOURISM

YEAR	INTERNATIONAL ARRIVALS AT THE END OF THE DECADE (millions)	AVERAGE ANNUAL GROWTH RATE OVER THE DECADE (%)	GROWTH IN ARRIVALS (millions)
1950-1959	69.3	10.6	44
1960-1969	165.8	8.7	90.4
1970-1979	287.5	6.1	128.2
1980-1989	458.3	4.7	167
1990-1999	702[1]	4.3[2]	243.7[1]

Source: World Tourism Organization, Global Tourism Forecasts to the Year 2000 and Beyond: The World (Madrid: World Tourism Organization, 1994).

1 World Tourism Organization, "What We Offer," WTO Website (1998), available at http://www.world-tourism.org/Offer.htm#Mision

2 Author's calculations based on World Tourism Organization, Yearbook of Tourism Statistics, vol. 1 (Madrid: World Tourism Organization, 1997); World Tourism Organization, "What We Offer," WTO Website (1998), available at http://www.world-tourism.org/Offer.htm#Mision; and World Tourism Organization, Tourism Highlights 1997 (Madrid: World Tourism Organization, 1998). Numbers for 1998, 1999 are estimated by averaging.

Box 2.1: The Process of Development of Tourism Destinations

Tourism broadly develops in two ways. Predominantly, tourism has developed *evolutionarily*,[1] as tourists "discover" a location and it evolves according to their demands, developers' capacities and government support. Alternatively, in some areas, tourism has been developed *intentionally*, as governments and developers plan the form they wish tourism in a region to take.

Both paths to development have the potential to create a relatively sustainable form of tourism if stakeholders are actively interested in environmental stewardship and respect local interests.[2] However, both can also lead to serious negative impacts, especially where involved parties do not recognize the need to incorporate environmental and social concerns into development early in the process and ensure that measures to address impacts keep pace with development.

Although the process of evolution varies, it is possible to identify common characteristics in the evolution of destinations.[3] In such destinations, initially a small number of travelers visit, making their own travel and lodging arrangements and relying on local residents and existing community facilities for their needs. Social interaction is usually positive, some local people benefit economically, and environmental impacts are minimal. As visitation becomes more constant, some residents begin to provide services primarily or exclusively for visitors. This often leads to the first advertising attempts, and to pressures on governments and public agencies to provide or improve infrastructure.

As visitation increases and a tourism destination becomes increasingly well-defined, developers and governments become involved, often spurring rapid growth. In the past, this growth has often resulted in negative environmental and social impacts from irresponsible resource use, waste disposal, land clearing, and a reduction in local control, as planning and investment focus primarily on growth without regard for negative impacts or sustainability issues.[4] As development continues, where social and environmental policies have been inadequate, problems in the form of conflicts with local residents and environmental degradation become increasingly visible and significant, in many cases negatively affecting the quality of the tourism product.

Although intentional planning of tourism development in destinations gives more explicit control over land use, types of facilities developed and tourism impacts, this form of growth has also led to significant environmental and social impacts. Many planners have focused on growth at all costs to maximize short term financial gain, in many cases simply facilitating faster development and the expansion of inappropriate levels of tourism development to remote areas.

Today, many governments and developers have recognized the need to shift their focus toward the long-term success of the industry; both have been involved in a range of efforts to include environmental and social considerations in the development of areas from the start. For example, tourism ministers and senior officials from 25 nations in the East Asia/Pacific region signed the Male' Declaration in February 1997, recognizing environmental and social issues as a top priority for tourism development.[5]

Evolution of Tourism in Pattaya, Thailand

About 30 years ago, Pattaya was a fishing village. During the Vietnam War, it became a popular destination for off-duty American soldiers, and local people developed services, such as bars and prostitution to cater to soldiers' demands. As visitation increased, development increased in response, and Pattaya soon became a major tourist destination. Until recently, there were no attempts to control development, and the unchecked tourism evolution throughout the 1980s resulted in environmental ruin and a host of social problems.

In 1990, not one of the 22,000 hotel rooms along the beach in Pattaya was attached to a sewage plant,[6] and the sea along the coast was coated with a film of raw sewage.[7] Recent efforts to control pollution have made progress, although there is still significant discharge of raw sewage: in 1996, 60 percent of city sewage was processed.[8] A pervasive sex trade has developed in the area, ranging from massage parlors to widespread child prostitution. Other crime is also common.[9] Recent efforts to control this crime have met with little success: in the period between May 1996 and 1997, 45 foreign visitors died in unexplained circumstances.[10]

The city that has developed alongside the coast now has golf courses, bowling alleys, fast-food chains and

shopping malls.[11] The further increase in tourism to the city has resulted in traffic jams and air pollution; police officers directing traffic wear masks to avoid breathing polluted air.[12] To control these problems, the government has invested in massive planning and cleanup efforts.[13]

Planned Tourism Development along the Mexican Coast

In the 1970s, before Mexico's Fondo Nacional de Turismo (FONATUR) decided to plan and develop a megaresort in the area, 12 families lived on the 14-mile long island of Cancun. The entire area that now comprises the state of Quintana Roo was made up of relatively untouched rain forests and coastal ecosystems, and was inhabited by an indigenous Maya population of about 45,000.[14] Today, Cancun alone receives more than 2.6 million visitors a year and has more than 20,000 hotel rooms,[15] with a permanent population of more than 300,000.[16]

Intensive and uncontrolled development in Cancun, Mexico, has led to extensive environmental damage.

Courtesy EDSA slide library

Cancun has miles of high rises, golf courses and shopping malls full of American eateries and brand-name outlets. Tourists there spend more than US$1.7 billion annually. The economic success of Cancun has spearheaded tourism development along the Mexican coast all the way to the border with Belize, opening up many formerly pristine areas to development.

Although environmental and social impacts were considered in the development plan for Cancun, they were given secondary importance. No provision was made for low-income developments to house migrants who now work and live in the area.[17] As a result, a shanty town developed, in which the sewage of 75 percent of the population is untreated.[18] Much of the environment around Cancun has been destroyed. Mangrove and inland forests have been cut down, swamps and lagoons have been filled, and dunes have been removed[19] to make way for development. Due to extensive habitat loss and pollution, many bird, marine and animal species have vanished. The reef at Punta Nizuc is predicted to be completely lifeless in another five years,[20] and the massive Cancun landfill is growing by 450 tons of garbage per day.[21]

The Government of Mexico recently declared the area saturated, adding further fuel to the development boom in other areas along the coast. Tourism in Playa del Carmen, one hour to the south of Cancun by four lane highway, has been growing at an annual rate of 30 percent, and development pressure is encroaching on the nearby Sian Ka'an Biosphere Reserve. Despite local regulations and a 1994 zoning law significantly restricting development along the Cancun-Tulum corridor,[22] critically important coastal habitats for a variety of birds, fish, turtles and other wildlife have already been developed, and more are slated for development.

1. R.W. Butler, "The Concept of a Tourist Area Cycle of Evolution: Implications for Management of Resources," *Canadian Geographer* 24, no. 1 (1980): 5-12.

2. Oliver Hillel, Director, Ecotourism Program, Conservation International, interview with author, Washington, DC, Summer 1998.

3. Adapted from Butler, "The Concept of a Tourist Area Cycle of Evolution: Implications for Management of Resources," 5-12.

4. Klaus J. Meyer-Arendt, "Geomorphic Impacts of Resort Evolution Along the Gulf of Mexico Coast: Applicability of Resort Cycle Models," in P.P. Wong, ed., *Tourism vs. Environment: The Case for Coastal Areas* (Netherlands: Kluwer Academic Publishers, 1993), 125.

5. World Tourism Organization, *Tourism2000: Building a Sustainable Future for Asia-Pacific*, final report from Asia Pacific Ministers' Conference on Tourism and Environment (Madrid: World Tourism Organization, 1997).

6. Paul M. Scherer, "Entrepreneur Bets Blue-Light Shopping Can Rehab Red-Light Thai Resort Town," *Wall Street Journal*, 15 May 1995, A17A.

7. "Thailand's Tourist Industry: Beached," *The Economist*, 6 July 1991, 72.

8. Scherer, "Entrepreneur Bets Blue-Light Shopping Can Rehab Red-Light Thai Resort Town."

9. "The Island that Became Too Popular," *The Economist*, 19 July 1997, 36.

10. Ibid.

11. Scherer, "Entrepreneur Bets Blue-Light Shopping Can Rehab Red-Light Thai Resort Town."

12. Seth Mydans, "Thailand Restoring Pattaya Beach Resort," *New York Times*, 8 December 1996, 5, 3.

13. Gerard Dionicio Gonzales, *The Quest for Sustainability: A Review of Two Integrated Beach Resorts in Southeast Asia* (Singapore: Nanyang Technological University, 1996), 35.

14. Natasha Kate Ward, "Ecotourism: Reality or Rhetoric: Ecotourism Development in the State of Quintana Roo, Mexico," *Ecotravels in Latin America Website*, 1997, available at: http://www2.planeta.com/mader/ecotravel/mexico/yucatan/ward/ward.html

15. Luisa Esquiroz Arellano, "More than Just Great Diving," *Travel Agent Cancun-Cozumel*, Supplement, 6 October 1997, 2.

16. Amanda Austin, "Cancun Leads Mexican Tourism," *Hotel and Motel Management* 212, no. 1 (1996): 8.

17. F. Bosselman, *In the Wake of the Tourist: Managing Special Places in Eight Countries* (Washington, DC: The Conservation Foundation, 1978).

18. Blanche Petrich, "The Governor of Quintana Roo's Curtain of Smoke Around the Sale of the Mayan Riviera," *La Jornada*, 24 April 1998, available at: http://www.turtledisaster.org

19. Ward, "Ecotourism: Reality or Rhetoric: Ecotourism Development in the State of Quintana Roo, Mexico."

20. Ibid.

21. William Stolzenburg, "Cancun Conundrum," *Nature Conservancy Magazine* (November/December 1997), available at http://www.tnc.org/news/magazine/novdec97/feature/cancun.html; Michelle Chi Chase, "Tour de Force," Business Mexico 8, no. 5 (1998): 24.

22. Ward, "Ecotourism: Reality or Rhetoric: Ecotourism Development in the State of Quintana Roo, Mexico."

experience of East Asia/Pacific also illustrates the dependency of tourism growth on a number of factors, including political and financial stability, ease of access and natural disasters. The recent financial crisis in Asia caused the annual tourism growth rate to plummet to 1.1 percent between 1996 and 1997.[21] Malaysia offers a specific example of the sensitivity of tourism to economic and environmental conditions. While tourist arrivals increased 350 percent between 1985 and 1995, the financial crisis and smog from forest fires led to a decrease in arrivals of 8.7 percent per year between 1995 and 1997.[22]

In contrast to many of its Southeast Asian neighbors, the Philippines saw tourism decline steadily throughout the early 1980s, mainly as a result of political turmoil. Between 1992 and 1997, however, tourism grew at a rapid pace, averaging increases of 15.9 percent annually.[23] Currently, the Philippines is poised for further tourism expansion in the province of Palawan, considered to be the country's last natural frontier. It has been proposed that large-scale tourism development can provide alternative sources of income and employment for a population which is rapidly destroying the area's natural resources. Plans include significant investment in the planning and management of the social and environmental impacts of future tourism development.[24]

Latin America

Tourism to the Latin American region has grown rapidly in the past decade, a result of increased political stability and safety, reduced flight costs due to deregulation, and a wider variety of airlines servicing many more destinations. Central America has been at the forefront of the development of alternative types of tourism, such as adventure travel and ecotourism. Costa Rica has established itself as a world-class nature tourism destination, gaining impressive economic and environmental benefits from tourism. Between 1985 and 1995, annual receipts from international tourism grew at an average rate of 18.8 percent,[25] making the tourism sector the country's largest earner of foreign exchange, surpassing traditional exports such as coffee and bananas.[26] In addition, by creating an incentive to preserve natural areas as resources for tourism, the country has been able to protect significant wilderness areas, despite a national deforestation rate that is among the highest in the world.[27]

In Peru, terrorism in the early 1990s caused arrivals to drop by 26.8 percent between 1990 and 1991 alone.[28] Recently, with the reduction of guerrilla activity and increased stability, tourism has experienced a period of rapid growth, increasing by an average of 26.5 percent annually between 1993 and 1997.[29] In response, the Government of the Inka Region, the most significant tourism area in Peru, has developed the Inka Region Ecotourism Strategy to manage tourism development to benefit the area financially and, at the same time, protect the region's high levels of biodiversity.

Table 2.2: Growth in Tourist Arrivals in Tropical Regions

Region	Av. annual growth 1980-1995 (%)	Arrivals in 1980 (millions)	Arrivals in 1995 (millions)
Micronesia	11.1	0.4	2.1
Australasia	9.2	1.4	5.1
Southeast Asia	8.7	8.3	29.1
Africa	6.6	7.3	19.2
South America	5.8	5.8	13.5
Caribbean	4.9	6.8	13.9
South Asia	4.3	2.3	4.3
Polynesia	3.9	0.2	0.4
Central America	3.8	1.5	2.6
Melanesia	2.8	0.3	0.5

Source: World Tourism Organization, Yearbook of Tourism Statistics, vol. 1 (Madrid: World Tourism Organization, 1997), 5.

Africa

Although Africa is, in general, the least-developed continent, it has tremendous ecological, cultural and historical resources for tourism. Better access and increased political stability and safety in many countries have contributed to significant growth in tourism to the region in the last two decades. Between 1980 and 1995, Africa was the second-fastest growing tourism region in the world, with annual tourist arrivals nearly tripling from 7 million to more than 19 million.[30]

Since the dismantling of South Africa's apartheid regime in the early 1990s, tourism has increased rapidly in the country, as foreign visitors, who were once put off by its political system, take advantage of South Africa's wildlife parks, beaches and other tourist attractions. Between 1989 and 1995, tourist arrivals to South Africa increased by nearly 500 percent, from less than a million to 4.5 million.[31] In late 1998, the South African Ministry of Environmental Affairs and Tourism announced a partnership with the private sector to co-finance and co-manage a broad effort to improve tourism facilities, with improved infrastructure, sustainable ecotourism projects, new tourism routes and projects to increase the benefits of tourism in local communities.[32]

Emerging destinations

During the 1990s, some tropical countries that have not been traditional tourism destinations have witnessed extraordinary growth rates. For example, tourism to Cambodia grew at an average annual rate of 81.5 percent in the first half of the decade. Tourism to Nicaragua grew at an average rate of 21.8 percent annually during the same period,[33] though more recently the effects of Hurricane Mitch have halted tourism growth.

While these increases have occurred in countries with relatively low base volumes of tourism, they do suggest the potential for rapid development of new tourism destinations in the future. These countries have a unique opportunity to plan and develop tourism as a key contributor to economic growth and conservation, based on acceptable levels of tourism and impacts for each area. If they fail to do so, they run the risk of allowing rapid tourism expansion to degrade their natural resources without creating a long-term source of economic development.

Table 2.3: Tourist Arrivals in Select Tropical Countries with High Levels of Biodiversity and Tourism

Country	Av. Annual Growth 1980-1995 (%)	Tourist Arrivals 1980 (millions)	Tourist Arrivals 1995 (millions)
Australia	9.9	0.9	3.7
Brazil	3.0	1.3	2.0
Indonesia	15.0	0 .5	4.3
Malaysia	8.8	2.2	7.5
Mexico	3.6	11.9	20.1
Philippines	3.8	1.0	1.8
South Africa	13.2	0.7	4.5
Thailand	9.2	1.9	7.0

Source: World Tourism Organization, Yearbook of Tourism Statistics, vol. 1 (Madrid: World Tourism Organization, 1997).

CHAPTER 3

Private Sector Practices for Mitigating Adverse Impacts and Increasing Environmental, Social and Economic Benefits

The development of tourism, as with any large industry, involves the creation of large-scale infrastructure and a significant influx of people with new cultures, ideas and resource demands. While these changes can bring important benefits, if developers and governments do not actively attempt to understand and address potential impacts, tourism can have widespread negative environmental and social consequences. This is particularly true in many tropical areas, where complex and fragile ecosystems and newly developing local economies are especially susceptible to degradation and disruption. ■

As awareness of the potential impacts of tourism development has increased in the last decade, there has been a growing movement within the private sector to improve its practices. However, in many cases, this effort has not been sufficient to curb severe negative impacts, instead largely focusing only on options that are profitable in the short term. Two broad changes are necessary to improve the environmental and social performance of the tourism industry to a point where it can be considered sustainable in the long term. First, individual developments need to focus on long-term strategies for mitigating the negative environmental and social impacts of their activities, based on improvements in siting choices and design, efficient use of resources, and the involvement of local communities. Second, the concept of good practices must be expanded beyond impact mitigation to include positive and proactive contributions to the well-being of surrounding communities and local biodiversity conservation efforts.

In this chapter, we examine a broad range of potential environmental and social impacts of tourism development, focusing particularly on individual hotels and resort developments and the steps they can take to minimize their negative impacts and increase their positive contribution to the surrounding environment and cultures. Although complete solutions to many of the problems are beyond the scope of individual developers, they can make a significant contribution toward improving the overall effects of tourism on conservation and community development efforts. While the recommendations detailed in this chapter will mainly be implemented by private developers, it is equally important for policy-makers, local communities and NGOs to be aware of the range of options available to the private sector for improving its performance. This awareness will help these groups with regulation and enforcement, as well as in becoming better informed participants in the development process.

Many of the specific issues discussed here have been covered in greater detail by a range of organizations and publications. Our purpose in covering these issues is to introduce them as a necessary part of a responsible tourism strategy and provide practical information. Where possible, we provide references for further sources of information that cover the material in more depth.

We have divided the potential impacts of tourism, and our recommendations for addressing them, into two stages: the impacts of infrastructure and facility development as a destination prepares for the arrival of large numbers of visitors, and the impacts of operations and tourist presence and activities once visitors arrive. Because of the strong connection between environmental and social impacts, and because techniques aimed at one type of impact will often also address the other, we discuss them both in this chapter.

3.1 THE IMPORTANCE OF GOOD ENVIRONMENTAL AND SOCIAL PRACTICES

- **Good environmental and social practices will conserve biodiversity, maintain the quality of tourism resources and contribute to financial success.**

While governments are ultimately responsible for broad land-use planning decisions and national development strategies, the practices of individual developments also play a decisive role in whether tourism develops responsibly in a region. Implementing good environmental and social practices will help to maintain the quality of a development's surroundings, improving the overall experience for guests. Responsible practices can also increase local support for development, both from neighboring communities and from governments that wish to see their national tourism sectors grow in a responsible manner. Furthermore, if the tourism industry fails to protect its environmental and cultural surroundings, it will be destroying the very attractions upon which it depends directly for success. Without clean air, water and beaches, and healthy marine and terrestrial ecosystems, a huge portion of the tropics will lose its attraction to tourists.

Implementing good environmental and social practices can also directly benefit a resort's financial bottom line, for instance by reducing energy, water and disposal costs and minimizing conflicts with local communities. Good practices can also be a beneficial marketing tool; by including information about environmental and social initiatives in promotional materials, advertising and educational displays, a site can enhance its reputation among the growing market of environmentally and socially conscious consumers.[1] As one hotel executive noted about some of the chain's European guests, "They expect us to be making improvements."[2] Good practices may also be an interesting "hook" for stories in newspapers, magazines and travel publications,[3] and may help a resort attract and keep dedicated and motivated staff.[4]

Increasingly, managers need to look not just at the benefits of implementing good environmental and social practices, but also at the costs of *not* implementing them. In many areas, the trend in national and regional legislation is toward requiring stricter environmental compliance. Anticipating legislative changes during design or renovation of a resort can save the costs of paying fines or retrofitting facilities later on.[5] Conservation efforts such as hazardous waste management and water treatment will also mean a safer workplace and common spaces, which can lead to lower staff turnover, less lost work time due to injury or illness, and lower liability risks.[6] Furthermore, publicity about poor environmental practices may damage a resort's reputation and lead to loss of business.[7]

3.1.1. Environmental and social impact assessment

- **Early impact assessment can minimize damage and conflict and reduce costs, by including environmental and social considerations in development decisions.**

For new developments or major expansions, the most important tool for understanding potential environmental and social impacts is the environmental impact assessment (EIA). If the recommendations of the EIA are followed, it can be a critical tool for ensuring that developments and practices will be suitable to local conditions.[8] This can result in significant benefits for all parties, promoting long-term success by allowing developers to make decisions that respect and take advantage of local environmental and social conditions. In some cases, early recognition of potential impacts will mean that a project may have to be abandoned or significantly redesigned to avoid potentially disastrous impacts.

EIAs are now required for major development projects, including resorts, in most developed countries and in an increasing number of developing countries.[9] Although in many places EIAs are conducted by the public sector, in many developing countries, the reality is that governments often lack the capacity and resources to perform comprehensive impact assessments and it is often up to the private sector to guarantee that they are completed. Thus, we have included EIAs in this chapter to emphasize their critical role

FOR MORE INFORMATION

SELECT ORGANIZATIONS

European Golf Association Ecology Unit
http://www.golfecology.com/

International Hotels Environment Initiative
http://www.ihei.org

The Ecotourism Society
http://www.ecotourism.org

Tourism Concern
http://www.gn.apc.org/tourismconcern/

TwinShare: Tourism Accommodation and the Environment
http://www.tourism.gov.au/accommdir

World Tourism Organization
http://www.world-tourism.org

World Travel and Tourism Council/ECoNETT/GREEN GLOBE
http://www.wttc.org

for the private sector in anticipating and mitigating impacts and promoting long-term financial success.

In addition to environmental factors, impact assessments should also include an analysis of potential social impacts and mitigation options, either as part of the EIA, or in a separate social impact assessment (SIA), conducted simultaneously with the EIA.[10] Anticipating and addressing potential social impacts in surrounding communities is as important to the continued success of a resort development as an understanding of environmental threats.

An EIA should be started before any specific plans for siting, design and practices are completed. This will give developers an opportunity to use the results of the assessment process to build environmental considerations into siting and design plans from the early stages, before much money or time has been invested.[11] The first step in conducting an EIA is to appoint a team that has the expertise to investigate and evaluate potential impacts, and is acceptable to developers, government officials and community stakeholders. Team members might include biological, ecological and cultural experts, pollution experts, engineers, tourism professionals, policy-makers and representatives of affected or interested groups.[12]

The team should first identify all of the potential impacts by a review of current development plans, an examination of the impacts of similar developments, discussions with local stakeholders and experts and site visits.[13] Actual assessment should cover the most significant of these potential impacts. In order for the EIA to be as beneficial as possible, it should:

- provide an assessment of the baseline environmental and social conditions of the area;
- describe the proposed project and how it fits into official tourism plans;
- assess the type, extent and duration of potential negative and positive impacts and their significance;
- suggest potential mitigation and management alternatives; and
- describe which of these alternatives will be used.

If no baseline data exists, the EIA can also be used to inventory and describe the local environment and communities.[14]

The EIA team should present the results of the assessment in as non-technical a form as possible, in order to increase its usefulness to decision-makers and other stakeholders. In describing impacts, the team should strive to be comprehensive, including primary, secondary and tertiary impacts in terms of geographic extent, quantity and duration.[15] Significant secondary impacts, such as the indirect effects of large numbers of people and off-site impacts, for instance on ecosystems and communities downstream, are often not included in impact analysis.[16]

Conducting a thorough EIA is not enough; the study's recommendations must be followed. Before development on the island of Pulau Redang, Malaysia, a thorough EIA was conducted, predicting that a major resort development would result in the depletion of fresh water supplies, slope erosion and the destruction of the surrounding coral reef. Although the EIA recommended significantly limiting development and placing restrictions on building in steep areas, these recommendations were ignored and major resorts were developed, not surprisingly causing the predicted impacts. Fresh water resources on the island have been overused, resulting in salt water intrusion and contamination and forcing the government to propose an expensive water pipeline from the mainland to meet tourists' needs. Furthermore, slope erosion has destroyed terrestrial ecosystems and choked the surrounding reef, resulting in significant species loss, the clouding of previously clear waters and a decline in the quality of the tourism product.[17]

Steps toward effective environmental and social impact assessment:

- ✓ Hold discussions with local stakeholders and experts and ensure that they get an opportunity to review the results.
- ✓ Determine potential primary, secondary and tertiary impacts and their significance.
- ✓ List possible mitigation and management alternatives, and describe which ones will be used.
- ✓ Ensure that the EIA's recommendations are followed closely.

3.2 IMPROVING INFRASTRUCTURE AND FACILITY DEVELOPMENT

It is important to begin to implement environmental and social practices from the very beginning of project development and design. Before a single tourist ever arrives at a destination, tourism development has the potential to impact local environments and cultures during the construction and design of infrastructure and other facilities to support the industry. Hotels, golf courses, restaurants, shopping centers and transportation require a significant amount of land and resources for construction, often leading to large-scale land-clearing and degradation. Choices made about siting, architecture, landscaping and building materials in the design phase will play a large part in determining whether a development harms or complements an area. In this section we discuss some of the potential impacts of large-scale infrastructure and facility development and offer suggestions for dealing with these impacts.

3.2.1 Potential negative impacts of land-use practices

When tourist destinations are relatively undeveloped, the few adventurous travelers who visit are often willing to use existing accommodation and transportation facilities. However, as a destination develops, planners and developers build or improve airports, roads, seaports, hotels and facilities to increase the speed, ease, comfort and attractiveness of

travel and attract larger numbers of mainstream tourists. Infrastructure and facilities usually require the conversion of large expanses of land. For example, airport facilities, especially if they wish to accept large, international aircraft, require significant amounts of land for refueling, parking, connection facilities and runways. In the Caribbean, islands accepting international jets are required to have a minimum runway length of 10,000 feet (3,048 meters).[18]

3.2.1.1 Potential negative impacts on inland areas

- **Clearing inland areas for tourism facilities and roads can lead to serious environmental degradation and can catalyze further damage by facilitating migration into previously inaccessible areas.**

In sensitive areas such as tropical forests, partial or total clearing of vegetation often upsets the complex natural processes which sustain these ecosystems, leading to serious problems in both cleared and surrounding areas. Removal of vegetation, particularly on slopes, can result in flooding, erosion, landslides, loss of soil fertility, lowering of water tables and siltation of rivers, lakes and other productive areas.[19] These impacts are exacerbated by the periods of heavy rain that are common in the tropics, especially in areas where cleared land is left exposed during construction or use. Deforestation also removes significant areas from use as wildlife habitat, disrupting migration, breeding and feeding habits.

Dirt paths through forests, to beaches and places of cultural and historical significance can lead to erosion, especially if they are built on slopes and subject to rain or high levels of tourist traffic. Larger roads may divide habitats, shrinking the range of wildlife populations. This can result in a lack of access to resources for wildlife and, in some cases, the division of populations into sub-populations that are too small to remain viable.

Roads into relatively undeveloped areas can also catalyze environmental damage by providing access for migrants to previously unreachable areas, increasing the population of an area and leading to a rapid increase in demand for and exploitation of natural resources. Migrants may clear land along roads and paths for agriculture and cattle-ranching, slashing and burning vegetation as they go. Non-native animal species introduced by migrants can also upset the balance of delicate tropical ecosystems. In the Galapagos Islands, Ecuador, for example, animals such as rodents, cats, goats and pigs brought by migrants now pose a serious threat to native species which, having evolved in the absence of terrestrial predators, are now easy prey.[20]

In Palawan, Philippines, roads that were constructed initially for logging operations are now being used for tourism access. These roads, combined with land-clearing, have led to significant erosion that has reduced the water level in rivers, contributing to dwindling fish stocks because breeding grounds have been reduced. The roads have also brought greater access to previously isolated areas, leading to significant migration of people coming to Palawan to take advantage of natural resources. One local described the situation by saying, "Most of these people you see in Palawan are not natives. They come from Visaya and Luzon."[21]

Clearing mangrove forest for development.

Courtesy U.S. Fish and Wildlife Service

3.2.1.2 Potential impacts on coastal areas

- **Inappropriate land-use can damage coastal ecosystems, leading to the destruction of key tourism attractions.**

Because of the central nature of the beach as a tourist attraction, the majority of tropical tourism developments on all continents are built on or near the coast. Coastal ecosystems contain critical nesting, breeding and feeding habitats for reef, coastal and pelagic marine species of birds, fish, shellfish and mammals.[22] In the Caribbean, for example, the majority of tourism facilities are located within 800 meters of the high water mark,[23] and most tourist activity takes place in the area between the back bays and fronting reefs.[24] Two-thirds of identified environmental impacts in the Caribbean also occur in this same area.[25]

In coastal areas throughout the tropics, dunes, mangrove swamps, wetlands and other vegetation have been removed to provide land for tourist developments, reduce insect breeding, provide better views of the beach and sunsets, and increase access to beaches.[26] In the majority of coastal resort areas in Phuket, Thailand, for instance, nearly all of the backshore vegetation has been cleared. The removal of backshore vegetation in coastal areas reduces sediment stability, causing serious coastal erosion and the smothering of offshore reefs, which can, in turn, kill organisms that depend on the reef.[27] As with terrestrial impacts, heavy seasonal rains in most tropical resort regions often exacerbate these problems.

The filling of wetlands and salt ponds reduces water circulation and the flow of nutrients to coastal areas, which can create stagnant water and increase problems associated with sewage disposal, especially if sewage is not properly treated.[28] Dredging to create harbors and channels for deeper and faster boats for tourists can destroy coastal ecosystems, and the dredged mud can smother sea grass or corals. Channels cut through coral reefs lead to direct destruction of the reef and can disrupt coastal processes, causing erosion and damage to surrounding ecosystems.[29]

In many cases, an emphasis on building close to and altering the coast has led developers, governments and residents to construct shoreline protection measures such as seawalls, groynes, moles and bulkheads, to prevent natural and artificially enhanced erosion and coastline changes. While these engineering solutions may be successful in the short run, in the long term they often cause new environmental problems by altering coastal processes such as sediment flow.[30] Problems include accelerated erosion, siltation or clarification of waters, and flooding. In Nigeria, moles built to stop the silting of an access channel to the country's largest harbor are the principle cause of annual erosion rates of 25 and 30 meters at Victoria Beach.[31]

Even "soft" engineering methods, such as beach nourishment and replanting vegetation can cause problems if they are not based on the natural functioning of the system. While the introduction of vegetation on shifting dunes is highly effective in holding sand in place, it can disrupt the natural flow of sand to the downwind side of the dunes.

Box 3.1: Coastal Ecosystems

Coastal ecosystems are shaped and maintained by complex interactions. Dunes, mangrove swamps and wetlands provide critical habitat and breeding grounds for a variety of organisms such as fish, birds and shrimp. These areas also play a central role in maintaining coastal systems. Dunes and mangroves help to hold sediments in place, limiting erosion and thus protecting beaches and reefs, which can smother under high sediment loads. This protection is especially important during storms. Mangrove forests additionally hold soil in their roots, allowing land masses to expand. Backbarrier wetlands absorb flood waters and filter water flowing to the coast, moderating the levels of nutrients which enter coastal waters.[1] Beaches themselves are constantly evolving natural formations which change shape and move under natural processes. Sand continually moves along the shore, replenishing beaches down the coast with sediments from above.

Offshore, coral reefs are extremely complex and sensitive webs of living organisms, supporting a rich diversity of species.[2] Over long periods of time, new corals build on the skeletons of older corals, forming a reef that grows at a rate of a few millimeters to a few centimeters per year.[3] Because of this extremely slow rate of growth, reefs do not recover quickly from damage. The presence of coral reefs and sea grasses, which also support important species, moderates the energy of waves on the shore, protecting beaches and inland vegetation from destruction due to erosion. Sediment flow out to sea, a process that is vital to preventing erosion and maintaining the sediment budget of beaches, is also slowed.

1. Bruce Potter, *Tourism and Coastal Resources Degradation in the Wider Caribbean* (St. Thomas, U.S. Virgin Islands: Island Resources Foundation, 1996), 14.

2. Jaap Schoorl and Nico Visser, *Towards Sustainable Coastal Tourism: Environmental Impacts of Tourism on the Kenya Coast* (Nairobi: Netherlands Ministry of Agriculture, Nature Management and Fisheries, 1991), x.

3. Ibid.

On Sylt Island, off the North Sea coast of Germany, for instance, engineers were able to retain 700,000 cubic meters of sand per year by replanting dune vegetation, but, as sand was also prevented from moving along the shore, the growth of the island on the leeward side stopped, resulting in an annual decrease in overall size of the island of 0.15 percent.[32]

3.2.1.3 Potential impacts on local people

- **Where developers do not respect local interests, tourism development can have profound negative impacts on local communities and lead to widespread discontent and conflict.**

Many of the terrestrial and coastal areas that are attractive to tourists are already in use to some degree by local people for economic, cultural or recreational purposes.[33] The environmental impacts of land use for tourism development therefore often have profound impacts on surrounding communities. In Langkawi, Malaysia, for instance, construction of a single road leading to a hilltop tourist resort caused huge quantities of dirt to be washed downstream into the farmers' fields below. As a result, rubber trees being cultivated along the stream banks died and crop productivity decreased to less than half of former levels.[34]

Furthermore, to make land resources available to tourists, governments and developers have at times evicted communities, purchased community land or instituted land-use restrictions. A single resort complex can displace hundreds of local families.[35] In several countries, governments have directly evicted local people in order to use their lands for tourism. In Kenya, for example, the government has evicted the Maasai from many of their traditional herding lands to make way for wildlife tourists.[36] Similarly, the Ugandan government has confined the formerly nomadic Ik people to a small mountainous area in order to use their traditional lands as a national park, primarily for European and North American tourists who come to hunt. The Ik are now forced to live on subsistence farming, in which they have generally been unsuccessful.[37] In Myanmar, the ruling military junta gave the 5,200 residents of Pagan two weeks to leave their homes after deciding to use the ancient pagodas around which they lived as a tourist attraction.[38] Those who agreed to move were given infertile, unsheltered land seven kilometers away and compensation of 250 Kuats, equal to slightly less than US$3. Those who resisted were jailed.[39]

The purchase of land by developers, often facilitated by the government, has also been responsible for displacement and conflicts. When purchasing land from local or traditional owners, private developers tend to press for rapid land acquisition in order to minimize land speculation, permit a more rapid return and allow for integrated development plans.[40] Expectations of jobs and income are often irresistible to local people, who may sell their land at relatively low prices, only to find it soon worth much more.[41] Within a period of only a few years during the development boom along the Costa del Sol, Spain, developers bought much of the valuable land in the area from residents. As a result, local people quickly found that they had lost control of the development of their communities and could no longer survive by the traditional means of fishing and farming.[42] Often, loss of access to resources is increased as hotels legally prohibit residents from using important resources, such as beaches or wildlife areas, in order to avoid crowding or harassment of tourists, or simply to create a more isolated image. Privatized beaches for instance, have cut local people off from a key source of livelihood in countries throughout the tropics.[43]

Purchasing land or resource use rights often has been complicated by different conceptions of ownership, control and contracts, and a lack of local understanding about the changes likely to result from development. Misunderstandings have resulted in use restrictions for local people, as well as in conflicts between communities and developers. In some cases, conflicts have caused short-term and permanent resort closures.

In the Solomon Islands, in 1983, developers and customary land-owners signed an official lease contract allowing the development of a resort on Anuha Island. Initially, relations were friendly and the contract was effective, as the developers trained local people to work at the resort and paid the community for necessary land changes, such as the removal of coconut trees to construct an airstrip. After several years, however, the developers sold their resort to a new company that viewed the contract as granting unconditional land-use rights to the area. Soon after the purchase, the new company fired the local management staff, hired people from other islands and bulldozed a large portion of forest without providing compensation. The customary land-owners believed these actions were illegal. This resulted in a series of violent disputes over control of the land, during which local people dug holes in the airstrip, threatened employees, destroyed equipment, and took members of the management team hostage, ultimately forcing the resort to close and causing serious financial losses for the investors.[44]

3.2.2 Improving land-use practices

The negative impacts of land-use practices should ideally begin to be addressed through participatory land-use planning at a regional level. Planning, which is discussed in the following chapter, can help to ensure that land uses, impacts and types of tourism are sited in appropriate areas. In some areas, whether or not land-use plans exist, investors should not develop tourism, in order to respect environmental conditions and local interests. Where development does proceed, resorts should take an active role in reducing the impacts of land-use by proper planning of facility location and design and minimization of land-clearing. At the

same time, individual developments can also go beyond impact mitigation to make a positive contribution to local conservation through creation of private nature reserves or various land stewardship activities, such as volunteer programs and donations. These actions can help tourism developments to preserve critical habitat and resources for tourism and ensure that the needs of local people are respected.

3.2.2.1 Siting

- **Choosing a development site based on environmental conditions and local support can allow developers to take advantage of natural features, avoid conflicts and reduce costs.**

The impact of a resort development on the natural and cultural environment depends significantly on where and how the resort is sited. One of the best ways to choose an appropriate location for an individual development is to conduct an environmental impact assessment, as described above. In all cases, developers should build only where local people are in favor of development and in areas where the environment can support the proposed development. Developments should not be located in critically important ecosystems, such as national parks, or culturally sensitive sites.

Sustainable design has emerged as an important discipline to assist developers in integrating the siting and design of a resort into the local setting and conditions.[45] With this approach to design, architects and landscape architects utilize a number of techniques to create an intimate association between the building and the ecosystem in which it is constructed. An understanding of the natural processes of the ecosystem in which the tourism development is planned will allow developers to site buildings to avoid the need for costly ecosystem modification, and to take advantage of wind, shade, gravity, water sources and vegetation. In general, factors which should be considered include carrying capacity, climate, slope, vegetation, views, natural hazards, access to natural and cultural features, traditional activities, energy and utilities, separation of support facilities from public use areas and proximity of goods, services and housing.[46]

The benefits of undertaking this approach are not simply aesthetic; costs can be reduced dramatically by taking into consideration physical and geographic features when planning developments. Utilizing existing natural systems and conditions can, for example, reduce reliance on electric heating or cooling systems and water pumps.[47] Less ground maintenance will be necessary if existing vegetation is kept intact.

J's Bay YHA Hostel in New South Wales, Australia, has designed all rooms to maximize the natural ventilation from the prevailing winds, and external screens have been fitted to shade windows from direct sunlight. Ceilings are well insulated to minimize heat transfer into the rooms. In contrast to many other properties located in subtropical climates, no air-conditioning is required to cool the rooms. A single ceiling fan, which requires a fraction of the energy to operate, is sufficient to keep the rooms comfortably cool throughout the year.[48]

In addition, if ecosystem disturbance is kept to a minimum at the development site, native wildlife and plants can be a key on-site attraction for clients. Chalalan Ecolodge, in Bolivia, is located in a primary rainforest area and was developed with as little ecosystem disturbance as possible during the construction process. The Lodge now boasts populations of monkeys, macaws and other key species that are a big attraction to clients.[49]

Inland, building on slopes should be minimized to reduce erosion and landslides. In coastal areas, buildings and other developments that do not require a direct coastal location, such as support facilities for marinas, should be located farther back from the coast. This will reduce pollution from storm runoff and susceptibility to storm damage. Siting facilities inland will also reduce the need for clearing coastal vegetation, in turn reducing erosion and potentially eliminating the need for expensive and damaging coastal protection measures. Furthermore, it will keep coastal areas free for facilities that directly require a coastal location. Marinas should be sited in areas with good water circulation, steep banks and natural wave and storm protection. To reduce potential damage to shorelines and the need for expensive and damaging dredging and bulkheading, boat slips should be placed farther out into the water and connected to shore with wharves. Developers should also avoid building in areas where they will need to fill wetlands.[50]

One way to improve rather than just preserve the surrounding environment is to site developments in environmentally degraded areas that can be reclaimed and made attractive for tourism. Several hotels have successfully used creative strategies to do this. The Banyan Tree Hotel in Phuket, Thailand, was built on a site formerly used for tin mining. In order to restore the land, the resort did extensive landscaping and planted hardy native plants such as Casuarina trees and palms. Construction materials were chosen to minimize the use of scarce local forestry resources. Instead, all villas were built of bricks, with clay roof tiles. As a result of these efforts, wildlife has been returning to the area.[51]

A number of hotels are actively involved in habitat restoration in the areas in which they operate. The Harmony resort in St. John, U.S. Virgin Islands, for example, has been involved in replanting native vegetation, attempts to limit alien species and the reintroduction of native wildlife. The resort has found that in addition to promoting conservation, these efforts have led to a cooler and more attractive environment for guests, and fewer biting insects.[52]

3.2.2.2 Minimizing land-clearing

- **Clearing only the minimum amount of land necessary will decrease environmental damage and allow hotels to take advantage of natural ecological features.**

Traditionally, tourism developers have seen land for their developments as simply a plot that needs to be fully cleared prior to construction. As discussed above, the developer can benefit from taking an alternate approach. The development site is not only a plot of land, but an ecosystem that contains potentially valuable characteristics for developers. It is not necessary—and in most cases it will be less cost effective—to completely clear the land prior to construction. Maho Bay Camps, in St. John, U.S. Virgin Islands, developed its property without clearing any land. Once the property was acquired, a siting plan was established for each of the rooms/tents and a raised boardwalk was constructed to allow builders to access each room/tent site without the need to clear land for a road or pathway.[53]

During construction of any type of facility, builders should seek to minimize roads and land clearing. When land is cleared, it should be covered until construction begins, to prevent erosion. Similarly, roads should be paved and trails should be hardened. In many areas, resorts can undertake reforestation to stabilize cleared land. When building in natural areas, it is especially important to minimize roads and land-clearing. The Rayadavee resort, in southern Thailand, was built without road access and without cutting down any trees to make room for buildings. The two-story pavilions that accomplish this goal are almost invisible from the sea nearby.[54]

Minimizing the impacts of land-use in coastal areas can include softening or removing existing shoreline protection structures, replanting shoreline vegetation and plugging man-made holes in reefs. As a last resort, destinations may "nourish" their beaches by replenishing the sand. Some areas have had success fighting erosion by moving sand that is accumulated by a groyne up against the seawall. Beach nourishment, however, can be expensive and it will often be difficult to replace a sediment budget that has been reduced through dams or other engineering measures. A beach nourishment program at the French resort of Chatelaillon cost 15 million francs (US$2.66 million) when it was initiated in 1987, and required annual maintenance costs of 20,000 francs (US$3,550). Initially, more than 400,000 m^3 of sand was pumped from a depth of 18 meters onto the beach, with an additional 10,000 m^3 added each year.[55] Although these results have been successful in maintaining the beach, they have come at a significant cost that could have been avoided through building in a more appropriate location.

This boardwalk, made of recycled timber, helped preserve a large tract of mangrove forest in West Lake Park, Florida.

Photo: Hitesh Mehta

3.2.2.3 Creating private reserves

- **Creating private reserves can help to protect both biodiversity and important tourism resources.**

Promoting ecological health and preserving resources in areas surrounding resorts requires that developers make a positive contribution to conservation. One way to achieve this goal is through buying and setting aside areas as private reserves. In addition to protecting biodiversity, private reserves can be critically important to conserving the resources which provide resorts with water, attractions and activities. In creating private reserves, developers face the same issues that governments must confront

when deciding to set aside land—making sure not to displace local people and ensuring that preservation is compatible with local community development goals. Setting up a reserve with local consent, in combination with practices to increase local benefit, can be critical to the success and quality of the reserve.

The Lapa Rios resort in Costa Rica maintains a 1,000-acre private reserve and has also been involved in socially beneficial work such as providing employment at all levels and supporting the local school. These activities have meant that the integrity of the reserve is respected by local communities. In addition, because of the reserve's location at the edge of the 100,000 acre Corcovado National Park, it provides a buffer to encroachment. All of the resort's 14 bungalows are surrounded by nature, and the resort is able to offer its guests a range of activities that depend on access to a beautiful and uncrowded natural area, such as professionally guided rainforest tours, bird watching, hiking, horseback riding, fishing and kayaking.[56]

A number of other hotels have been involved in similar protection efforts. The Half Moon Golf, Tennis and Beach club in Jamaica, for instance, maintains a 27-acre reserve on its 400 acre property.[57] The Al Maha Resort, a luxury 50-guest facility that is being developed in the United Arab Emirates, plans to set aside 98 percent of its 3,500 acre site as a nature reserve to protect the surrounding habitat. The resort also plans to go a step further with an extensive program to re-introduce indigenous species to the area and the hiring of a conservation specialist and field manager to oversee the work.[58] Aventuras Naturales, which operates the 15-guest Pacuare Lodge in Costa Rica, owns 70 acres of primary rainforest near the lodge that it has set aside solely for conservation, with no visitors allowed in the area. The company was motivated to buy the land because it was in danger of being cleared.[59]

3.2.2.4 Land stewardship

- **Tourism developments can have a strong positive impact on their surroundings through support of local conservation and community development efforts.**

Land stewardship activities include donating money and time, providing in-kind support to people involved in conservation, working with local communities on conservation projects, and giving access to underutilized resources. The most straightforward type of support which hotels can provide to conservation is financial. The Holiday Inn Crowne Plaza in Jakarta, Indonesia, launched a financial stewardship program in 1997 with the introduction of its "Back to Nature" initiative. The hotel added an optional US$2 to each guest's bill, which is used to support orangutan conservation efforts by the Balikpapan Orang-Utan Society and the Green Bear Association. The work includes rescuing and reintroducing orangutans to the wild and educating tourists on responsible tourism.[60] When undertaking initiatives that allow guests to donate money to conservation, hotels should take care that guests do not feel pressure to contribute, or they may hold it against the hotel or conservation group involved. A preferable option is for hotels to integrate the costs of conserving their tourism resources into operating costs. For example, for each booking on "Discover Jamaica Naturally" Programs, the Hotel Mocking Bird Hill in Jamaica donates "per guest" sponsorships to the Port Antonio Marine Park and Conservation Corridor project.[61]

Volunteer programs can also be a valuable tool for supporting local conservation efforts. The staff of many hotels have become involved in a range of volunteer projects such as beach clean-ups. At the Inter-Continental Resort in Bali, Indonesia, for instance, employees have volunteered to clean the entire beach area around the hotel every Friday morning.[62]

There are many other creative ways to use money, time and other resources to support conservation. The main focus of the Environmental Program at the Phuket Yacht Club in Thailand is environmental education initiatives in surrounding communities, especially focused on children. The program focuses on increasing care and respect for the environment, based on the philosophy that lasting change will only come from changing fundamental attitudes.[63] The hotel has held weekly environmental education classes for local children,[64] developed an environmental curriculum for local primary schools that is disseminated to primary school teachers throughout the country,[65] and organized seminars for Phuket's police to discuss environmental issues and develop possible solutions.[66] Hotels have also taken less direct approaches to environmental education. For instance, the Jeddah Conference Palace in Saudi Arabia recently distributed 10,000 leaflets about environmental issues to businesses and schools in the city.[67]

Costa Rica Expeditions provides free transport to researchers and National Park Service employees and their equipment. The company has also contributed money to the Costa Rica National Parks Foundation, the Park Guard Fund (dedicated to the well-being of park guards), and the Costa Rica Conservation Association. During more than 20 years of operation, the company has donated more than US$100,000 in cash and kind to promote conservation in Costa Rica.[68]

n Steps toward improving land-use practices:

- ✓ Site resorts only where the environmental conditions can support the proposed development and local people are in favor of development.
- ✓ Never site developments in protected areas or culturally sensitive areas.
- ✓ Use the principles of sustainable design to integrate the siting and design of a resort into the local setting and conditions and take advantage of natural features.
- ✓ Minimize road-building and land-clearing at all times.
- ✓ Contribute to habitat restoration efforts.

- ✓ Create private reserves to promote ecological health and preserve resources in surrounding areas.
- ✓ Support conservation and community development projects through financial and in-kind support and volunteer programs.

3.2.3 Improving facility design and construction

3.2.3.1 Potential negative impacts of construction materials choices

- **Construction materials can cause environmental damage during extraction and transportation, and can have an important impact on the energy efficiency of facilities.**

While materials designed to be environmentally responsible - for example recycled, recyclable or durable materials, materials providing insulation, and materials made by minimally polluting processes - are now widely available, they often must be imported, and may be prohibitively expensive for local businesses.[69] Furthermore, in some cases, the negative environmental impacts of transport may outweigh the benefits of these materials. In most cases, developers use local materials for the construction of large-scale facilities, a decision that can have serious environmental and social impacts, depending on what materials are used, how they are obtained and where they come from. For example, resorts have used timber extracted from primary rain forests for construction, a practice that should be avoided at all costs. The use of primary forests for construction timber can be responsible for widespread land-clearing, leading to habitat degradation and species loss.

In coastal areas, the use of sand to make concrete for permanent structures can have serious impacts. Along Spain's Costa del Sol, for example, a number of small beaches have completely disappeared as a result of sand removal for construction.[70]

Using coral as a construction material causes the direct loss of large quantities of reef. Furthermore, as noted earlier, damaging reefs can cause serious indirect impacts on other coastal ecosystems. In the Maldives, coral rocks were once used in the construction of all tourist facilities, infrastructure development and shoreline protection projects.[71] This coral mining led to significant loss of reefs and extensive coastal erosion, damaging some of the country's most important tourist attractions.[72]

3.2.3.2 Choosing appropriate construction materials

- **Choosing construction materials that minimize damage caused during extraction, transportation, operation and disposal can have significant environmental and financial benefits.**

Making the appropriate materials choices can have important implications for reducing impacts and costs during the lifetime of a tourism development. Impacts related to construction materials can be reduced through choices about the materials themselves and their sources. Appropriate properties to base materials choices on include insulation, durability, recyclability and availability.

Besides conventional materials, such as sand, gravel and wood, resorts can use materials recycled from other sources. Many new recycled materials are attractive, durable and relatively inexpensive. For example, nearly all of the building materials at the Harmony Resort in St. John, U.S. Virgin Islands, from walls to railings on walkways, are made of innovative products from the waste stream of other industries, such as sawdust and plastic. This has been done without compromising the resort's attractiveness. As a final step, the resort is attempting to "close the loop" on its own waste stream, by recycling bottles on-site into products such as glasses and tiles, recycling aluminum cans into table legs and recycling plastic bottles into traction pads to prevent guests from slipping on walkways.[73] Even at more traditional resorts and hotels, there are significant opportunities to incorporate renewable, recycled or recyclable materials into infrastructure

Where tourism facilities use natural materials for construction, they should ensure that they choose materials and suppliers that minimize damage at the source. One option for reducing the consequences of using natural building materials, such as timber, is to use renewable resources, such as wood from tree farms. Developers should never use wood from primary forests, which can take hundreds of years to recover. If wood is not available from tree farms, developers should seek alternative materials, or timber from less critical biodiversity areas such as

For More Information

Siting, Land Use, Construction and Design

Andersen Group. *Design of Ecotourism Facilities*. Minneapolis, MN: Anderson Group.

Economic and Social Commission for Asia and the Pacific (ESCAP). 1995. *Guidelines on Environmentally Sound Development of Coastal Tourism*. New York: United Nations.

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United States Department of the Interior. National Park Service. 1993. *Guiding Principles of Sustainable Design*. Denver: National Park Service, Denver Service Center.

secondary forests or already degraded lands.

Lapa Rios, in Costa Rica, has chosen to grow some of its materials itself. The resort and its guests have planted more than 25,000 native suita palms in the surrounding forest to use in rethatching the roofs of guest bungalows.[74] Resorts can similarly plant quick-growing tree species to meet future building needs. Although the time-frame for return on these investments is long, they can make an important contribution to preserving natural areas for other uses, and for meeting needs as natural resources become increasingly scarce.

In some cases, harvesting natural materials may be compatible with other social and environmental goals. Where possible, developers should source construction materials from local businesses or communities. For instance, the Taj Garden Retreat Thakkady, in Kerala, India, buys elephant grass harvested by local communities to construct the roofs of its lodges. The local people gather the grass, according to Forest Department directions, in "fire strips," which can help prevent fires from spreading out of control.[75]

3.2.3.3 Potential negative impacts of architecture and landscaping decisions

- **Architecture and landscaping decisions that are not suited to local conditions will often visually degrade a destination and require more resources to operate and maintain.**

In order to accommodate large numbers of people, resort architecture has often been in the form of concrete high-rises, which can overwhelm traditional architecture, altering the original character of a destination. In mega-resort areas such as Cancun, Mexico, and Pattaya, Thailand, where tourism has catalyzed the development of a city, destination areas have changed beyond recognition in short periods of time.

Multi-story concrete buildings are typically ill-suited to the climate of tropical destinations and require more energy for cooling and lighting than traditional style buildings. In most areas, traditional architectural styles have evolved for practical reasons, to respect natural weather conditions such as the angle and intensity of the sun, wind direction and flooding patterns. Resort buildings which do not take local ecology into account may also deteriorate more quickly, requiring expensive repairs and engineering to prevent damage.

Many hotels have also failed to take local conditions into account when making landscaping decisions, choosing to use imported plants rather than native species. Non-native plants often require increased modification of the landscape, as well as more maintenance and greater quantities of water and chemicals. The use of pesticides, fertilizers and herbicides can be responsible for toxic runoff into streams, coastal waters and groundwater. Environmental impacts related to water use may be exacerbated as imported plants or non-porous surfaces such as concrete can reduce infiltration of water into the water table, preventing the recharge of aquifers, and disrupting the flow patterns of streams and rivers.[76]

3.2.3.4 Improving architecture and landscaping decisions

- **Taking advantage of local architectural styles and the local ecology can provide important benefits by minimizing resource use and disruption of the visual environment, and creating a more authentic experience for guests.**

Principles of sustainable design, introduced in section 3.2.2.1 above, can contribute to appropriate architecture and landscaping decisions. Although many developers will have their own team of expert architects and landscape architects, partnering with a local company can prove beneficial in many ways. Unnecessary ecological impacts can be avoided by building in the local style of an area, for instance building bungalows or a series of smaller, low-rise buildings made of natural materials rather than concrete high-rises. During the design phase, architects should consider the local landscape and take advantage of natural climate conditions. For instance, shade and cross-breezes can contribute significantly to cooling. Due to design which uses shade from trees and cross ventilation from wind, the Coconut Beach Resort in Queensland, Australia, does not need any air conditioning in its luxury rooms. Guests appreciate the lack of noise and closeness to nature fostered by the architecture.[77]

In order to reflect and respect local cultures and styles, planners should consult local experts to benefit from their knowledge about building strategies, such as which areas are prone to flooding, what is the proper angle for a roof, which materials will last longest, and how they should be used. These methods will reduce environmental damage both during construction and operation, and can also make tourist visits more meaningful by exposing them to local styles and cultures.[78]

In Kakum National Park, Ghana, Conservation International and local partners brought international experts in architecture and landscape architecture together with a local architect to develop plans for a new visitor center. This international cooperation took advantage of the knowledge and skills of both groups, leading to an important exchange of ideas. The result was a combination of local styles and building techniques with low-impact materials and design, allowing the visitor center to meet modern needs while fitting in with the surrounding landscape and ecosystem.

In landscaping, resort developers should use native plant species, which require less maintenance, use fewer resources, provide a sense of authenticity for guests and, in some cases, create jobs for local people who have

knowledge of these local plants. Plants with similar water and feeding needs should be grouped together to avoid waste, and wide expanses of lawn should be avoided, as grass is the most water-intensive plant per square meter.[79]

Transamerica Comandatuba Resort, a 350-room beach facility in the northeastern state of Bahia, Brazil, was built on a site originally covered by sand dune vegetation. Given the resort's international five-star customer profile, the management initially decided to plant a lawn using imported grass varieties as the main landscape feature. However, maintenance of the lawn required a team of 55 gardeners, US$120,000 worth of supplies and intense watering and care each year. After four years, management decided to restore the area to its original sand dune plant ecosystem. This 1997 restoration was part of a conceptual change to become more integrated with the natural environment and to offer nature as a component of the resort experience. In addition, the new landscaping saved money by requiring considerably less maintenance and watering, and offered a much more diverse and interesting landscape to the tourists.[80]

In many cases, fish, iguanas or other animals can be used to control insects, in place of dangerous pesticides and other chemicals. The Green Hotel in Mysore, India, stocks mosquito-eating fish in its ponds.[81] Maho Bay Camps and Harmony Resorts in St. John, U.S. Virgin Islands, have promoted natural insect control by installing bat-houses on their grounds.[82] Compost or other organic substitutes for chemical fertilizer can often be produced on the premises; for instance, Jasper Park Lodge, in Alberta, Canada, fertilizes its golf course with composted elk manure.[83]

Steps toward improving facility construction and design:

- ✓ Choose materials based on sources that minimize damage, and properties such as insulation, durability, recyclability and availability.
- ✓ Use recycled and renewable materials whenever practical.
- ✓ Do not use timber harvested from primary forests; rather, seek wood extracted from tree farms, secondary forests or already degraded lands.
- ✓ Work with local architects and communities to incorporate local styles and knowledge in building design.
- ✓ Take advantage of natural climate conditions for cooling, energy and other needs.
- ✓ Use native plant species for landscaping and natural insect control measures such as fish and other animals.

A guest room built in local architectural styles with local materials, Chaa Creek Cottages, Belize.

Photo: Jamie Sweeting

3.3 IMPROVING DAILY OPERATIONS AND TOURIST ACTIVITIES

Once all the necessary infrastructure has been established and tourists start to arrive at a destination, the major impacts from tourism development will come from the daily operation of resorts and other facilities and the regular activities of visitors. Increased demand for and use of energy, water and other resources, as well as higher levels of solid waste and wastewater have had profound environmental and social impacts on surrounding areas, particularly in developing countries where these demands are far in excess of previous resource use. Addressing the impacts of daily operations and activities will

require the participation and understanding of a wide range of stakeholders, including employees, clients and local people.

Because of the vital importance of staff and guest support to the success of environmental and social initiatives, in this section, we look first at how to develop a functional environmental strategy and how to increase guest support for initiatives. We then discuss the broad range of direct impacts from daily resource use and activities and present a series of technologies and management practices that can be used to minimize each type of impact. Just as in the development stage, there are numerous opportunities for resort developers to look beyond mitigation and make a proactive contribution to local conservation and community development during the operations phase.

3.3.1 Developing an environmental strategy

- **The effectiveness of an environmental strategy depends on the acceptance and understanding of all people involved and a careful and ongoing review of current or projected impacts.**

All of the recommendations discussed in this chapter can be implemented as part of a broad-scale environmental and social strategy that guides operating decisions. New developments should incorporate these practices during planning and design, while existing developments can phase in an environmental strategy over time. In general, the key to developing a successful strategy is involving and motivating the people who will make that strategy a reality, including guests, business partners, local communities and, most importantly, staff.[84] Staff commitment and participation in the initiative must come not just from top management, but from all parts of the organization.[85] Each facility should appoint a task force that includes staff from all departments and levels to design, implement and evaluate the environmental strategy.[86] For smaller facilities, it may be more effective to appoint a single environmental leader.

The task force's first job will be to conduct a thorough review of current practices at the resort, identifying opportunities for improvement and setting priorities for action.[87] This review should cover all areas of operation, from waste management, energy, water use and product purchasing to community relations and broad-scale impacts on the local environment.[88] Impacts and costs should be reviewed based on life-cycle, rather than just up-front costs, for instance, including the costs of manufacturing, operating, maintaining and disposing of certain products.[89] Other considerations should include ease of implementation and length of time for a return on investment, as initial successes will pave the way for further, more complicated changes.[90] Staff, guests and other stakeholders can be involved in this review through surveys and informal interviews.[91] If the resort lacks the internal capacity to conduct a thorough review, an outside third party may be hired to complete it.

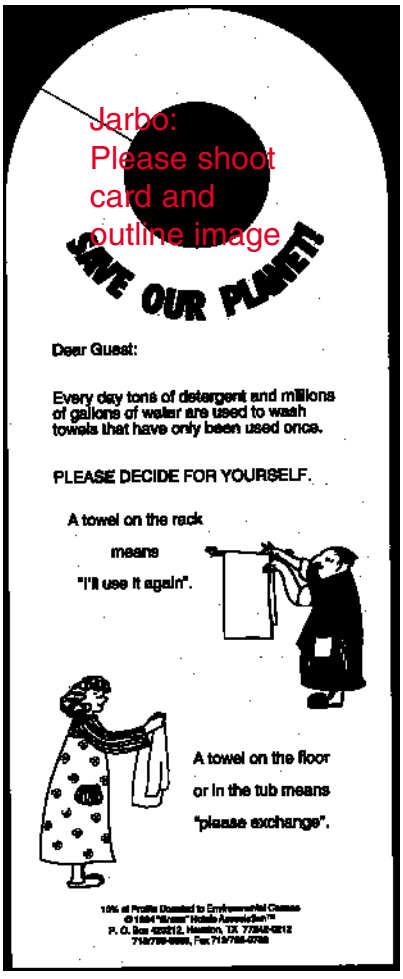
Based on this review, the task force should then work with other staff to develop an environmental mission statement as well as standards, goals and guidelines for action. Publishing a formal, written mission statement, complete with an action plan for achieving goals will help to communicate the seriousness of this commitment.[92]

Implementation of the strategy will begin with a clear allocation of individual responsibilities among staff members and other stakeholders. The task force should be precise about what is to be accomplished, when, and by whom,[93] and should ensure that these efforts receive solid financial and personal support from top management.[94] Staff can be informed about goals and activities in various ways, such as newsletters, special events, meetings, handbooks, team-building exercises, competitions and training sessions.[95] For example, Inter-Continental Hotels distribute an Environmental Reference Manual to staff on issues such as waste management, air quality, energy, noise, hazardous substances, water conservation, product purchasing and community action.[96]

Canadian Pacific Hotels and Resorts have developed the Green Partnership Guide for their employees, which sets out steps "to help create an environmentally friendly setting for our guests, for ourselves, and for our future." The guide was developed in 1992 after two years of research and analysis that included environmental committees and environmental audits at each hotel, discussions with environmental consultants and a comprehensive survey of each of the company's 10,000 employees throughout Canada.[97] The guide includes an Action Plan with company-wide goals on waste management, energy, product purchasing and water conservation. There is also a 12-step

Information cards can encourage guests to participate in an environmental strategy.

Courtesy "Green" Hotels Association



strategy covering everything from reducing packaging and water conservation to buying organic foods and redistributing half-used soap and shampoo bottles to local homeless shelters and other charities.[98]

In addition to tasking staff members with environmental goals, a resort should challenge its suppliers and other business partners to supply environmentally friendly goods and services.[99] A resort should also strive to communicate activities and goals to its guests. Educating guests through local nature walks, newsletters, informational cards in the bathroom about water and energy use, comment cards and notice boards will help to ensure that they understand goals and share the commitment to conservation.[100] See section 3.3.2 below for more information on tourist education.

At the end of each stage of the environmental program, a resort should conduct—or commission a third party to conduct—an environmental audit to determine whether goals have been met, assess successes and failures, and determine what changes need be made to the program.[101] Again, staff members should be involved through surveys and suggestion boxes.[102] Grecotel, the largest hotel chain in Greece, began an eco-auditing system for its resort hotels in 1992. Each year, the company hires a third party to analyze the performance of each department against preset targets and ensure that the targets are being met.[103]

Finally, in order to maintain the momentum of the program and the commitment of stakeholders, it is important to provide regular feedback to staff, guests and the local community on achievements and to acknowledge outstanding individual performance.[104] For example, Ramada International Hotels & Resorts offered cash incentives to employees who came up with the best environmental ideas, presented awards to individual staff members, departments and hotels at the company's annual convention, and recognized staff members' ideas in the company newsletter.[105]

The Taj Group of Hotels has adopted a broad initiative called EcoTaj to encourage environmental practices in all of its 60 hotels in nine countries. Each hotel has an Environmental Task Force headed by an "EcoChampion." The company publishes an in-house magazine called EcoTaj to educate staff, while the Guest Communications Programme raises awareness among guests through questionnaires and informational materials. The program's initiatives include water and energy conservation, natural, chemical-free wastewater treatment systems, solar power, CFC-free air conditioning, use of handmade recycled paper, and reduction of non-biodegradable wastes such as plastic.[106]

n Steps toward developing an environmental strategy:

- ✓ Implement environmental and social practices as part of a broad-scale strategy that guides operating decisions.
- ✓ Appoint a task force to develop, implement and evaluate the strategy.
- ✓ Conduct a thorough review of current practices to find opportunities for improvement and set priorities for activities.
- ✓ Work with staff from all levels to assign roles and implement the strategy.
- ✓ Challenge suppliers and other business partners to improve their practices.
- ✓ Regularly audit and evaluate the strategy to ensure its effectiveness.

3.3.2 Guest education and involvement

- **Educating guests about environmental and social issues and hotel initiatives can help reduce adverse impacts and increase support for conservation programs.**

Often, negative social and environmental impacts caused by tourists arise from the fact that guests have little or no understanding of the local culture and ecology.[107] On the other hand, where guests are aware of environmental and social issues, they are often willing to contribute to hotel initiatives. Education can result in increased respect for local cultures and environments and more responsible attitudes and behavior. Thus, one of the most important tools for improving environmental and social impacts is an effective guest education strategy, designed to ensure that guests understand and support a facility's environmental and social programs, both in spirit and financially. Education can also improve business by increasing the quality of guests' experience, increasing repeat visitation and occupancy rates, providing unique marketing opportunities and allowing hotels to charge higher rates.[108]

The nature of tourism means that there are many challenges to effective education and involvement of guests. Most importantly, tourists are not a captive audience, so education and interpretation should be fun and engaging, as well as personal and meaningful to individual guests.[109] The relatively limited time frame and multiple competing distractions mean that a message should be communicated clearly and quickly, requiring little effort on the part of the tourist.[110] Finally, a wide range of ages, educational backgrounds, cultures and languages of tourists add to the challenges of interpretive education.[111] An education program should be designed to be relevant to the characteristics of the audience, through the use of familiar examples, analogies and comparisons.[112]

The goals of a good guest education program should be to increase both enjoyment and knowledge, change attitudes, create a desire to change behavior and, ultimately, change actual behavior.[113] At the Tangalooma Resort in Queensland, Australia, where wild bottlenose dolphins regularly interact with tourists, researchers found that although all guests expressed a desire to change their behavior and be more environmentally responsible, those who had been exposed to a formal educational program on the dolphins

actually followed through on those intentions much more frequently.[114]

When designing an interpretive program, it is important to ensure that exhibits and programs revolve around specific themes and have clear messages, such as the role of coral reefs in protecting coastlines and fisheries, or the rapid disappearance of a specific bird species. People will remember themes and messages much longer than they remember specific facts.[115]

There are three basic levels of educational programs that require varying degrees of staff time and expense. Start-up level programs, such as nature trails, informational kiosks, exhibits, information packets in rooms, publications and libraries require little maintenance or staff-time after their initial set up, but are more passive for the visitor. Active exhibits are those that are more engaging for guests, but require more maintenance and staff time. These programs might include spotting telescopes for bird watching, expanded nature trails, computer databases, aquariums and discovery rooms. Finally, interpretive guided tour programs, such as lectures, field trips, bird and animal watching, photography and classes, will be the most staff-intensive type of education, but can also be the most rewarding for tourists.[116] If possible, all programs and exhibits should be designed during construction of the resort, so they will blend in with their surroundings.[117]

Several resorts and tour operators have involved guests directly in environmental and social initiatives. For instance, German operators who bring charter tours to the Maldives have adopted a program that requires tourists to take their garbage back to Germany with them. This has been helpful to the Maldives, which does not have adequate waste disposal facilities.[118] At resorts such as Footprints, in Tobago, guests are actively invited to plant trees to support reforestation efforts. At Lapa Rios, in Costa Rica, guests are provided with information about government environmental policies and encouraged to write letters to politicians.[119]

Perhaps the simplest way to involve guests in efforts to promote conservation or local well-being is to provide a means for them to support local conservation financially. Guests at Sheraton Hotels throughout Africa and islands in the Indian Ocean, for instance, are invited to donate US$1 or US$2 on top of their room charge to be used in conservation projects such as adopting an endangered species through the World Society for the Protection of Animals. The company has been matching guest donations. The reaction is extremely positive: "Our guests really get behind this, and it provides a natural bridge to start to address other issues with them such as waste reduction."[120]

Steps toward effective guest education and involvement:

- ✓ Design an interpretive program to revolve around specific themes, with clear messages relating to local environmental and cultural issues.
- ✓ Implement various levels of guest education, appropriate to the type of guest and requiring varying degrees of staff time and expense.
- ✓ Provide a means for guests to support local conservation and community development efforts.

Tourist education, Kakum National Park, Ghana

Photo: Amy Rosenfeld

3.3.3 Improving resource use

The development of large-scale tourism in relatively undeveloped areas often puts a great deal of pressure on local resources. Demand for energy, water, waste disposal and sewage treatment increases greatly, straining existing facilities and necessitating the construction of additional infrastructure and treatment facilities. If this development is not done properly, serious resource degradation and environmental damage can result. Increased resource demand can also cause negative social impacts by disrupting or preventing traditional economic and cultural activities. In most cases, addressing the negative environmental impacts of increased resource use and demand will help in mitigating the social impacts as well.

3.3.3.1 Potential adverse social impacts of increased resource use

- **Use of resources by tourism facilities can damage or destroy resources on which local people rely, jeopardizing their livelihoods and causing resentment and anger toward tourism developments.**

Increased demand for resources for tourism can put serious stress on resource supplies that were once adequate to support the local population. Resource use may also be increased by migrants who move into an area from other parts of the country seeking jobs and economic opportunities in the tourism sector.[121] Although this migration may be integral to meeting new needs for both skilled and unskilled labor, it may also place additional stress on local communities.[122] In coastal areas, for instance, preferred species of fish and crustaceans are sometimes strained by increased demand.[123] In Nepal, where a rapidly growing segment of the local population work as porters on treks, deforestation to supply wood for warmth has become a serious problem.

As tourism degrades the ecosystems on which local communities have traditionally relied, it can also strain existing social structures.[124] For instance, despite local opposition to development, individual hotels in Goa, India, have drawn up to 66,000 gallons of water per day from wells and other local sources,[125] enough to meet the daily water needs of five villages.[126] As a result, many important wells and rivers now run dry, even in non-summer months. Further, many hotels do not process their waste before releasing it, contaminating remaining water sources and forcing local women to travel long distances in order to collect clean water, adding significantly to their already difficult work load.[127]

In some cases, the loss of traditional resources can also be associated with the development of undesirable activities, such as prostitution and begging, among economically marginalized people. The Maasai in some areas of Kenya have now resorted to begging or seeking to be photographed for money.[128]

Large-scale tourism development may also significantly increase prices for land, goods and services as tourists and developers increase demand for key properties, food and other products. The economic losses caused by increasing goods prices may be compounded by a growing need to rely on markets to supply basic goods as resources are degraded. One local resident on the island of Boracay, Philippines, commented that "Even if we had no cash and no job before, we could always have three meals a day, even if it was root crops instead of rice because everyone had vegetable gardens, we could collect foods from the forest and there was plenty of fish then. Now everything has to be bought."[129]

In many cases, inflation results in reduced local land ownership. For example, in Tonga, tourism-driven inflation has caused shortages of arable land. In 1966, 42 percent of eligible males in the country had land registered in their names. Twenty years later, only 25 percent still held land.[130] In some cases, for example in Las Bahias de Huatulco, Mexico, tourists have caused increased land prices by buying land for second homes or retirement homes, resulting in the displacement of local people by houses that are empty for most of the year.[131]

3.3.3.2 Potential negative environmental impacts of energy use

- **Fossil fuels can cause environmental damage during extraction, transport and use.**

Energy use at tourist facilities is usually many times greater than that in the local communities in which they develop. A recent study on sustainable tourism development for Northern Palawan, Philippines, found that an average hotel room demanded more than five times as much energy as a local household.[132] The difference in energy demand is due in large part to the use of energy-intensive technology to provide comforts and conveniences for large numbers of tourists. Air conditioning, importing and refrigerating food, transporting water, waste disposal, cooking, laundry, elevators, transportation and facilities such as swimming pools all require significant amounts of energy.[133] Recreational activities such as boating and transport can also be energy-intensive. In many cases, resorts use technology that disregards useful natural features, such as wind for cooling or sun for drying and heating, and local knowledge about how to take advantage of these features.

Although some resorts are beginning to take advantage of improving technology for solar power, hotels have traditionally met the vast majority of their energy needs by burning fossil fuels, including coal, oil and natural gas. The burning of fossil fuels for energy emits pollutants such as carbon dioxide, sulfur and nitrogen oxides into the atmosphere, causing local air pollution and acid rain.

Fossil fuels can cause serious environmental impacts not only during use, but also during extraction, refining and

transport. Poorly implemented oil operations, for example, can cause contamination of terrestrial and marine ecosystems, deforestation of tropical forests where reserves are increasingly being exploited, disruption of wildlife habitats, and human health hazards from soil and water pollution.[134]

In the long-term, fossil fuel use contributes to global climate change, a phenomenon which, through rising sea levels, may threaten some of the basic resources upon which tourism depends, and even entire islands. Many island nations have called for major reductions in fossil fuel use to curb the threat of global warming.[135] Rising sea levels may also be associated with stronger surges during storms and with intensifying damaging weather patterns such as the 1997-98 El Niño induced storms.[136]

3.3.3.3 Improving energy-use practices

- **Environmental damage and financial costs from energy use can be significantly reduced by using appropriate architecture styles, efficient and well-maintained equipment, and renewable energy sources.**

Practices for reducing the negative impacts of energy use will vary widely depending upon factors such as hotel location, size, age, and type of clients. New hotels and resort developments have the opportunity to include energy efficiency in the planning stages, avoiding the costs of retrofitting equipment.[137] However, even in older hotels, if energy-use decisions are made with a long-term perspective, many improvements can be achieved at zero or negative costs. Implementing such programs need not reduce guest comfort, and can often increase guest approval and create a more natural experience.

The design of an efficient energy strategy at existing hotels should begin with an environmental audit to determine the largest uses of energy at a resort and identify appropriate techniques for use reduction. Resorts can use relatively easy techniques to audit their own energy use. For instance, the pattern of energy use revealed in monthly bills can often show where inefficiency is highest: if costs jump during hotter months, then cooling functions may be responsible.[138]

Increasingly, advances in technology are making renewable sources of energy, such as wind and solar power, an economically viable option. Despite the significant investment required and often relatively long payback periods, many hotels have found solar panels to be an effective supplement or alternative to conventional energy sources. The Taj Group of Hotels uses solar heating to meet 50 to 100 percent of the hot water needs of all of its hotels. The Group has found that its investments in solar power pay for themselves in as little as two years.[139] At the Frogs Hollow Lodge in Darwin, Australia, up to 50 percent of hot water requirements are met by solar water heaters on the roof.[140]

In some cases, renewable energy sources will be less susceptible to disruption from bad weather. Whereas storms may prevent oil shipments, solar power generators can be functional immediately following a storm. Maho Bay Camps, in St. John, U.S. Virgin Islands, found that because it used solar panels, it was the only hotel on the island that was able to supply power to its guests after a tropical storm disrupted power lines.[141] Finally, these sources may also be cheaper than traditional fuels for providing energy to remote destinations where the transport costs of importing coal, oil or gas are high.

Whichever type of energy source is used, resorts should ensure that equipment and facilities are running as efficiently as possible. Staff should be trained to use equipment in an efficient and appropriate way. All equipment, such as air conditioners, refrigerators, generators and washing machines should be strictly monitored and serviced. Cleaning filters, preventing leaks and ensuring that mechanical devices are properly tuned will significantly increase energy efficiency and reduce pollution.[142] Any broken parts should be repaired or replaced quickly.

Older, inefficient equipment should either be upgraded or replaced with newer technology, such as compact fluorescent light bulbs (CFLs) and newer motors, chillers and air conditioners, which often use a fraction of the energy of older models. This reduction in energy use can often result in pay-back on investments in short periods of time. The Seattle Westin Hotel in the state of Washington, USA, overhauled its entire lighting system in 1993, changing incandescent bulbs to CFLs and improving control mechanisms. As a result of this program, the hotel has achieved a 66 percent reduction in guest room wattage with overall savings from the lighting system estimated at US$400,000 per year. Guests have also commented on the increased amount of light in rooms and the improved ambience of bathroom lighting.[143]

Other energy savings can be achieved by monitoring waste in heating, hot water and light usage, and switching to products which require less energy, such as colored sheets and towels that can be laundered at lower temperatures. Proper positioning of appliances, for example keeping dryers and stoves away from refrigerators, can also reduce waste. Increased insulation and better seals on walls, windows and refrigerators will reduce lost energy. With an initial investment of only C$25,000 (US$16,500), the Royal York Hotel in Toronto, Canada, was able to save C$200,000 (US$132,300) per year by repairing leaks and replacing and fixing steam traps.[144]

Finally, new facilities should be designed to take advantage of natural conditions. For example, covering windows, adding wind scoops for ventilation and building in natural shade can reduce cooling costs. Sunny destinations may be able to utilize solar water heating and power generation while windy areas may rely on wind power. Planning for facilities should take account of natural variations such as time of day, season and occupancy.

Steps toward improving energy use:

- ✓ Design facilities to take advantage of natural cooling, heating and light.
- ✓ Use renewable energy sources, such as wind and solar power, whenever feasible.
- ✓ Conduct regular monitoring and servicing of equipment to ensure efficiency.
- ✓ Replace older equipment with newer or more efficient models.

3.3.3.4 Potential negative environmental impacts of water use

- **Excessive water use can destroy and degrade water resources, threatening environmental and human health and diminishing availability for meeting local needs.**

Tourist demand for water, like that for energy, usually far exceeds that of local residents. A study on tourism in Palawan, Philippines, estimated that in the early stages of tourism development in Busuanga West, the amount of water required for a single high-standard hotel room, not including recreation facilities, will be 396 gallons per day.[145] This is enough to support about 14 local people at their current standard of living. By 2010, water usage is expected to increase to approximately 475 gallons per day for each room. The luxurious features of higher classes of hotels, such as swimming pools, lawns and golf courses, can add significantly to total usage. An average 18-hole golf course, for example, uses approximately as much water as a 2,000-room high-class hotel, or 27,000 rural people at current water usage rates in Northern Palawan, Philippines.[146] The amount of water needed for lower standard accommodation is significantly less than for high standard, but still far greater than local use.[147]

In many destinations, excessive water usage to support tourism has resulted in the drying up of streams, lowering of the groundwater table and salinization of groundwater resources.[148] This, in turn, damages the health of terrestrial, aquatic and marine habitats by reducing the quantity and quality of water available to plants and animals. In estuaries and coastal areas, disruption of water flow can cause erosion and diminish the flow of nutrients necessary for the health of coastal ecosystems. Along Spain's Costa Del Sol, excessive and unregulated water use by tourist facilities, in combination with other economic activities, has dried up many coastal streams, in turn decreasing sediment flow and coastal water circulation, and leading to erosion.[149] Problems stemming from water usage are exacerbated in regions such as the Costa Del Sol and many tropical areas, in which the high tourist season corresponds with periods of low rainfall.[150]

3.3.3.5 Improving water-use practices

- **Choosing appropriate sources for water and reducing overall use can protect water resources and lead to significant economic benefits, especially as prices rise or during water shortages.**

Conditions to consider when choosing a water source include renewability, distance from possible sources of pollution and infiltration, potential impacts on the water supplies of local people,[151] potential environmental impacts from

For More Information

Improving Operations

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altering the water table, and potential impacts of building supply infrastructure such as dams and pipelines.[152] In some cases, there will be no environmentally viable local source of water. In the Maldives, for example, fresh water supplies are inadequate to meet the needs of residents and tourists. In order to supplement and protect limited fresh water resources, the government requires all islands developed for tourism to have their own desalinization plants.[153]

Water needs can be significantly reduced by avoiding wasteful practices such as hosing hard outdoor surfaces, watering gardens during the day,[154] and washing laundry and dishes without full loads.[155] Demand can also be reduced by increasing the water efficiency of existing hardware, for example by installing low-flow shower heads and faucets, and replacing or repairing inefficient hardware.[156] For example, fixing a single dripping tap can save up to 25 gallons of water per day.[157] By simply putting sand-filled bottles in toilet tanks to reduce flush volumes in 25 percent of its rooms, the Hotel Beausejour in New Brunswick, Canada, saved 26,400 gallons of water per year.[158] These practices will result in economic savings, especially during periods of drought, use restrictions or increasingly strict government regulations on water use.

Newer or more efficient technologies can also reduce water use through recycling. For example toilets that use "graywater" from showers for flushing can result in significant savings. Another graywater technology is washing machines that reuse purified water from the previous rinse cycle for the next wash, resulting in a water savings of up to 35 percent.[159] The Apple Farm Inn and Restaurant, a seven-room luxury hotel in California, USA, uses discharged water from washing machines to flush toilets, saving 4,200 gallons of water per day and approximately US$5,000 per year.[160] Some water saving techniques, for example spring loaded faucets or timing devices on showers, are extremely efficient, but may not be suitable to higher-end locations. Instead, the higher revenues from more luxurious accommodations should be used for more expensive water recovery and purifying systems.

n Steps toward improving water use:

- ✓ Choose water sources based on environmental and local use characteristics of the surrounding area.
- ✓ Avoid wasteful practices and install water-saving devices.
- ✓ Increase the efficiency of existing equipment and replace older, inefficient hardware.

3.3.3.6 Potential negative environmental impacts of solid waste

- **Solid waste produced by hotels can cause serious contamination and visual degradation of surrounding areas, threaten human health and represent significant disposal costs.**

Tourists on average consume far greater quantities of processed resources, such as packaged foods, cleaning products and disposable goods, than local people. These products, in combination with the use of appliances and other equipment to provide services, create large quantities of solid waste, some of which is toxic.

In many areas, hotels do not dispose of their waste properly, using badly designed dumps or simply putting waste out of the sight of tourists. This practice can aesthetically degrade the area. Moreover, uncontrolled disposal of toxic items such as paint cans and batteries can severely contaminate water, air and soil resources, often directly threatening human health. Where organic waste is not dumped in controlled areas, local species may quickly change behavioral patterns to become scavengers around hotel areas. In Northern Palawan, the Philippines, for example, food refuse around some tourist facilities has increased the presence of scavengers, which in turn increases the problem of predation on the eggs of rare birds and turtles.[161]

Even when dumps are used, poor design can result in fires, odors, flies and ineffective containment of leachate, leading to water and soil pollution. On St. John, U.S. Virgin Islands, a recent dump fire cost hundreds of thousands of dollars to extinguish.[162] Coastal areas, which have very porous soils that are hard to seal, are particularly susceptible to groundwater contamination from dumps.[163] The small size of some resort islands often means that there is no suitable location for solid waste facilities and may also limit viable recycling programs. In many areas, resorts dump waste directly into the ocean or rivers. On the island of Lesbos, Greece, garbage dumped directly into the sea by both hotels and residents has contributed to severe pollution of the gulfs of Kalloni and Ghera, where the quantity of fish is decreasing and waters are no longer suitable for recreation.[164]

In Negril, Jamaica, because of dumping by tourists and local residents, refuse can often be seen floating on the surface and along the bottom of the ocean in developed areas. In many places, the surface of the water is covered by a white scum.[165] Coastal pollution can also drift to neighboring areas. In Pulau Pangkor Laut, Malaysia, for example, beaches have been polluted by wastes which wash in from other areas.[166]

3.3.3.7 Improving solid waste disposal and product purchasing practices

- **Reducing the amount of products purchased overall, buying responsible products, and reusing and recycling products wherever possible can save money and reduce environmental damage.**

A solid waste management program should revolve around the "three R's," Reduce, Reuse and Recycle. In addition to environmental benefits, an effective waste management program can have financial benefits for a resort through fewer

trash pickups and lower hauling and disposal fees.[167] In some cases, savings can come from unexpected places. For instance, one hotel that instituted recycling discovered that, in sorting the trash, employees continually came across valuable items, such as cutlery, that had been inadvertently thrown away.[168]

For existing resorts, the first step in developing a successful waste management program is a thorough review of the types and quantities of waste produced and current disposal methods and costs.[169] Managers should evaluate the environmental impact of their waste, local waste regulations, markets for recycling, and the capacity and constraints of existing or planned facilities.[170] Based on this review, they can determine how each type of waste can be reduced, reused or recycled. Once a waste management program has been established, it should be regularly monitored to ensure compliance with stated targets and guidelines.[171]

Product purchasing: The initial review of waste production should include consideration of all major areas of product purchasing, including cleaning and laundry, food and beverages, equipment and vehicles, office supplies, furniture and bedding, cosmetics and toiletries in guest bathrooms, and maintenance equipment.[172] Purchasers should strive to avoid products that are made with environmentally harmful materials, reducing environmental impacts at the hotel and also in supply industries. Green Seal, an environmental standards organization, has developed an environmental certification program for suppliers that can help hotels choose environmentally friendly products.[173]

Hotels can also take an active role in influencing and working with suppliers. The Grecotel hotel chain in Greece, for instance, is using the link between tourism and agriculture to promote sustainable development in the two sectors. The company has made its interest in locally grown organic produce known to local farmers' groups, many of which have expressed a desire to participate in the program, as the hotel offers a guaranteed market and technical assistance from its agronomist.[174] In 1995, four Grecotels in Rethymnon, Crete, began growing their own organic fruits and vegetables, producing 80 tons of produce between 1995 and 1997 and supplying 50 percent of their total fresh vegetable consumption. The four hotels have also switched to composting garden and kitchen waste and using organic farming principles for all garden flowering plants, saving more than US$130,000 in the process.[175]

Traditional farming in Java, Indonesia.

Photo: Russell Mittermeier

Reduce: Buying products with minimal or no packaging, bulk items, and durable, reusable products will reduce waste in consumption,[176] while buying reused or recycled packaging and materials will reduce the waste generated during manufacture of these items. Plastic packaging, which is non-biodegradable and difficult or impossible to recycle, should be avoided whenever possible.[177] Buying local products and materials that require less transport, packaging and storage will also reduce waste and can, at the same time, provide important benefits to local communities. Where possible, hotels should work with potential local suppliers to develop the products they need.

Reuse: For non-natural products that cannot be reduced, eliminated or produced on site, disposable items should be replaced when feasible with reusable ones. Reusable beverage containers, rechargeable batteries, refillable soap and shampoo containers, and cloth laundry bags will all eliminate a significant portion of daily guest-generated waste.[178] At the Omni Hotel in Hong Kong, China, laundry is returned to guests in a reusable rattan basket, rather than wrapped in plastic.[179] At a range of

other resorts, soda and other drinks are served by draft at the bar in glasses, eliminating the need to dispose of or recycle cans and bottles.[180]

Recycle: Items that cannot be reused in their current function can often be recycled into new versions of the same product or for entirely different uses. Besides reducing waste and saving energy and natural resources, recycling can be financially beneficial by reducing collection, hauling and dumping costs and even earning money for a resort if there is a local market for recyclable objects.[181] The most commonly recycled items are paper, glass, metals such as steel and aluminum, and a few types of plastics. Investing in a crusher for metals or glass can decrease the volume of these recyclables and thus further reduce transportation and disposal costs.[182]

It is important that any guest recycling program be convenient and user-friendly, with well-marked sorting bins provided in each guest room and work space and at other locations throughout the resort.[183] Many hotels are finding that environmentally aware guests now *expect* to find recycling facilities in hotels and will use them if they are there.[184] By placing recycling boxes for glass and cans in just 70 rooms, the Skydome Hotel in Toronto, Canada, collected 58,000 cans and 12,000 bottles in a single year. Guest response to the program has been unanimously positive.[185]

A resort can maximize opportunities for recycling by concentrating product purchasing on those items for which there is already a recycling market.[186] Products packed in a single material, for instance in cardboard boxes with cardboard spacers, rather than Styrofoam, will also facilitate the separation process.[187] Even if there is no local recycling market, a resort may produce enough waste on its own or be able to pool resources with neighboring resorts and other facilities to generate enough volume to make local recycling initiatives economically feasible.[188] At the Banff Springs Hotel in Canada, a recycling program that includes bottles, cans, paper, hangars, kitchen grease and even used motor oil has cut waste by more than 85 percent and greatly reduced the hotel's daily trips to the waste transfer station.[189]

If it is not possible to recycle certain materials locally, there may be other creative local uses for waste, such as grinding up glass beverage bottles for construction and gravel.[190] Old towels, sheets and tablecloths can have a second life as cleaning rags or even laundry bags. At L'Hôtel in Toronto, Canada, old bed sheets are sewn into reusable laundry bags, to replace disposable plastic bags.[191]

While metals, glass and plastics will generally be recycled off-site, biodegradable organic wastes such as food scraps, paper, leaves, tree cuttings and even solid sewage sludge, can easily be recycled on-site.[192] These organic wastes generally account for 60 to 75 percent of all solid waste. Composting is the most common type of organic recycling. In this process, organic wastes are mixed with mulching agents such as wood chips, newspaper and cardboard to add air and speed the process of digestion. The compost, which must be stirred daily, will eventually be reduced to about 40 to 50 percent of its original bulk and will produce a valuable and rich soil for gardens and other plantings. This product can be particularly valuable in the tropics where soils are generally poor. Any excess compost not needed on the resort grounds can be sold for profit.[193]

At Great Keppel Island Resort in Australia, paper, cardboard, garden waste, sewage sludge and some food scraps (no oils, fats or sauces) are shredded, composted for several weeks, and then fed to the worms at the resort's worm farm. Within several months, the worms produce a rich product that is used in the resort's gardens instead of fertilizer. This system not only reduces waste, but also eliminates the costs of having to remove the waste from the island.[194] The Rainforest Habitat in Port Douglas, Australia, also set up a worm farm, into which it dumps a large portion of food scraps, leaf litter and animal droppings from the property. The worms eat the decomposing material, creating excellent fertilizer. The worms themselves are fed to both birds and animals on the sanctuary. The worm farm produces no odor, is easy to care for, reduces disposal costs and reduces environmentally destructive waste.[195] Another potential solution is to donate organic wastes to other productive uses. The Phuket Yacht Club in Thailand, for instance, sends more than 100 gallons of organic waste per day to a local pig farm.[196]

n Steps toward improving product purchasing and solid waste disposal:

- ✓ Buy products with minimal or no packaging, bulk items, recycled items, durable, reusable products and organic or natural products.
- ✓ Challenge suppliers to meet demands for improved products.
- ✓ Buy local products to reduce transport, packaging and storage costs and support local communities.
- ✓ Replace disposable items with reusable ones.
- ✓ Recycle whenever possible.
- ✓ Compost organic wastes.

3.3.3.8 Potential negative environmental impacts of wastewater and sewage

- **Inadequate or non-existent sewage and wastewater treatment can lead to severe environmental damage, human health impacts and economic costs for developers.**

Aside from solid waste, the other major form of waste produced by resorts and other tourism facilities is wastewater and sewage. In many areas, little or none of this waste is treated. Even in areas with regulations, sewage disposal can still be a severe problem. Seventy-five percent of wastewater treatment plants operated by hotels and resorts in the Caribbean in 1996 did not comply with basic effluent dis-

charge criteria.[197] Overall, only 10 percent of the sewage produced by the 14 million visitors to the Caribbean in 1994 received any kind of treatment.[198]

Pollution has also resulted from a failure to take environmental features into account when designing sewage systems. In Negril, Jamaica, water levels along the coast have risen, and many septic tanks are now located below the water table, causing them to leak untreated sewage into the water.[199] Along the coastline of the Lekki barrier lagoon in Nigeria, low gradient heads of the sewer drainage system have led to flooding in most parts of the barrier complex during the rainy season. The few storm drains that exist are often backed up during high tides, leading to stagnant water in the drainage system that has become a breeding ground for mosquitoes and other insects.[200] Coastal areas with little water movement are especially vulnerable to damage from badly treated sewage. In the Mediterranean, for example, where the water renewal period is almost 100 years, sewage and other pollution remains where it is discharged for many years.[201]

Poor sewage treatment can lead to pollution of ground and surface water, bacterial growth, the smothering of corals,[202] the accumulation of toxins in aquatic and marine organisms, and algal blooms, which reduce oxygen available to other organisms and can cause biologically dead areas. In Rio de Janeiro, Brazil, although increased sanitation infrastructure has improved water quality in some areas of Guanabara Bay, other areas are now effectively dead, with beaches that were safe 20 years ago unusable due to raw sewage discharge, garbage and industrial pollution.[203]

Among humans, inadequate treatment of human waste can cause infection, gastro-intestinal disease, leptospirosis and cholera.[204] Along the coastlines of many tropical countries, sea water has at times been unfit for swimming or other uses because of inadequate sewage disposal by tourism facilities.[205] In Negril, Jamaica, the disposal of garbage and untreated wastewater and sewage into the sea is destroying the reef and polluting the water along the entire coast. In addition to the death of marine life, this pollution has been linked to bacterial infestation, causing ear and vaginal infections in people swimming in the area. As a result, dive shops have been forced to cancel trips, and tourists are increasingly abandoning the area for alternative vacation destinations.[206]

3.3.3.9 Improving wastewater and sewage treatment

- **A range of cost-efficient, innovative strategies can reduce costs and ensure proper treatment of wastewater and sewage.**

Tourism facilities can improve the quality of their wastewater discharge by both reducing contaminants that they put into wastewater and improving treatment. To reduce contaminants from the start, where possible, resorts should buy products such as non-bleached, recycled paper and organic foods, use biodegradable products, and control the use and disposal of items such as grease, food wastes, chemical pesticides, fertilizers, chlorine bleach, oil and paints.[207] Instead, natural products such as salt, vinegar and baking soda may be used as a substitute for chemicals used to clean ovens, drains, windows and floors.[208] For example, to avoid pollution from water discharge, the Hotel Vancouver in British Columbia, Canada, replaced chlorine with a baking soda and salt solution in its pools, saving C$2,000 (US$1,322) per year in the process.[209] Water-saving techniques, discussed in section 3.3.3.5, can also decrease treatment costs by reducing the volume of water that needs to be treated.[210]

There are several methods available for primary, secondary and tertiary wastewater treatment. Choosing an appropriate sanitation system will depend on many factors, including cost, available technology and local capacity for maintenance and construction. When designing and siting a treatment system, planners should consider rainfall levels, which will influence flooding and runoff, as well as topography, soil stability and permeability, and the location of groundwater sources.[211]

Traditionally, primary treatment of wastewater is completed in a watertight, underground septic tank in which sewage is partially treated by separating solids into a sludge. The sludge, which must be removed regularly, can be added to solid waste compost piles.[212] After the solids have been removed, the remaining liquid waste must undergo secondary treatment to remove any organic matter. Several different mechanical systems for secondary treatment utilize treatment tanks and settlement tanks in which chemicals and bacteria disinfect the water. The final, or tertiary, stage of treatment has traditionally used chlorine disinfection to remove the final bacteria. The chemicals used in these processes can be expensive and damaging to the environment.

More natural wastewater treatment options include rootzone and wetlands systems. These methods are based on the natural cycles of the environment without using chemicals. In rootzone systems, such as the one in use at the Taj Jungle Lodge at Thekkadi, India, wastewater is discharged into the root zone at a subsurface level of sturdy plants with tubular roots. The plants purify the wastewater by feeding off the organic material.[213] In wetlands systems, wastewater is transmitted through a series of ponds, lined with impermeable linings to prevent seepage of pollutants into soil and groundwater. In each pond, organic matter in the waste is eaten by bacteria growing on plant roots and is converted to water and carbon dioxide. Such systems require a large amount of space and relatively warm weather, making them ideal for some tropical environments.[214] Less harmful alternatives for tertiary treatment include using ultra-violet lamps similar to tanning lamps to produce an intense light and kill bacteria, or ionization, which uses an electrical current to kill off pathogens and has the added benefit of softening the treated water.[215]

On a smaller scale, a potential alternative to a conven-

tional sewage system is the use of composting toilets, which use little or no water and little energy and result in a nutrient-rich fertilizer that can be used on the resort's grounds. Kitchen scraps and other organic waste can be added to the compost. While composting toilets are relatively easy to maintain and can be designed to eliminate odors, some visitors may not like the idea of waterless toilets and they will generally not be appropriate or feasible at large-scale or high-end facilities.[216]

Treated wastewater can be reused for washing floors, flushing toilets and irrigating gardens and golf courses.[217] If water is going to be reused, it is important to separate "graywater," which mainly comes from washing machines, sinks, showers, baths and roof runoff, from "blackwater," which comes from kitchen dishwashing and toilets. While graywater can often be reused with minimal treatment, blackwater, which can contain grease, oil, blood and human wastes, must be more fully treated.[218] Graywater can be separated from blackwater through a well-marked, dual-pipe sewage system.[219] Such a system is most cost-effective if installed during construction or in larger commercial establishments. However, while it may be expensive to retrofit a facility, especially a small one, graywater reuse can result in as much as 75 to 90 percent water savings.[220]

At the Le Sport resort in St. Lucia, sewage used to be treated at an outdated plant. In 1996, the resort created a series of wetlands, in the form of three interconnecting lagoons, that filter wastewater with aquatic plants and mesh. The filtered "graywater" is then disinfected further with ultra violet rays and used for irrigation on the resort's grounds. Fish in the ponds control mosquito larvae and algae. In its first year of operations, the new treatment method saved about one million gallons of water and thousands of dollars.[221] Disney World in Florida, USA, recycles four million gallons of wastewater a day for irrigation of landscaping and golf courses. The company found that this method was not only environmentally responsible, but cost-effective, as using municipally treated water would have been much more expensive.[222]

The Hayman Island Great Barrier Reef Resort in Australia has a comprehensive water management system. The resort has a water desalinization plant that produces all of its water needs from sea water combined with rainwater collected from local roof runoff. The gardens are irrigated with treated effluent from the sewage system, and dried sewage sludge is used as mulch and compost, along with kitchen and garden waste.[223]

n Steps toward improving wastewater and sewage treatment and discharge:

- ✓ Ensure that all wastewater is properly treated before it is released into the environment.
- ✓ Reduce contaminants entering wastewater.
- ✓ Consider local climatic and geographical features when designing wastewater treatment facilities.
- ✓ Replace traditional, chemical-based wastewater treatment plants with more natural options.
- ✓ Reuse treated wastewater for washing floors, flushing toilets and irrigating gardens.

3.3.4 Improving tourist activities and behavior

Tourism may also have a significant impact on natural and cultural surroundings outside of the hotel, as tourists interact with surrounding communities and impact the environment through transport, sightseeing and recreational activities. While resorts cannot be responsible for all activities of their guests, implementing specific standards and guidelines for cultural interaction, recreation and transportation services sponsored by the hotel will help to minimize adverse environmental and social impacts. Resorts can also help tourists to make more informed and sensitive decisions by providing guidelines for activities not run by the resort.

3.3.4.1 Potential social impacts of tourist presence

- **Where tourism is not developed in a culturally sensitive manner, the presence of tourists can result in unwanted changes, anger and conflicts in local communities.**

Tourism development often brings new cultures and previously unheard of amounts of people and money into relatively isolated communities. The potential impacts of these changes are often compounded by extremely rapid growth of tourism after a destination is "discovered." For example, between 1970 and 1973, the number of visitors to Kuta, Indonesia, increased from 1,000 to 15,000.[224] Bali as a whole received 30,000 foreign tourists in 1970; in 1996, it received more than this number every two days.[225]

In many cases, demographic changes are compounded by migrants from other parts of the country who, like tourists, bring significantly different cultures that may conflict with local beliefs and practices. Even when migrants are from similar cultures, serious negative impacts may result.[226] In Negril, Jamaica, for instance, tourist wealth has lured large numbers of migrants from surrounding areas. Migrants now make up more than 60 percent of the population. Many earn a living from drug dealing and hustling, resulting in serious local discontent with the character of their community.[227] Migrants who are involved in activities that conflict with local values can inspire local antagonism not only toward them but also toward tourists and developers.[228] In addition, a lack of housing and infrastructure for the increased population often means that migrants working in tourism areas live in unhealthy slums with no fresh water, electricity, sewage treatment or other pollution controls.

Tourism has the potential to provide a positive opportunity for cultural exchange and growth in knowledge and understanding.[229] However, today, particularly with mass

tourism, this sort of positive cultural interaction between tourists and local communities is rare, because of relatively short visits by tourists and a general lack of understanding, and in some cases respect, by each group about the other's culture. This problem is often compounded by language barriers.[230]

Particularly where local people do not have a role in shaping the type, location and size of tourism development in their areas, the presence of tourists can result in conflicts and anger at tourists and developments. In many cases, tourists seeking to watch everyday practices such as bathing, clothes washing, farming and religious ceremonies can be intrusive, making local people feel uncomfortable in their homes or forcing them to relocate their activities.[231] People can suffer serious social costs from losing control of the direction of development in their communities.[232] In some areas, residents are actively seeking ways to reduce tourist inflow[233] or prevent tourism development altogether.

In Orcha, Madyha Pradesh, India, local residents were opposed to development of large-scale tourism facilities. Nonetheless, developers have built large hotels along riverbanks, blocking local residents' views of majestic palaces across the river. In order to avoid being watched and photographed by tourists, local women have been forced to relocate their traditional morning baths in the river. Local residents have expressed the fear that, in the long term, large numbers of tourists lacking genuine interest and respect for local people and their culture will undermine the village social structure and destroy their way of life.[234]

In many cases, tourists enjoy luxuries such as electricity, clean water, sewage, security and expensive recreation activities to which local people have no access.[235] Large, self-contained resorts that discourage interaction and contact may increase a local sense of being underprivileged.[236] Further, differences in wealth and lifestyle are exaggerated as tourists tend to splurge on holidays. Because of these differences, local people often envy perceived and real advantages in tourists' lifestyles.[237]

In some cases, differences can result in a "demonstration effect," in which local people seek to emulate the culture of visitors. Some of the most common changes are in social behavior, dress and eating habits.[238] Although these changes represent the loss of aspects of traditional cultures, they should not be regarded as purely negative in all cases. Furthermore, tourism is not always the primary cause of these changes; developments such as mass media and increased worldwide communications may play a more causal role.

One of the most negative social impacts of tourist presence is the degradation of local cultures through commercialization. Tourists often seek to observe "traditional" or "authentic" people and rituals as vacation attractions. Traditional funerals, for instance, are advertised as a tourist attraction in Bali, Indonesia. Tourist attendance at these events has become so widespread that local people have been crowded out in some areas.[239] Tourist observance of traditional events, cultural practices and ceremonies has in many cases caused profound distortions and loss of significance. For instance, in Hawaii, USA, the marketing of the hula dance has changed the basic nature of the dance. To younger generations, it is no longer an important cultural practice, but merely a dance to perform for tourists.[240]

The extreme of commercialization is the "zoo effect," where tourists come to observe local people like animals in a zoo, and there is no positive interaction.[241] Throughout the tropics, ethnic groups such as the Maasai in Kenya or the Mlabri in Thailand have become spectacles for busloads of tourists.[242] This problem can result in loss of pride and complete reliance on tourism for subsistence. In many cases, tourism development has been largely responsible for forcing these changes, either directly by destroying or prohibiting traditional means of livelihood, or more subtly by providing a potentially easy way to earn badly needed resources.[243]

By contrast, in some areas, tourism has been instrumental in reviving cultural practices. Although tourism-driven revival often changes the significance of practices, in certain areas it has also led to increased pride in tradition. In Malta, for instance, tourist interest in traditional arts, history and folk culture has been associated with helping to build a sense of national pride and identity. As a result, tourism was generally welcomed by local inhabitants throughout the 1980s.[244] Similarly, for the traditional Sa people of South Pentecost Island, Vanuatu, displaying the cultural practice of "land-diving" to tourists has become a way to proudly display cultural identity. It is likely that this display has helped to preserve pride and even bring about a resurgence of traditional culture in the face of missionaries, tourism and industrialization.[245]

3.3.4.2 Improving tourist interaction with local people

- **Resorts can play a critical role in averting conflicts and promoting understanding and positive cultural exchange between tourists and local people.**

As with other social impacts, mitigating adverse impacts of tourist presence will depend centrally on respecting local interests during planning. Developers should consult with local people directly before developing facilities or tours. When the people who live in or use an area do not want tourism development, developers should respect this choice. Developers and tour groups should also respect locally determined limits on number and behavior of visitors.

Where local people are in favor of tourism, developers should work cooperatively with local people in developing culturally-based attractions to ensure that developments are not exploitative. Several resorts, tour operators and local communities have worked together to design tourism facilities and activities in and around local communities that respect locally determined limits, and at the same time create high-quality, truly authentic experiences for tourists. For instance the Quito, Ecuador-based tour operator TROPIC

Ecological Adventures and the Huaorani people in Quehueri'ono, Ecuador, have worked together to design a trip to the community. In order to limit impact to acceptable levels, they have set a limit at eight guests once per month. Although this trip costs more than other trips to Huaorani territories, guests overwhelmingly indicate that they spent the money gladly because of the high quality of the experience and the knowledge that the community is receiving real benefits from their visit.[246]

Guides should ideally be chosen from local groups to promote appropriate behaviors by tourists and increase meaningful interaction between tourists and local groups. Costa Rica Expeditions trains its guides to promote meaningful contact between tourists and local people. To facilitate this interaction, guides meet the various local service providers beforehand.[247] Resorts should also educate their guests about acceptable behaviors. One important practice for tourists is to ask people for permission before photographing them.[248] In areas around the world, using these practices to improve social impacts will require a dramatic shift in the nature of tourism development and of cultural attractions.

n Steps toward improving tourist interaction with local people:

- ✓ Respect locally determined limits on scale and activities.
- ✓ Work with local people when developing culturally based attractions.
- ✓ Educate guests and local people about different cultures and acceptable behaviors.
- ✓ Hire guides from local communities.

3.3.4.3 Potential negative environmental impacts of tourist transportation

- **Poorly maintained and operated transportation can cause noise, pollution and habitat degradation.**

Cars, buses and trains burn large quantities of gasoline and release pollutants that can reduce local air quality and greenhouse gases that contribute to global warming. Because cars transport relatively few people at a time, they are much less efficient than buses and trains, and generally emit more pollutants per person transported. Assuming vehicles are full, the amount of energy required to transport one person one mile by car is three times that needed by a bus.[249] Carbon dioxide emissions per person for cars are approximately two-and-one-half times greater than emissions by trains and buses.[250]

Driving off-road can degrade delicate ecosystems and disrupt wildlife breeding, migration and feeding patterns. Even on-road transport can disturb wildlife with noise and pollution. In Kenya's Amboeseli National Park, dust clouds caused by tour vehicles frighten animals and reduce the overall quality of the tourist experience.[251] In a 1990 survey, 80 percent of tourists to Kenya indicated that animal harassment, off-road driving and vehicle congestion were serious problems.[252]

Off-shore, boat anchoring and groundings—which increase with the number and size of boats—can cause major damage to both coral and sea grass beds. In some places, paths may be cut through coral reefs for divers and

Trail interpretation by a local guide, the Petén, Guatemala

Photo: Michelle Sister

snorkelers, causing serious damage to the reef ecosystems.[253] Repeated minor changes from increased sea traffic, such as wakes and stirred up sediment, can also cause coral attrition.[254] If boats are not well maintained, oil and gas leaks can significantly pollute coastal areas.

Some animals, such as the endangered sea cow or manatee, which often floats near the surface, are constantly injured by passing boats. Waterfowl may also be disrupted by the noise and presence of passing vehicles. In the Yucatan Peninsula, Mexico, a 1995 study of the effects of motorized tour boats on flamingo behavior found that, each day, 75 percent of boats created a disturbance, resulting in significantly increased alert behavior and loss of feeding time. These impacts were worse on days with higher levels of boat traffic.[255]

3.3.4.4 Improving tourist transportation practices

- **Improvements in transportation equipment and operating procedures can help to preserve the quality of the destination and save money.**

When developing a transportation strategy, resorts and destinations as a whole should reduce the use of fossil fuel-powered vehicles wherever possible. For example, providing bicycles for short trips is one possibility for both guest and staff transport. Sailboats may also be an effective substitute for motorized tourboats. While it is unlikely that resorts or destinations will be able to completely abandon the use of motorized transport, minimizing its use can enhance the experience of tourists by decreasing noise and pollution, contributing to a more relaxed atmosphere and increasing recreation options. The use of non-motorized transport can also provide opportunities for marketing.

Destinations should also consider "no-vehicle zones," which can increase the quality of entire areas. In 1993, 32 resorts in Germany formed the Automobile-Free Spas and Tourist Resorts Association to develop a variety of measures to eliminate automobile traffic in resort and recreation zones. Solutions include pedestrian-only areas, parking outside of central areas, and free public transport and electric buses within central areas.[256]

In some cases, electric motors can be an effective substitute for fossil fuel-powered engines. Electric golf carts, for instance, are one option for moving tourists and their luggage around hotel grounds. On the island of Jersey, UK, a group of hotels and rental car agencies are promoting the use of sustainable technology by encouraging the rental of electric cars. At five of the island's prestigious hotels, guests can rent the RAV4 EV (a Toyota electric vehicle) for the same cost as a mid-size vehicle. At the end of the day, guests can plug in at the hotels to recharge their vehicles. The project has been met with enthusiasm by tourists.[257] In sensitive areas, electric motors can significantly reduce disturbance and increase the likelihood of seeing wildlife. River tours from the Sukau Rainforest Lodge in Sabah, Malaysia, for instance, make use of quiet electric motors when viewing wildlife.[258]

When using gasoline- and diesel-powered vehicles, it

Tourist vehicles often disturb wildlife populations.

Photo: Hitesh Mehta

is possible to significantly decrease energy consumption and emissions by choosing an efficient mode of transport. Boats can vary widely in efficiency depending on hull design. On land, buses and trains generally cause the least environmental impact per person transported. Choice of motor can also play an important role in reducing impacts. Four-stroke engines are generally more efficient, quieter, and significantly less polluting than two-stroke engines,[259] which can discharge up to 25 percent of their fuel unburned into the atmosphere.[260]

Operators should attempt to operate vehicles with a full load whenever possible. Efficient use of capacity can be facilitated by transporting guests in groups wherever practical, for instance from airports to hotels or to attractions. Maho Bay Camps in St. John, U.S. Virgin Islands, has a regular shuttle schedule for guests, which decreases the need for rental cars and facilitates easy visitation around the island.[261] Managers may also find it practical to combine guest transportation with staff travel or delivery of supplies. Similarly, managers can arrange carpools, boatpools or a single vehicle to bring staff to work.[262]

Staff should be trained in the proper maintenance of vehicles, which will help to reduce environmental impacts and increase the life of expensive machinery. Cars and buses should be kept well-tuned, with wheels aligned and tire pressures at recommended levels. On boats, operators should ensure that engines and drives are well-tuned and not leaking, and that hulls are free of barnacles and other objects which increase drag. Drivers should decrease speed where possible; decreasing driving speed from 68 to 56 miles per hour on average decreases fuel consumption by 20 percent.[263] On most boats as well, fuel consumption per mile is significantly higher at high speeds. Drivers and skippers should switch off engines when idling; a normal car engine uses 0.4 gallons of gasoline per hour of idling.[264] Finally, waste from transport vehicles should be properly disposed of. Engine oil can be recycled in many areas. Cars and buses should recycle or retread tires. Boats should use sewage pump-out facilities in harbors rather than dumping sewage at sea or in port.

Box 3.2: Reducing the Negative Impacts of Golf Courses

Golf is one of the most popular activities at resorts around the world. Today there are more than 25,000 courses worldwide, and this number is increasing rapidly in tourist areas, particularly in the developing countries of Asia. In Malaysia, the number of golf courses more than doubled between the early 1980s and the early 1990s.[1] The Tourism Authority of Thailand advertises its nation as having a "well-deserved reputation as a golfer's paradise."[2]

Although it may be difficult to associate the green expanses of golf courses with negative environmental impacts, a single course can cause drastic ecological damage and seriously threaten human health. An 18-hole golf course requires a minimum of 90 acres of land,[3] although many are much larger. This land is often made suitable for golf by filling wetlands, removing natural vegetation or converting it from agricultural production. Around the world, thousands of acres of rain forest have been bulldozed to build golf courses. An average course uses between 800,000[4] and 1.3[5] million gallons of water per day. This same quantity of water is enough to meet the daily needs of thousands of local residents; for instance, 800,000 gallons per day would meet the needs of approximately 5,000 rural families in Mexico.[6]

The quantity of pesticides, herbicides and fertilizers necessary to maintain the grass on a golf course averages about 1,500 kilograms per course per year,[7] equivalent to seven times the amount used per acre by large-scale agriculture in the United States.[8] These chemicals can pollute surrounding areas through infiltration and runoff, especially where sewage infrastructure is inadequate. Chemicals used to maintain golf courses have been associated with pollution of water resources, the death of wildlife and increased diseases, including cancer, among humans.[9] In the early 1990s, for instance, a U.S. Navy investigation linked the death of one of its lieutenants to golf-course pesticides absorbed through the skin.[10] The U.S. Ladies Professional Golf Association offers free mammograms to its members, because of the higher rates of breast cancer among women professional golfers.[11]

The most important step in addressing these negative impacts is planning. Before building courses, developers should study local ecosystems to ensure that land-clearing, water use and pest control measures will not cause unacceptable damage to ecosystems or local uses. Developers should also ensure that courses will not cause excessive erosion or displace people against their will. Many resort locations will not be suitable for golf courses. In these areas, if tourism is to be developed, developers should focus on other natural features to provide tourist attractions.

Where golf courses are built, a range of improvements can result in significant financial and environmental benefits. For instance, by reducing

Terrestrial vehicles and boats should stay on roads or in boat lanes. In marine areas, resorts and mangers of natural areas should install and require the use of mooring buoys wherever possible to avoid damage from anchors.[265] They should also institute maximum speed regulations in specific areas. Where there are no buoys, boat operators should be careful to avoid dropping anchors on reefs.[266]

n Steps toward improving transportation:

- ✓ Consider the use of non-motorized transportation and electric motors to decrease pollution and noise.
- ✓ Consider "no-vehicle zones."
- ✓ Choose an efficient mode of transport, such as buses and trains, to decrease energy consumption and emissions.
- ✓ Train staff in the proper maintenance of vehicles and boats, and mandate maximum speeds.
- ✓ Stay on roads or in boat lanes.

3.3.4.5 Potential negative environmental impacts of recreational activities

- **Even low-impact recreational activities can have significant cumulative environmental impacts if not carefully controlled.**

Recreational activities, including water sports, golfing, hiking, wildlife viewing and shopping are often an important part of a resort-based vacation. In many cases, tourists may be unaware that these actions can have adverse impacts. Often, negative impacts of recreation can be exacerbated by poor operational practices by tour companies and guides.

Snorkeling and scuba diving have been growing in popularity worldwide. Once a location gains a reputation as a diving destination, numbers of divers can grow rapidly, increasing the potential for environmental degradation.[267] In Hawaii, USA, for example, the number of divers increased from 450,000 in 1975 to about two million in 1988.[268] Inexperienced divers may accidentally touch corals and sea grasses

nutrient applications and mechanical controls, the Valderrama Golf Club in Spain eliminated the need for chemical control of algae in water features.[12] In Vilamoura, Portugal, three golf courses managed by Lusotur recently received ISO 14001 certification for their management systems.[13]

The National Audubon Society's Audubon Cooperative Sanctuary System describes six categories in which courses can improve environmental performance. These are:

- *environmental planning:* generate a plan outlining environmental goals and proposed projects, including a plan for monitoring environmental conditions, species, and improvements;
- *wildlife and habitat management:* leave woodland understory where possible, maximize natural non-play areas, buffer shorelines, protect wetlands, leave dead trees standing, mount and monitor nest boxes;
- *integrated pest management:* reduce turf stress from carts, traffic and low mowing heights, regularly monitor disease, insect and weed problems, reduce chemical use, use slow release and organic fertilizers, use mechanical controls, use pesticides only on a curative basis, educate and train employees;
- *water conservation:* check irrigation system for proper distribution and leaks, install more efficient systems where possible, water during low evaporation times, choose turf species suited to climate and soils, select water sources with the least impact on local supplies, re-capture and re-use irrigation water, use local vegetation for landscaping, document water reduction;
- *water quality management:* maintain shoreline vegetation to minimize erosion and runoff, establish no-spray zones around water features, develop and maintain equipment wash down and storage areas, improve drainage, monitor water quality;
- *outreach and education:* educate and involve golfers in conservation projects on and around the course, work with local groups on environmental awareness and monitoring programs.[14]

1. Samantha Sparks, "Ruinous Resorts: Tourist Development in Malaysia," *Multinational Monitor* 12, no. 10 (1991), available at: http://www.essential.org/monitor/hyper/issues/1991/10/mm1091_06.html

2. Tourism Authority of Thailand, *Exotic Thailand: Pattaya and the East Coast* (Thailand: Tourism Authority of Thailand 1998), 13.

3. Elaine Robbins, "Golf War Syndrome," *UTNE Website* (1998), available at http://www.utne.com/lens/atc/15atcgolf.html

4. "Asia Golf Tourism," (1997), available at http://gurukul.ucc.american.edu/ted/ASI-AGOLF.HTM

5. Pratap Chatterjee, "Clubbing Southeast Asia," *Multinational Monitor* 11 (1993), available at: http://www.essential.org/monitor

6. Author's calculation from E. Robbins, "Golf War Syndrome."

7. Chatterjee, "Clubbing Southeast Asia."

8. Sara Chamberlain, "Golf Endangers Hawai'ian Ecology and Culture," *Econet Website* (1998), available at: http://www.econet.apc.org/ei/journal/

9. Ibid.

10. C. Cox, "Pesticides on Golf Courses: Mixing Toxins with Play?," *Journal of Pesticide Reform* 11(3), 1991, 2-4.

11. Ladies Professional Golf Association, telephone conversation with author, 4 January 1999; Chamberlain, "Golf Endangers Hawai'ian Ecology and Culture."

12. Audubon Cooperative Sanctuary System, *Environmental Stewardship Report* (Selkirk, New York: Audubon Cooperative Sanctuary System, 1998).

13. "Vilamoura: Destino Verde." First Semester, 1998.

14. Audubon Cooperative Sanctuary System, *Minimum Required Items for Certification* (Selkirk, New York: Audubon Cooperative Sanctuary System, 1998).

numerous times in each dive. As these minor impacts accumulate, they can cause significant damage. When divers lift coral rocks and boulders to see marine life growing underneath, many organisms die if the rocks are not replaced as they were.[269] Divers who practice spear-fishing, as well as those who collect marine organisms such as corals and sea fans, have an even greater impact on the areas they use.

On land, hikers and wildlife viewers can also have a negative impact on the ecosystems and species they visit. In delicate habitats throughout the tropics, hiking off trails can result in rockslides, erosion and destruction of vegetation, such as mosses, lichens and certain grasses, which may take as many as 100 years to regenerate. Tourists may leave behind trash, despoiling the environment and potentially harming wildlife. Large numbers of tourists viewing wildlife—especially if they are loud or come too close—can make animals nervous and provoke defensive displays, disrupting behaviors such as feeding, courtship, nesting or raising young. Additionally, the eggs and young of distracted animals are more susceptible to predators.[270]

In some cases, tourists can also have a significant impact on terrestrial and marine species through their shopping choices. By buying souvenirs such as snake and lizard skins, ivory, turtle shells, feathers, corals or shells, tourists can increase the motivation of local people to continue to collect these species, which may represent a significant threat to local biodiversity.[271]

3.3.4.6 Improving recreational activities

- **Increasing guests' understanding and appreciation of natural environments and their role in conserving them can reduce negative impacts from recreation.**

Depending on the activity, providing guidelines, requiring the use of guides, or requiring tourists to receive instruction may all be useful in changing behavior. For many activities, outside groups that are active in resort areas have developed guidelines and training that hotels can use both to train their own personnel and to offer to tourists. For instance, diving and environmental organizations such as the Professional Association of Diving Instructors (PADI) and the Coral Reef Alliance (CORAL) have developed codes of good practices for diving. PADI distributes its guidelines to resort destinations in a brochure called "Ten Ways A Diver Can Protect The Underwater Environment."[272] Ecotourism organizations such as The Ecotourism Society can provide good guidelines for hiking, sightseeing and longer trips to natural areas.

Generally, for diving, before divers visit sensitive areas, instructors should teach buoyancy control, appropriate weighting, and control of fins, gauges and equipment.[273] Instructors should also ensure that divers respect all local guidelines, laws and regulations.[274] Some basic guidelines include never touching, standing on, or collecting corals, and never feeding or touching fish or other living organisms.[275] Divers around Isla Contoy, Mexico, are instructed to keep their hands two meters from the reef, and boats no closer than 30 meters. They are also prohibited from touching marine species, or using gloves, knives, lamps or suntan lotions that are not environmentally safe.[276]

For divers who wish to make an extra contribution to local conservation efforts, resorts or dive operators can direct them to ways to volunteer for surveys or other projects. For instance, in the Togean Islands, Indonesia, a recent explosion in the population of crown of thorns starfish has begun to pose a major threat to the health of the area's reefs. Jaringan Ekowisata Togean (the Togean Ecotourism Network), a group of local guides, accommodation managers and boat owners in the islands, takes groups of tourists on trips to manually remove these starfish.[277]

For hiking and camping in sensitive areas, requiring or providing guides can be critical to minimizing impacts and increasing the quality of the experience for tourists. In all cases, tour groups and individual tourists should stay on trails and avoid picking flowers or littering. When viewing wildlife, tourists should always maintain an appropriate distance. They should never surround or touch animals, get between parents and young, get between marine animals and the water, or follow animals for long periods of time. For many activities, for instance bird watching or photography, modern cameras and other technology can help ensure that tourists have high quality experiences without getting too close to wildlife.[278]

When shopping, tourists should avoid products and souvenirs made from endangered species. Resorts can aid in these efforts by providing tourists with lists of products that they should not buy.

n Steps toward improving recreational activities:

- ✓ Utilize guidelines and training programs to improve behavior and increase awareness.
- ✓ Require guests to receive instruction for certain activities, such as scuba diving.
- ✓ Require the use of guides in sensitive areas.
- ✓ Advise guests to maintain an appropriate distance from wildlife.
- ✓ Provide guests with lists of products and souvenirs to avoid.
- ✓ Provide ways for guests to volunteer for and support local conservation or community development projects.

3.3.5 Increasing local benefits from tourism development

It is not uncommon for local communities to remain extremely poor in the midst of multi-million dollar developments.[279] The practices of individual resorts can have a tremendous impact on the extent to which local people benefit from tourism. Appropriate practices to avoid this outcome include employing and training local people at all levels, developing local partnerships, buying locally pro-

duced goods and services, and supporting a range of locally beneficial projects. These practices can drastically increase local benefit and support for tourism, and often result in improvements to the tourism product itself. Furthermore, providing employment for local people can provide critical support to conservation efforts by providing a source of livelihood that is relatively non-destructive, especially in comparison to practices such as logging, mining or dynamite fishing.

3.3.5.1 Lack of local benefits from tourism

- **In many destinations, local people receive little or no benefit from tourism.**

Often, the justification given to communities for many of the potential negative impacts of tourism development is that they will receive a range of benefits. Many communities initially welcome tourism as a source of employment opportunities, wealth, resources and infrastructure development.[280] However, in many cases, as tourism develops it fails to provide local people with the type of employment and other benefits they envisioned.[281] Although the World Tourism Organization estimates that each tourist bed supports approximately four jobs in economic sectors[282] such as hotels, airlines, car rentals, manufacturing, retail, construction and telecommunications,[283] these jobs in many cases do not reach the local people who suffer the most serious costs of tourism development.[284] When the costs of tourism exceed benefits to local communities, local people will cease to support tourism, and may actively oppose it.[285]

On a macro-economic level, a significant portion of potential revenues from tourism are often lost to "leakages" resulting from repatriation of profits by foreign companies, the use of imported goods or government spending on infrastructure to promote tourism development. In Fiji, for instance, 56 percent of 1992 gross tourism receipts flowed out of the country.[286] Leakages can be even larger if tourists travel to and from the country on foreign airlines. Much of the potential local benefit of tourism, for example to local hoteliers and farmers, is therefore lost.

The distribution of benefits that do not leak out is often not favorable to local communities. Business opportunities related to tourism are very limited for poorer, isolated people, who usually lack start-up capital and a basic understanding of the nature of tourism and formal business developments. All-inclusive resorts, which are becoming increasingly popular in countries such as the Philippines, Jamaica and the Dominican Republic,[287] have the effect of further limiting business opportunities for local people. For instance, on Boracay Island, Philippines, as tourism increased from 27,000 people in 1986 to more than 150,000 by 1996, high-impact, all-inclusive resorts replaced traditional small, low-impact operators. Reduced fishing yields and increasing use restrictions led local fishermen to supplement their income by hiring out their boats to tourists, but this practice is now almost impossible due to the number of resorts that have their own boats.[288] Further, cultural exchange in Boracay, which was once described by local residents as generally positive, has been vastly reduced and is in many cases unpleasant, as large resorts provide all services to their guests, and current tourists have less interest in local interaction.[289]

Local people, especially in relatively undeveloped areas, often lack tourism-related skills. Because hotels throughout the tropics have generally chosen to employ skilled expatriate labor rather than training local people, higher managerial positions are often not available to local community members. Even in countries where nationals have the necessary skills, developers have generally hired expatriates for most higher level management and development work.[290]

Of those jobs which are available to local people, many are menial or undesirable and often seasonal. In a range of communities, local people have found work only in low paying service jobs, often only during peak seasons, and are unemployed during the rest of the year.[291] Further, migrants, who will often work for lower wages than local people, may compete with local people for these jobs.[292] Employment from tourism development on Margarita Island, Venezuela, for example, has been found to benefit mostly migrant workers, as many of the jobs created were either inaccessible to poorer local people, or undesirable to better-off segments of the population.[293]

Finally, as a range of political, economic and natural disasters around the tropics have shown, employment in tourism can be fragile. In the Gambia, for instance, a 1994 travel advisory by the British government stating that the Gambia was an unsafe destination resulted in a drastic decline in tourism, during which 60 percent of people working in tourism lost their jobs.[294] Tourism to Egypt also dropped sharply following the 1997 massacre of 58 tourists outside the city of Luxor. This decline cost the country an estimated US$700 million in lost revenues in the first year following the attack.[295] In Nicaragua, despite the fact that Hurricane "Mitch" damaged only five percent of the country's tourism infrastructure in the fall of 1998, images and reports of the disaster devastated the tourism industry, which experienced a near complete shut down.[296]

3.3.5.2 Partnering with and employing local people

- **Developers can increase local benefit and the quality of their tourism product by working in partnership with local groups and entrepreneurs, using locally provided services and hiring and training local people.**

Perhaps the most important step to ensuring long-term local benefit from tourism is the active support of locally run tourism-related businesses. For example, the Punta Cana Beach Resort, in the Dominican Republic, has organized a cooperative for local women who live at its hous-

ing facility to enable them to market their handicrafts at area hotels.[297] Furthermore, the combined resources of developers and local groups—capital and business expertise on one hand, and an understanding of local conditions, local contacts, and access to specific attractions on the other—can create unique, high quality tourism products.

One way to stimulate cooperation is through workshops that bring together stakeholder groups. In Ghana's Central Region, even though visitation has increased steadily and business is brisk, with some hotels boasting over 80 percent annual occupancy rates, the benefits of tourism largely do not flow to local communities. To address these concerns, tour operators, hoteliers, community leaders and representatives from the Ghana Tourist Board and from the University of Cape Coast recently participated in a 5-day Ecotourism Product Development Workshop coordinated by Conservation International. The objective of the workshop was to increase the average length of stay of tourists in the Central Region by developing and offering locally run, community- and conservation-based itineraries and extension tours. Six locally run products were developed. In a strong show of support for these products, the owner of the Coconut Grove Resort, which hosted the workshop, committed to sell all of the products to his 13,000 yearly guests.[298]

Canodros S.A., a tour operator which formerly operated exclusively in the Galapagos Islands in Ecuador, and ONAIE (Achuar Nation Organization) have worked in partnership to develop Kapawi Ecolodge, located on Achuar land in the Amazon Basin in Ecuador. Canodros S.A. has agreed to make the initial investments, without buying any land, and to make monthly payments to the organization for use of the land. The company is also involved in training local people. In 2011, it will leave Kapawi, leaving the infrastructure to local people to run as a sustainable means of generating income. Because of the partnership, the lodge is able to offer a unique attraction to its visitors.[299]

Resorts should also employ local people at hotels and facilities, and as guides and drivers. In order to facilitate employment, hotels should develop training programs covering both basic skills and those necessary for promotion, so they can phase local people into management positions over time. Depending on conditions, resorts may be able to include a range of benefits for local employees at relatively low costs. In Tibet, for example, the Lhasa Hotel

Women's basket-making cooperative, Botswana

Courtesy CI Slide Library

offers good wages, three meals a day, lodging in a heated dormitory and free medical care to its employees, significantly improving the quality of life of the hotel's employees.[300]

3.3.5.3 Supporting projects to benefit local communities

- **Resorts can increase local benefit from tourism development by directly promoting the well-being of local communities.**

A number of resorts have worked actively with communities, supporting development projects by donating money, time and under-utilized resources. Perhaps the most common area in which resorts have supported community development is in providing education, training and support for schools. Exploraciones Amazonicas, which operates four lodges in the Peruvian Amazon, supports efforts by CONAPAC, a Peruvian NGO, to provide school supplies for students and teachers.[301] The Punta Cana Beach Resort, in the Dominican Republic, supports a program that teaches fishermen new practices for improving sustainability.[302] Lapa Rios, in Costa Rica, offers rain forest field trips for local primary and high school students to provide environmental and conservation education.[303]

Besides contributing to education and schools, resorts have helped support community well-being through projects ranging from hospitals to demonstration organic farms. This support is often given through NGOs. The Yachana lodge, in Ecuador, for instance, donates money to FUNEDESIN, the Foundation for Integrated Education and Development, which works on a variety of local development projects, including an education center for the region, a bee raising project for women, a local health clinic and a farm demonstrating sustainable farming techniques.[304]

Resorts can also support local communities with their knowledge, influence and unused capacity. Exploraciones Amazonicas in Peru provides legal advice to neighboring communities and works with the Ministry of Agriculture to keep lumber companies from illegally deforesting local lands. They also provide board and transportation for a doctor working in a health clinic that serves local residents of more than 50 river communities.[305] In London, England, the Mayfair Inter-Continental has "adopted" the Passage Day Centre and Night Shelter for Homeless People. The hotel donates curtains, carpets, bedspreads and half-used bottles of shampoos and soap. Staff have also donated clothes to the Centre's secondhand store and assisted with throwing a Christmas party.[306]

Steps toward increasing local benefits:

- ✓ Develop and support tourism-related businesses in partnership with local groups or entrepreneurs.
- ✓ Use locally provided services.
- ✓ Employ local people.
- ✓ Train local workers and phase them into management positions over time.
- ✓ Support local community development projects with money, time and under-utilized resources.

CHAPTER 4

Managing Tourism Development Through Participatory Land-Use Planning

As the previous chapter demonstrates, the explosion of poorly planned and implemented tourism development has, in many locations, resulted in significant negative environmental and social impacts, provided few local benefits and at times undermined the economic sustainability of tourism itself. Impacts have been most severe where development has been uncontrolled or where the public sector has focused primarily on promoting growth, while ignoring social and environmental concerns. ■ Although many nations are now beginning to implement impact management measures, the majority have done so only after environmental degradation or local discontent have reached serious proportions.[1] While reactive policies can be an effective and necessary step toward reducing impacts, trying to change established patterns of behavior often causes conflicts and can be an expensive process.[2] Furthermore, reactive control cannot affect siting decisions, which may allow inappropriate and damaging development to proceed in some of the most environmentally and culturally sensitive areas of a country or region. As governments become increasingly aware of the potential pitfalls of tourism and the practices necessary to avoid them, early planning for tourism development has been increasingly recognized as a necessary and preferable option to trying to correct damages after the fact. Early planning can promote long-term sustainability, minimize social costs and conserve valuable natural areas for future generations.

The most basic and perhaps most effective tool in planning is to design a regional or national land-use plan that integrates tourism, environmental and socio-economic priorities.[3] This plan should specify where tourism can be developed and to what degree, ensuring that appropriate types of tourism development are sited in appropriate places.[4] Because of the critical importance of land-use plans to long-term sustainability, many bilateral and multilateral aid agencies now require them as a condition for investing in an area.[5]

Land-use plans and zoning regulations are already in use in many countries.[6] In others, broad-scale land-use planning and zoning will be a relatively new concept, and it will be necessary to increase capacity. Although the tools discussed in this chapter were not designed specifically for tourism, adapting them is relatively straightforward.[7] Successfully developing and implementing a land-use plan that maximizes long-term economic, social and environmental benefits will require the adaptation of traditional planning tools, a participatory consensus-building process involving all stakeholders and patience in granting development permission where environmental and social data is inadequate. A further challenge will be coordinating tourism plans with existing and future plans for other industries.[8] More generally, successful land-use plans will require a shift in the objectives of tourism development away from the traditional "growth at all costs" approach. In many cases, this will mean that tourism development must be limited and shaped by social and environmental criteria. In the most environmentally and socially critical areas, the land-use plan should prohibit tourism or any other form of development.

Because the most viable land-use plans will be developed with the participation of all key stakeholders, we begin this chapter with a discussion of the importance of implementing a participatory planning process, including

stakeholder involvement and consensus building. We then present a three-step process for developing a tourism land-use plan, including (1) setting objectives and assigning roles, (2) determining tourism, environmental and socio-economic priority areas, and (3) synthesizing these priorities to form a final zoning plan. Once the plan is in place, its successful implementation will depend on a combination of national and local policy tools,[9] which are discussed in the following chapter. Although it is beyond the scope of this paper, the information used to develop a tourism land-use plan can and should be coordinated with the development of land-use plans for other needs, including traditional use, biodiversity conservation and industrial development, resulting in an overall land-use plan for the region.

4.1 THE IMPORTANCE OF PARTICIPATORY PLANNING

- **Land-use plans will be more effective, comprehensive and easy to implement if developed in a participatory fashion, involving all relevant stakeholders.**

Traditionally, tourism and other land-use plans have been designed by experts, with local participation limited to brief interviews that provide little substantive contribution to the final design. As a result, local priorities often have not been represented, leading to conflicts and forcing governments to divert limited financial resources toward enforcement or negotiation.[10] Some land-use plans may simply become impossible to implement because of a lack of support from key stakeholder groups, including regional and national government agencies, the private sector, local communities, community and conservation NGOs, and funding agencies.[11] Thus, successful development and implementation of a land-use plan will rely on active stakeholder involvement and consensus-building among all participants.

In order to facilitate participation, planners should use locally appropriate means of communication to educate people about the nature of tourism and the changes it may cause. Capacity-building can aid these groups in making better informed decisions about tourism development, which may in turn reduce conflicts that arise from inaccurate expectations.[12] Should certain communities decide that they do not want tourism development in their region, efforts should be made by the government to support their position by controlling development and promoting tourism in regions where local people are supportive.

Involving all stakeholders in participatory or "bottom-up" planning allows people to set priorities for their area, which will increase their stake in and support for the final plan.[13] Equally important, it allows plans to take advantage of the knowledge and skills of each group.[14] Active participation by local stakeholders can often reveal key information about potential tourist attractions, local interests, potential conflicts and important environmental areas.[15] In Guyana, for example, Amerindian

Participatory tourism planning workshop, Papua New Guinea

Photo: Jamie Sweeting

groups have been involved in developing resource maps of the areas they know, for use in national planning strategies.[16]

Building a policy based on a participatory process will require consensus-building among the full range of stakeholders. In order to promote consensus-building rather than conflict, it is critical to abandon the view that resource use is a zero-sum game, and that any gain for one group must come at the expense of another. This view often leads developers, governments and communities to feel they are in combat to win resource rights. Instead, "win-win" negotiating systems have shown that there is significant scope for mutual gain.[17] In tourism, especially, there are many possibilities for each group to benefit from cooperative planning with other stakeholder groups.

For developers and governments, the use of environmental and social information provided by stakeholders in making siting, design and operation decisions, can result in a higher quality tourism product, long-term sustainability, market differentiation and reduced costs and conflicts. When there is local support for tourism development, the tourism product can be improved in the form of authentic attractions such as handicrafts and locally guided tours. On the other hand, failure to heed local knowledge may have serious costs. In the early 1990s, in Lauvi Lagoon, Solomon Islands, developers attempted to build a resort without consulting the customary landowners. By choosing attractions without local guidance developers not only incited strong local resistance, but also unknowingly planned to offer diving and snorkeling trips to areas which are so infested by sharks that even local people do not swim there.[18]

Local communities can also benefit from their involvement in planning by shaping the location, type and level of tourism development near their homes. Those communities that are interested in development can work with investors on developing tourism services and attractions[19] and creating local employment opportunities for community members. Providing economic alternatives for local people, as part of a balanced economic strategy, can reduce pressures on important ecosystems. Environmental protection projects will benefit both tourism and local communities, by preserving the resources upon which both groups depend for economic and cultural sustainability.

There will always be some degree of conflict of interest among stakeholders. Therefore, it is vital that each group be willing to compromise to some extent to achieve a common vision that can actually be functional. Acceptable procedures for interaction among stakeholders should be established, and new technologies and better practices should be

Box 4.1: Top-Down vs. Participatory Planning: The World Bank in the Philippines

The World Bank's Philippines Integrated Protected Areas System (IPAS) project illustrates the importance of participatory planning. During the initial stages of the project, local NGOs were responsible for identifying priority areas for facilitating local participation. However, as NGOs were chosen for their scientific expertise, not their community interaction skills, local participation was minimal. Key stakeholders, including many people who lived in areas that were proposed as parks, were left out of discussions and, in many cases, local interests were not represented. Instead, NGO experts developed the initial plan in a top-down manner, based on technical criteria.

As a result, local communities, whose support was considered vital to the successful implementation of the plan, generally objected to it. In follow-up meetings facilitated by PANLIPI - a national legal services NGO that has good relations with local communities and the government - local groups identified serious flaws in the original IPAS, such as failure to recognize Ancestral Domain Rights and the imposition of use prohibitions in areas on which local people depended for their livelihood. As one World Bank consultant noted, "Although we knew the plans were stronger in their technical descriptions than in their social analysis, we hadn't realized how far removed they were from human realities."

After these concerns were incorporated into a redesigned IPAS, NGO representatives returned to the communities involved to give local groups an opportunity to review maps, legislation and responsibilities in detail, identify concerns and develop modifications. Local groups were also given the option to refuse membership in the IPAS. As a result of these participatory processes, three of the four groups involved agreed to participate in the IPAS and join the protected areas system. In Mindoro, however, local people overwhelmingly rejected the IPAS, principally because they had not been included in the process from the start and no changes in the late stages would suffice. In the end, these objections led to Mindoro being dropped from the plan.

Source: World Bank, "Sharing Experiences - Examples of Participatory Approaches: Philippines Integrated Protected Areas Project," *World Bank website* (1998), available at: http://www.worldbank.org/html/edi/sourcebook/sb0214.htm

incorporated into daily operations in order to adapt tourism to the conditions developed by the plan.[20]

4.2 DEVELOPING A LAND-USE PLAN: SETTING OBJECTIVES AND ASSIGNING ROLES

- **Setting objectives and assigning specific roles will help to focus land-use planning efforts and ensure accountability and effective implementation.**

The first step in land-use planning for tourism is to determine concrete objectives of tourism development. Objectives should be based on social, environmental, political and economic conditions, problems and opportunities.[21] Setting specific objectives can make final decisions more credible to communities, aid agencies and other concerned parties, and provide critical guidance for designing and evaluating policies.[22] As with each stage of the planning process, designing objectives that accurately reflect the needs, values and goals of all affected parties should be done in a participatory way, involving all stakeholders.

Various countries and regional conferences have chosen a range of possible objectives for sustainable tourism development, encompassing economic, social and environmental needs. Some examples of these objectives are presented in Figure 4.1. Although we have divided economic and social objectives from environmental objectives for clarity purposes, it is important to realize that environmental and social issues are interconnected and can be promoted in a complementary way.

At the same time that objectives are being set, the roles and responsibilities of the various government agencies with jurisdiction over tourism must be resolved. These can include agencies in charge of tourism, environmental regulation, economic planning, protected areas management and cultural resources.[23] These agencies should meet prior to the actual planning process to allocate direct responsibilities.[24]

Similarly, many areas and resources that are critical to tourism development are often managed, affected or claimed by multiple agencies,[25] including agriculture, mining, forestry and hydrology.[26] The needs of these sectors are often in conflict. Along the coast of Vietnam, for instance, tourism development is in conflict with oil and gas exploration and other forms of industrialization, which are significantly impacting the coast's attractiveness for tourism.[27] Identifying interests and current resource claims at this earliest stage of planning will facilitate coordination of the needs of these sectors.[28]

In the Shark Bay Region of Western Australia, for instance, the 1995 Shark Bay Regional Plan coordinated a World Heritage Area Strategic Plan, several tourism strategies and several fisheries management strategies. In order to effectively manage future development and use, the Department of Conservation and the Ministry of Planning worked together to ensure that their planning was complementary and there were no areas of conflict.[29]

4.3 PRIORITY SETTING AND MAPPING

- **Conducting individual priority setting exercises for tourism, environmental and social priorities will help to optimize land-use decisions.**

The second major step in developing a tourism land-use plan is the mapping and ranking of areas within the region in terms of their priority for tourism, conservation and local communities. There are many methodologies for priority setting.[30] The most appropriate in each situation will depend on existing information, the amount of area to be covered, technical capacity, and budgetary considerations.

Tourism Priorities: Criteria for evaluating areas for tourism priority should include the quality of natural environmental and cultural attractions, existing facilities and services, areas that could be improved to support tourism

FIGURE 4.1: POSSIBLE OBJECTIVES FOR RESPONSIBLE TOURISM

Economic/Social Objectives

- Promote the well-being of local communities
- Create suitable employment
- Promote long-term economic and educational benefits
- Increase society-wide equality in the distribution of wealth
- Equally distribute benefits and costs from tourism
- Manage tourism development to be culturally sensitive
- Promote values that contribute to sustainable tourism
- Restrict negative impacts from tourism at the regional, community and site levels

Environmental Objectives

- Conserve and manage natural resources
- Maintain biological wealth
- Restrict negative impacts from tourism at the regional, community and site level
- Minimize the depletion of nonrenewable resources

Sources: Adapted from Walter Jamieson, "First Technical Presentation," in *Tourism2000: Building a Sustainable Future for Asia-Pacific,* final report from Asia Pacific Ministers' Conference on Tourism and Environment (Madrid: World Tourism Organization, 1997), 124; Out Islands of the Bahamas Ministry of Tourism, *Sustainable Tourism Policies and Guidelines*, executive summary (Nassau: Ministry of Tourism, 1995), 2.

and accessibility.[31] Natural attractions include both general characteristics, such as climate, and specific attractions such as waterfalls, sunsets, beaches and historical features. Surveys of resident, expert and tourist opinion, literature reviews, guidebooks and statistics can all help to identify and rank the attractions of an area.[32] The final product of tourism priority setting should be a map of the region with areas ranked in terms of both quality of resources and what type of tourism they could support. Different regions will have different types of tourism resources, capable of supporting varying numbers of tourists in a range of activities.

Conservation Priorities: Priorities for conservation should also be evaluated based on a range of criteria, including endemism (species that occur only in a particular region and nowhere else on Earth), biodiversity, level of disturbance and historical features. Planners should also evaluate the role of areas in protecting other important resources, for instance as wildlife corridors to allow species movement, for watershed or erosion protection, or more indirectly for services such as climate regulation and carbon sequestration.[33]

Comprehensive planning can help control levels of development.

Photo: Haroldo Castro

As with tourism resources, different countries and regions will have varying amounts of land at each level of conservation priority, and classification will be more or less difficult. In Madagascar, for example, where much of the island is deforested, it has been relatively clear which areas are critical for conserving biodiversity. In other cases, for example Suriname, Guyana and Papua New Guinea, where much of the land and coastal areas remain covered by undisturbed ecosystems, large sections of the country must be considered to be of high conservation priority. As with tourism priority-setting, the final result should be a map of the region with defined areas of varying conservation priority.

Social and Economic Priorities: Social and economic priorities can be determined based on information such as local land ownership, land claims, interest in or resistance to tourism, the presence of other industries, infrastructure such as roads, and future development concessions. Along with tourism and environmental information, this information will be critical in determining the best land-use strategy. Local interest in or resistance to tourism should be considered one of the basic opportunities or obstacles in evaluating tourism potential. Much information about these conditions will come from participatory priority setting. If local people cannot participate, however, NGOs, universities and local government offices may be able to provide information about local land claims and uses. Care should be taken to analyze local cultural traditions and value systems and, where possible, integrate them into this process.

4.4 SYNTHESIZING PRIORITIES

- **Synthesizing tourism, environmental and social priorities into a single priority map will help to identify key areas for conservation and development, as well as potential conflicts and opportunities.**

After priority maps for tourism, conservation, social and economic constraints and opportunities are developed, they can be synthesized into a land-use plan. As with the other steps in the land-use planning process, synthesizing priorities into a land allocation scheme that is acceptable to all stakeholders will require a participatory, consensus-building approach. Appropriate representatives for this effort should be chosen based on potential involvement, interest in participation and an understanding of the issues facing their peers and their region. All stakeholder groups should be included, even if there are known conflicts between them. The best representatives of each sector will not necessarily be top executives, elected leaders or chairmen, but instead informal leaders and those who make front-line decisions.[34] Efforts should also be made to respect the local hierarchy of community leadership in order to avoid long-term resentment.

Planners and stakeholders should overlay tourism, environmental and socio-economic priority maps, and, based on levels of priority and where priority areas are separate or overlapping, they should work to allocate land areas to various levels of tourism development.[35] Although the details are beyond the scope of this paper, information should also be used to designate areas for a range of conservation importance. Land allocation should focus on finding areas where appropriate levels and types of tourism can be compatible with environmental and social priorities.[36] Many areas should not be used for any type of tourism, because of critical conservation importance, priority for local people or other economic sectors, or a lack of tourism resources.

In synthesizing priorities to meet the objectives and goals outlined at the start of the planning process, planners should keep in mind that leaving natural areas relatively

BOX 4.2: REGIONAL PRIORITY SETTING WORKSHOPS

One effective way to set conservation and social priorities is through a Regional Priority Setting Workshop. This methodology emphasizes developing and using high-quality data through a participatory, consensus-building process that increases local capacity and helps to ensure that the results of the workshop are used in decision-making.[1] Priority setting workshops have helped to set conservation priorities in various ecosystems, including the Amazon Basin, Papua New Guinea and Madagascar.[2]

Prior to the workshop, working groups of community members and local experts gather data on the characteristics of the region and synthesize it into a report. Sources of information can include conservation organizations, government agencies, tourism bureaus, museums, satellite images, published materials, unpublished notes, universities and the internet.[3] If resources exist for studies to fill holes in existing information with techniques such as new satellite images or field research, this information can also be useful.[4] The information gathered is also valuable outside of the workshop, and should be organized into a permanent database.[5]

The actual workshop can include leading regional, national and international experts in specific scientific fields, community members, government decision-makers, tourism developers and other relevant stakeholders. Based on information gathered before the workshop, as well as personal knowledge, participants develop priority maps of the area for each specific characteristic. For instance, in an environmental priority setting workshop, characteristics might include plant priorities, herpetology priorities, mammal priorities, etc. Individual maps are then overlaid with one another in order to divide the region into several levels of overall conservation priority.

The inclusion of a range of participants facilitates the integration of global, national and local priorities[6] and provides information about constraints and opportunities. Further, skills gained by participants in regional priority setting can help to stimulate workshops elsewhere, and at a more site-specific level.

1. S. Olivieri, et al., *A Participatory Approach to Biodiversity Conservation: The Regional Priority Setting Workshop*, discussion draft (Washington, DC: Conservation International, 1994), 1.

2. Ibid., 8.

3. Olivieri, et al., *A Participatory Approach to Biodiversity Conservation: The Regional Priority Setting Workshop*; Christopher Rader, Coordinator, Monitoring and Evaluation Program, Conservation International, interview with author, Washington, DC, August 1998.

4. Ray Ashton and Patricia Ashton, "An Introduction to Sustainable Tourism (Ecotourism) in Central America," Product of Paseo Pantera: Regional Wildlands Management in Central America (1995), 58.

5. Bruce Potter, *Tourism and Coastal Resources Degradation in the Wider Caribbean* (St. Thomas, U.S. Virgin Islands: Island Resources Foundation, 1996), 18.

6. Nels Johnson, *Biodiversity in the Balance: Approaches to Setting Geographic Conservation Priorities* (Maryland: Corporate Press, 1995), xiv; Olivieri, et al., *A Participatory Approach to Biodiversity Conservation: The Regional Priority Setting Workshop*.

undeveloped can still make a significant economic contribution, especially when combined with other tourism activities, such as day or overnight trips from larger resort areas. For instance, approximately 400 million people traveled to U.S. National Parks in 1996,[37] generating US$14.2 billion and approximately 300,000 jobs for local communities.[38] Similarly, more than two-thirds of tourists to Costa Rica in 1996 visited a protected area.[39] Furthermore, many communities rely directly on relatively undisturbed and healthy natural areas to preserve their ways of life. In the long-term, as demand for nature tourism continues to grow and natural areas throughout the tropics continue to be degraded, countries which protect their natural areas may find themselves in possession of some of the most valuable tourism resources in the world.

Once the planning group has developed a satisfactory land-use plan, it must be formalized into law through zoning. Potential zones could include concentrated tourism development, low-impact tourism facilities such as small developments and ecolodges, low-impact tourism such as ecotours, core zones that allow only research or minimal activity, and strictly protected areas that allow no activity at all. For each zone, it must be determined what groups and uses are allowed and which are restricted, which goals and values take priority over others, and the likelihood of the plan being effectively implemented.[40] Depending upon conditions and objectives in a specific region, each final land-use plan will vary widely in terms of type and extent of tourism development and protected areas.

4.5 IMPLEMENTING LAND-USE PLANNING DECISIONS AT A LOCAL LEVEL

- **Local land-use planning complements regional and national land-use planning by ensuring that development is appropriate to local conditions.**

Once national and regional land-use plans have been developed to specify acceptable locations and levels of development, further preparation must proceed at the local level, in the form of site-specific land-use planning. Depending on the scope and detail of a national or regional land-use plan, more specific local zoning may be required to ensure the responsible development of tourism on the local scale. While the policy tools described in the following chapter will be the principle form of control at the site-specific level, local zoning will help to increase the effectiveness of that control. In many developing countries, effective zoning can be a challenge, due to differences in agenda and focus of

BOX 4.3: INTEGRATION OF TOURISM AND CONSERVATION PRIORITIES IN NEPAL

The Government of Nepal has designed several regional and local zoning plans that provide a balance among development needs, local community priorities and conservation. On a regional level, the country's *Tourism Policy 1995* aims to develop wildlife tourism and trekking in new areas of the country in order to distribute the benefits from tourism and to diffuse pressure on currently popular areas. In order to balance environmental conservation with trekking, the plan establishes three levels of trekking areas: General Trekking Areas, which are open to all trekking groups, Guided Trekking Areas, which are established in more environmentally sensitive or important areas and are open only to a fixed yearly quota of group trekkers guided by trekking agencies, and Controlled Trekking Areas, which include areas in the high Himalayan region that contain highly sensitive natural environments and are home to several indigenous cultures. In Controlled Trekking Areas, only groups of trekkers guided by trekking agencies and accompanied by a government deputy liaison officer are allowed to visit. Further, a portion of tourism revenues from remote areas are given to several local NGOs to promote their work in support of conservation and development.

On a site-specific level, the Annapurna Conservation Area Project (ACAP) aims to coordinate development needs with conservation priorities. The project, which covers an area of approximately 309 square miles (800 square km) that is home to about 400,000 people, seeks to balance the needs of local people, tourism development and environmental conservation. By strengthening traditional land-use rights, the project has facilitated close cooperation between government officials and local communities on project initiatives. ACAP and local communities work together on a variety of issues including tourism development and managing tourism impacts. To combine conservation and development, ACAP uses a biosphere reserve approach, with a protected core zone, a buffer zone for protected forests and seasonal grazing areas, and an intensive use area, for settlements, agriculture, tourism and other high-impact uses.

Adapted from Chakra Prasad Bastola, "Panel Presentation by Nepal," in *Tourism2000: Building a Sustainable Future for Asia-Pacific*, final report from Asia Pacific Ministers' Conference on Tourism and Environment (Madrid: World Tourism Organization, 1997), 55-67.

national, regional and local governments. Ideally, local government representatives will have played a pivotal role in the development of national and regional land-use plans and will be able to initiate the process of determining more localized priorities and zoning. In many cases there are no national or regional plans for the local government to build on. In such instances, it is the role of the local government to work with local tourism stakeholders to develop land-use plans for areas within their jursistiction.

In nearly every country, local governments already require developers and operators to apply for permission to develop or use a specific area of land.[41] In order to ensure that permission is granted based not only on tourism resources, but also on local environmental features and local interests, governments should develop a local land-use plan, delineating specific locations for specific levels of tourism development. As with regional planning, cooperation with stakeholders will be critical to ensuring that site planning uses resources in an efficient and acceptable way. Combining regional and local land-use plans can form a comprehensive framework for controlling development.

Local management plans are critical to preserving the environmental quality of development sites,[42] and can protect the value of investments by ensuring that further development and environmental degradation will be controlled.[43] One effective way to control development on a local level is

Box 4.4: Limits of Acceptable Change

Limits of Acceptable Change (LAC) is a planning tool that can help government agencies and resource managers in designing development and management plans for a range of areas. LAC is based on the premise that all human uses will impact natural and cultural environments to some degree, and therefore seeks to provide a way to determine an acceptable level of change for each area, choose management options to ensure that this level is not surpassed, and monitor and evaluate the success of management choices. LAC has been used in a wide range of protected areas and is now the management system used by all United States land management agencies for wilderness areas.[1]

The first step in the LAC process is identifying which of the important environmental and social characteristics of each area are likely to be impacted by development. Planners then identify one or more indicators for each characteristic, based on ease and cost effectiveness of measurement, direct relationship to potential uses and threats, and responsiveness to management measures.[2] Indicators need not be quantifiable, only verifiable.[3] Although appropriate indicators will vary, some relatively consistent ones might include hours per week of community participation in planning, management or operation; percentage of local population at various levels of income; level of protection in critical areas; levels of contaminants in air, soil and water; numbers and distribution of invasive species; frequency and behavior of important and indicator species; total number of visitor days in the area; level of local satisfaction with development; and rate of deforestation.[4]

Once indicators are identified, managers and local stakeholders undertake comprehensive surveys to provide baseline data for each indicator. They then delineate a limit, called a "standard," for each indicator, to provide a measurable limit beyond which change will be judged unacceptable.[5] The level of the standard should be based on the importance of the area, sensitivity and local views. In critical areas, therefore, no significant change to the indicators should be allowed. In some cases, the level of an indicator may already exceed the standard at the time it is set. In these cases, management actions are necessary to improve local conditions.

Managers and planners next identify management options necessary to maintain conditions at the desired level. (See Chapter 5) These will vary depending on factors such as type of use, environmental conditions, local capacity and resources. Planners should seek opportunities to partner with the scientific community in order to conduct monitoring in sensitive environments. Indicators should be monitored relatively frequently, and the information should be used to evaluate and improve management strategies. This is critical to make up for deficiencies in policy and to adapt to changing management needs.

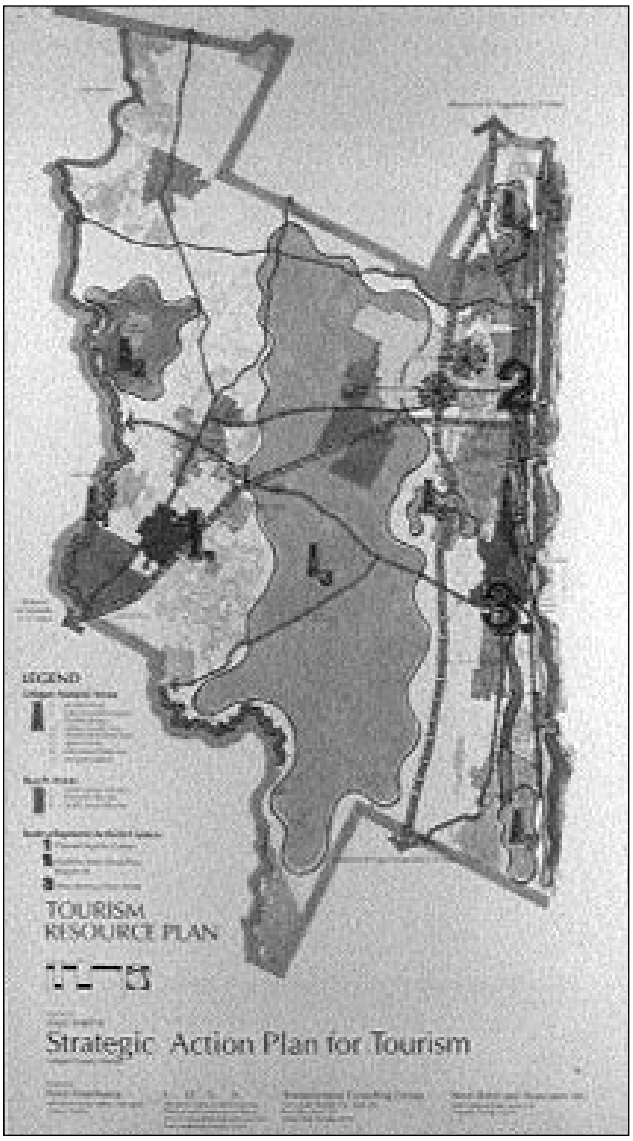
1. Art Pederson, *Encore/Dominica: A System to Monitor Visitor Impacts on the Indian River and at Sulphur Springs* (Texas: Wilderness Recreation and Ecotourism Planning, 1994), 4.

2. George H. Stankey et al., *The Limits of Acceptable Change (LAC) System for Wilderness Planning* (Washington, DC: U.S. Department of Agriculture, 1985), 10; David Andersen, *National Plan for Ecotourism Development in Guyana* (Washington DC: Organization of American States, 1998), 10.1.03.

3. Christopher Rader, Coordinator, Monitoring and Evaluation Program, Conservation International, interview with author, Washington, DC, August 1998.

4. Sustainable Development Indicator Group (SDI), "Proposed 1997 Sustainable Development Indicators," *NASA Website* (1997), available at http://venus.hq.nasa.gov/iwgsdi/1997SDI.html

5. Andersen, *National Plan for Ecotourism Development in Guyana*, 10.1.03; Stankey et al., *The Limits of Acceptable Change (LAC) System for Wilderness Planning*.



Regional strategic action plan for tourism, Volusia County, Florida

Courtesy of EDSA

to divide up broadly designated areas, such as national parks or buffer zones, into more specific zones allowing various gradations of tourism use. By increasing sensitivity to local conditions, local zoning can play an important role in avoiding environmental degradation and promoting visitor education and enjoyment.[44] For example, the Government of Australia has demarcated seven different use zones along the Great Barrier Reef, each of which permits and prohibits a range of activities. These zones include General Use A and B, Marine National Park A and B, Marine National Park Buffer, Scientific and Preservation, and Periodic Restriction. Permissible activities range from commercial fishing to non-consumptive uses to exclusively research-oriented activity. Zones that permit heavier use function as buffers for zones designated for greater protection.[45]

Steps toward designing national, regional and local tourism land-use plans:

- ✓ Design a regional or national land-use plan that integrates tourism, environmental and socio-economic priorities.
- ✓ Involve all stakeholders in a participatory or "bottom-up" planning process.
- ✓ Promote consensus-building among the full range of stakeholders.

Setting objectives and assigning roles

- ✓ Determine concrete objectives of tourism development, based on social, environmental, political and economic conditions, problems and opportunities.
- ✓ Resolve and define the roles and responsibilities of the government agencies with jurisdiction over tourism.

Priority setting and mapping

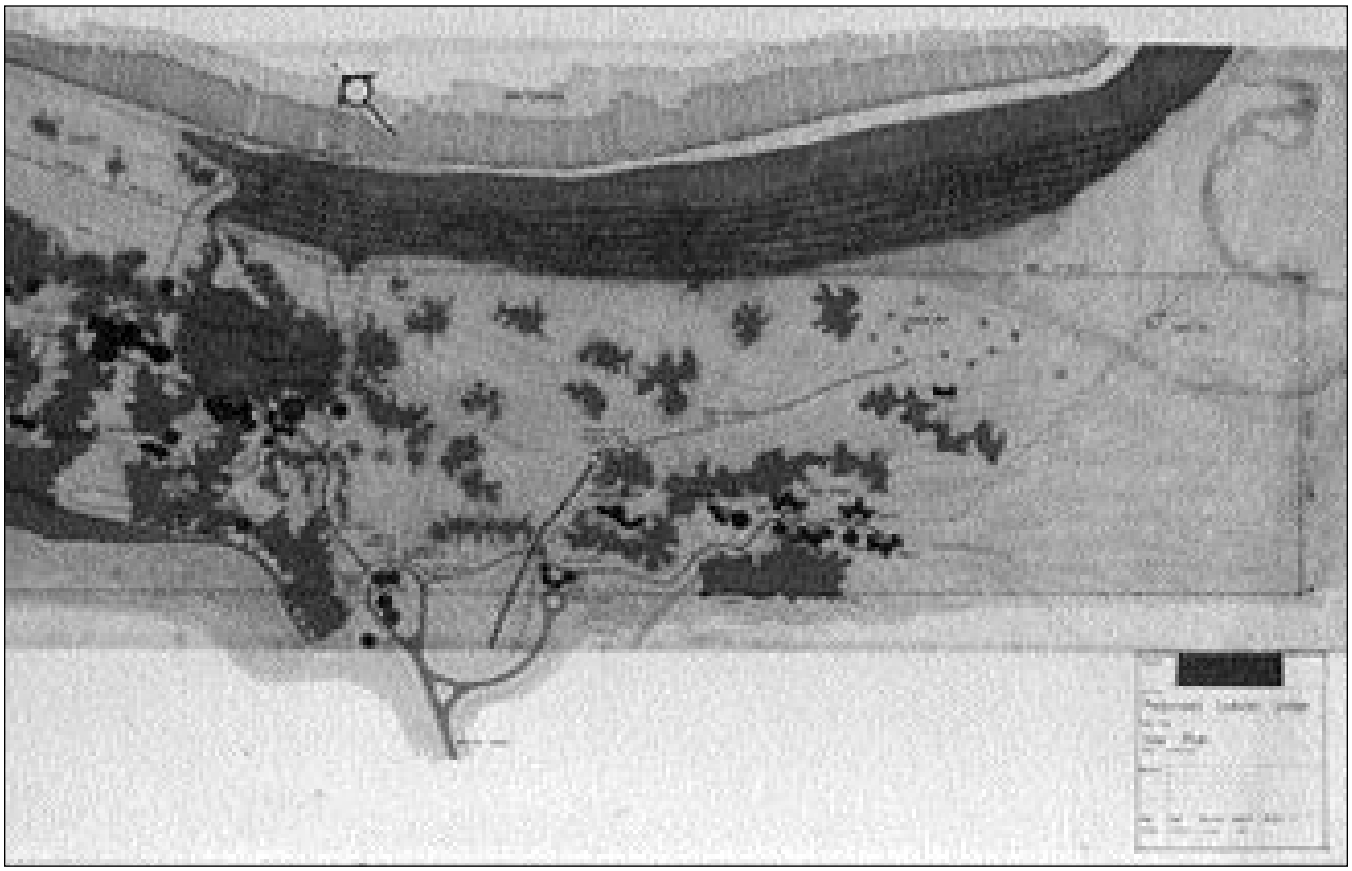
- ✓ Rank areas in terms of their priority for tourism, conservation and socio-economic development.
- ✓ Determine priorities by surveying resident, expert and tourist opinion.
- ✓ Create tourism, environmental and community-use maps showing different levels of priority.

Synthesizing priorities

- ✓ Overlay tourism, environmental and community-use priority maps to determine areas of conflict and opportunity.
- ✓ Synthesize priorities into a land-use plan using a participatory, consensus-building approach.
- ✓ Allocate specific land areas to various levels of tourism development or conservation.
- ✓ Prohibit tourism development in critical areas.
- ✓ Formalize the land-use plan into law through zoning.
- ✓ Create more specific local land-use plans for each development area.

Opposite right: Site-specific plan for Lobolo Ecolodge in Kenya.

Courtesy of Hitesh Mehta



Box 4.5: CI's Ecotourism Development Program

CI has developed a series of flexible, participatory workshops and activities, the Ecotourism Development Program, to address the relationship between biodiversity conservation, local quality of life and tourism development in the countries in which it works. The workshops provide a means to use local and international expertise to help the private sector, communities, governments and NGOs work toward three general goals:

- Increased efficiency and usefulness of tourism plans and policies through greater participation by all stakeholders;
- Promotion of tourism as an economic alternative to more destructive industries and as a means to provide support for conservation and sustainable development; and
- Creation and promotion of environmentally and socially sound tourism products and establishment of codes of best practice for the industry.

The Ecotourism Development Program comprises seven types of workshops, including community awareness and education on ecotourism; diagnosis of ecotourism potential; participatory planning; codes of best practice; ecotourism product development; marketing training; and a train-the-trainers system for product development. CI has implemented these components in a range of countries. In the Petén region of Guatemala, workshops have resulted in the creation of Alianza Verde, an institution composed of representatives from the private sector, the government and local communities, which works to create responsible ecotourism policies and products for the region. In 1997, in Peru, a participatory planning workshop helped stakeholders in the states of Apurimac, Madre de Dios and Cusco define priority projects and develop action plans for developing tourism. CI has also conducted train-the-trainers and product development workshops in Ghana, Madagascar, Brazil and Papua New Guinea.

CHAPTER 5

Public Sector Policy Tools for Mitigating Adverse Impacts and Increasing Environmental, Social and Economic Benefits

While private developers can have a significant impact on their local surroundings by implementing good practices and proactively supporting conservation and community development, it is also the responsibility of the public sector to ensure the responsible evolution of its national and regional tourism industry. As discussed in the previous chapter, the public sector role should begin with a comprehensive land-use plan, developed in conjunction with local, regional and international stakeholders. Once a land-use plan is in place, its success will depend on the implementation of appropriate policy tools and strategies to manage development and ensure that developments comply with regulations and use appropriate practices to mitigate negative impacts and increase positive contributions to community development and conservation.

Effective government policies, whether in the form of direct regulations, indirect incentives or voluntary programs, will help to create and achieve standards and guidelines throughout the tourism sector. While it is important to formalize goals and objectives in national legislation, the effectiveness of even the best legislation may be hindered by obscure regulations, lack of standardization across an industry or weakness in enforcement.[1] Policies should be designed based on studies of acceptable levels of impact and land-use plans,[2] as discussed in Chapter 4. Lack of adequate information for designing policies is one of the most critical problems in many countries. In order to gain the most access to information and ensure that policies fully support the land-use plan, representatives from the priority-setting process should be included in policy-making decisions. This will also help policy-makers to understand the basis for planning decisions.[3]

Policy tools should be created, at least in part, before any major development begins in an area, as experience has shown that impacts can be severe if effective control is not in place from the start. It will also be easier to gain compliance with standards if they are in effect from the beginning.[4] When potential investors express interest in a certain area, ideally, the government should be able to present them with documents outlining plans, policies and regulations for development, including regional and local zoning plans and information on environmental and social regulations.[5] Practical recommendations for complying with these guidelines can also be helpful.[6]

In general, a broad mix of policy tools will be necessary to achieve the stated objectives of responsible development. This section presents an introduction to the wide-range of policies and strategies available to government sectors. The appropriateness of each option will depend on existing development plans and local resources and conditions. Many of these tools are already being implemented in various parts of the world, both in the tourism industry and other major development sectors.

Effective implementation of policies and support of a management plan will require local understanding of stated goals and the capacity to design, implement and enforce policy strategies. In many countries, the tools to design regulations are already available, but their successful use in promoting responsible tourism will require knowledge of how to use and apply policies effectively and selectively and the political will to enact and enforce them.[7] For these reasons, we begin our discussion of policy tools

with a look at the need to increase both public sector capacity and local awareness of and support for environmental goals.

We next look at strategies for direct regulation and control of the tourism industry. These tools range from contracts and regulations to licenses and permits, designed to control impacts and behavior, as well as levels of development and numbers of tourists.[8] The third part of this section examines economic and financial tools that can be used to directly and indirectly control the impacts of tourism, in some cases turning potentially adverse impacts into resources for conservation and community development. We next discuss ways that the public sector can positively contribute to the development of a responsible tourism sector by providing infrastructure and support for appropriate development. Finally, we conclude this chapter with a look at the importance of effective enforcement and comprehensive monitoring and evaluation of policy strategies, tools that are necessary to ensure that all types of policies are achieving their stated goals and objectives.

5.1 INCREASING PUBLIC SECTOR CAPACITY AND LOCAL AWARENESS

As with any major initiative, implementing strategies to regulate and monitor the tourism industry will require a great deal of political knowledge, ability and will. Thus, before a broad-scale policy approach is designed and implemented, it is important to assess and improve the level of capacity within the public sector agency or agencies that will be managing the strategy. Furthermore, even with the required capacity and abilities, the public sector will have difficulty carrying out significant policy strategies without the endorsement of the local population, the private sector and other stakeholders. Thus, it is equally important to increase awareness of and support for environmental and social policies through education and training.

5.1.1 Increasing public sector capacity

- **Increasing capacity of government offices and improving coordination among government agencies and cooperation with relevant stakeholders will allow more effective regulation of the tourism sector.**

Box 5.1: Factors for Success in Developing and Implementing Effective Tourism Policies

There are several factors that are critical for developing successful tourism policies. Among these are:

- *Project management:* The development and implementation of a policy should be seen as a project, with sufficient funding and human capital allocated well in advance. Priorities and geographic focus should be clearly defined from the start, and efforts should be made to maintain this focus throughout implementation of the policy. In general, it is best to begin planning development around focal destinations or "hubs" that are feasible for tourism, to minimize pressures and political lobbying from affected groups and to avoid overextending resources.
- *Institutional coherence and stability:* Specific roles and responsibilities, including responsibilities for follow-up activities, should be clearly defined. A central component of assigning responsibility is that people must be accountable for results. It is also important to address the stability of policies over the long term and during changes in government. One option for increasing coherence over time is to involve middle-level workers who may be less likely to leave due to political changes. When choosing institutions for participation, project managers should look for organizations with the mandate and the means to follow through on activities.
- *Governmental control of policy development:* Governments should seek a middle ground between too much control, which can decrease incentives for stakeholder groups to take initiatives, and too little control, which can hinder the development of useful policies.
- *Stakeholder buy-in:* Policies will be stronger, more beneficial and easier to implement with the support of all stakeholders, including local communities, NGOs, the private sector, and various governmental bodies. Although support from all groups is important, private sector buy-in is the most critical in developing tourism policies which can actually be successfully implemented.
- *Area scope and heterogeneity:* Scope and diversity should be viewed as central constraints to policies; the larger and more diverse the area to be developed, the more complicated it will be to develop cohesive policy. Similarly, if a policy concerns areas with radically different levels of tourism development, the process may become more difficult to manage. In some cases, dividing the region into smaller, more manageable units should be considered.

Adapted from Oliver Hillel, "Factors for Success," slide presentation (Washington, DC: Conservation International, 1998).

Lack of capacity to create, implement and enforce viable policies can contribute to policy failures in developing countries. As tourism continues to grow rapidly throughout the tropics, it will become increasingly important to ensure that the regulatory agencies that deal with the sector grow along with it, both in size and ability. Although the most obvious way to increase public sector capacity is to increase the skills and funding of government offices, capacity-building can also come through the coordination of actions among all relevant actors, at the local, national and international levels.

5.1.1.1 Increasing skills and funding

Throughout the tropics, national tourism agencies are often understaffed, underfunded[9] and lacking in skilled personnel.[10] This lack of technical skills is rapidly becoming an obstacle as tourism grows and becomes increasingly complex, and as governments strive to incorporate principles of sustainability into their tourism industries.[11] In the Asia-Pacific region, for instance, governments have identified qualified environmental management personnel as one of their most pressing needs for promoting responsible tourism.[12] In the long run, effective training and support will be vital for the economic and environmental well-being of the sector.

Both to increase human capital and to promote the tourism sector as a more attractive employment choice, governments should therefore develop national tourism training strategies and increase their financial commitment to training.[13] In many cases, even a relatively specific increase in the skill base of employees can lead to significantly higher environmental performance. The Government of Jamaica, by providing special training to government health inspectors, has been able to achieve the highest level of compliance in the Caribbean with hotel wastewater treatment standards.[14]

Many governments are already involved in training programs for public sector employees, politicians involved with tourism[15] and people who wish to become involved in tourism administration. The Government of Vietnam, for instance, has been conducting training courses for personnel at all levels of government in order to increase their capacity to control rapidly growing tourism in the country.[16] Similarly, the Government of the Bahamas plans to train Bahamians in the professional skills necessary to assess environmental resources, formulate management plans, enforce regulations and monitor development.[17]

Although these government training programs will pay off in the long term with increased compliance and enforcement of regulations, they can be expensive in the short term for governments with limited resources. In order to help governments meet planning and capacity-building costs, several international lending and aid agencies are increasingly supporting responsible tourism planning. These include the Organization of American States (OAS), the Inter-American Development Bank (IDB), the World Bank, the Global Environment Facility (GEF), the United Nations and many bilateral development agencies.

5.1.1.2 Increasing coordination

Conflicts among the various government agencies with jurisdiction over tourism issues can create a serious obstacle to control and development of the tourism sector. Agencies that have traditionally focused independently on a specific mission may be unaccustomed to working with certain other ministries and, in many cases, unwillling to cooperate. Conflicts among departments with different objectives and a desire to protect their "turf" can not only hinder effective policy formation and implementation, but also frustrate developers, who must face conflicting regulations and concerns from different government agencies.[18] Governments should therefore actively seek to remove conflicts and develop a functional working relationship among all agencies involved in tourism.[19] This may entail reshaping the national tourism agency to include social and environmental mandates and monitoring and evaluation capacity, forging concrete working relationships between tourism and other relevant agencies,[20] or developing a central body to control all tourism-related activity.[21]

The Government of Nepal, for example, recently created a Tourism Council, which, among other functions, maintains coordination among the several agencies involved in tourism, including the Ministry of Tourism and Civil Aviation, the Department of Tourism, and the Department of Immigration. As many tourism-related activities, such as regulation of trekkers, fuel use and entrance fees to parks, are all regulated by separate agencies, the Tourism Council facilitates the effective design and implementation of broad strategies.[22] The Tourism Authority of Thailand has similarly proposed a National Plan which would integrate all functions related to tourism under a single plan and budget.[23]

In 1995, the Brazilian Government created a working group in which top representatives of the Ministry for Industry, Commerce and Tourism and the Ministry for the Environment discussed the development and implementation of a National Ecotourism Policy. Input was provided by a broad range of tour operators, investors, NGOs, consultants and various government bodies, through a participatory planning workshop. Based on the official proceedings of this workshop and continuing with a participatory approach, the Cooperative Working Group on Ecotourism (GTC-Amazonia) was officially established in 1996, composed of representatives from a national ecotourism association, various development institutions, the Park Service, the Brazilian Tourism Promotion Authority and top leaders from both Ministries.[24]

Since its establishment, the GTC has proceeded to develop regional ecotourism policies and action plans. In 1997, the group produced a Regional Ecotourism Policy

for the nine Legal Amazon States, and the State Secretariat for the Environment produced another for the state of São Paulo. Other states, such as Rio de Janeiro and Parana, are following suit. In order to ensure that the policies and action plans will become a reality, ecotourism investment promotion events have been organized in the United States and Europe. Most recently, the Inter-American Development Bank sponsored a US$200 million grant and investment program called "Proecotur." To protect the quality of its tourism industry, Brazil has also established new protected areas such as the Amana Sustainable Development Reserve in the state of Amazonas.[25]

While intra-governmental coordination can significantly improve the efficiency and effectiveness of the government tourism sector, coordination with other governments and other stakeholder groups can also improve the overall capacity of the public sector to oversee the tourism industry. Government cooperation among countries can help to harmonize standards and regulations in a certain region, increase efficiency through economies of scale in planning and marketing, and decrease environmental, social or economic externalities.[26] Cooperation with the governments of other nearby destination countries may also reduce competition to attract investors, allowing countries to offer reduced incentives to investment. Even if countries are in totally different regions of the world, shared goals may argue for cooperation on certain initiatives. For instance, the Governments of Germany and the Philippines are working together to combat organized sex tourism and the exploitation of children.[27]

Regional conferences such as the Intergovernmental Meeting on Tourism Development, held in Bangkok, Thailand, in 1996 by the Economic and Social Commission for Asia and the Pacific (ESCAP), are useful for sharing information, promoting cooperation[28] and taking advantage of the knowledge of specialists from each country.[29] Similarly, regional training courses and the exchange of experts can result in the leveraging of effective practices and the promotion of sustainability on a regional scale.[30] One of the results of the Intergovernmental Meeting on Tourism Development was an endorsement of the establishment of regional tourism training institutes and organizations for the Asia-Pacific region.[31]

Another way to take advantage of outside resources to improve internal government capacity is to collaborate with the private sector, NGOs and local residents in a participatory process which mirrors that used in the planning stages. In addition to taking advantage of a range of skills, collaborative efforts can often spread information and increase support for programs.[32] One way to make use of outside expertise is to facilitate the formation of a consultative group, which can include hotels, travel agencies, airlines, local residents and NGOs, to provide consultation on tourism development strategies.[33]

In the Philippines, the government has established a Boracay Task Force, composed of representatives from the Department of Tourism, the private sector and local communities, that works to develop and implement tourism policy and aids in monitoring and evaluation.[34] Consultative groups of NGOs, local community members and experts can also help government agencies in ensuring that plans are environmentally and socially responsible.[35] In Peru, the United Nations Development Programme (UNDP) invited Conservation International to work with the Inka Region government to develop a responsible ecotourism development plan.

n Steps toward increasing public sector capacity:

- ✓ Develop national tourism training strategies for government personnel.
- ✓ Increase financial commitment to training programs.
- ✓ Coordinate roles among the various governmental agencies with jurisdiction over tourism, in order to reduce conflict.
- ✓ Coordinate with other national governments, the private sector, NGOs and local residents to improve the overall capacity of the government tourism sector.

5.1.2 Local education, training and awareness-building

- **Education and awareness-building among local communities, the private sector, tourists and governments will help to promote responsible actions and increase support for policies.**

Governments can further promote environmental and social goals through general awareness-building campaigns focused on a wide range of groups, including hotel owners, tour operators, government offices, tourists, school children and local communities.[36] Although appropriate material will vary by situation, campaigns might include information about the roles and responsibilities of each group in preserving a healthy environment, the interaction between people and the environment,[37] and the reasons for and importance of environmental and social policies.[38]

Depending on local conditions and target audiences, the most effective media outlets might include newspapers, radio, television, leaflets, comic books, posters, exhibitions, videos, extension agents, town meetings or local NGOs. Governments may also be able to leverage education efforts by working with other groups with similar objectives, such as NGOs or the private sector, who can then disperse information.[39] In the Out Islands of the Bahamas, the government plans to assist the travel industry in informing travelers about environmental protection efforts in order to increase tourist support for and participation in conservation initiatives.[40]

Another effective way to leverage tourist education efforts is to build awareness within the private tourism sector. A recent trend toward cooperation between the public and private sectors in the tourism industry means that edu-

cation and training initiatives aimed at the private sector can be a critical component of government tourism policy to both improve practices and increase support for policies.[41] Building awareness within the private sector can also lead to cooperation on education of tourists and local communities.

Providing information to tourists can significantly increase tourist cooperation and assistance in achieving the goals of responsible tourism and sustainable development in general.[42] Awareness campaigns should address the environmental issues a country faces, appropriate social behaviors, and existing policies and ways tourists can support them. For example, governments can explain codes of practice and request that tourists only visit businesses that observe them. Similarly, the government can ask for tourist help in protecting endangered species such as turtles by providing lists of illegal animal products. It may also be useful to solicit feedback on tourists' opinions of environmental and social conditions and policies[43] for use in further policy development.

In general, awareness-building education initiatives for tourists can be distributed through a wide variety of outlets, for instance via brochures, ports of arrival and departure, visitor information centers, hotels, tours and attractions.[44] Visitor information centers, which can provide relatively detailed information about conditions and attractions, may play an especially important role in guiding where tourists go and what they do,[45] allowing governments to promote new attractions, and helping to spread benefits and reduce the costs of overcrowding.[46] Government-run protected areas and attractions can also develop information, education centers or materials.[47] Producing site-specific interpretive information in a range of forms, themes and depths can be relatively inexpensive and can increase the interest and satisfaction of different groups of visitors. Furthermore, site-specific information can significantly increase control over behaviors, time spent at the attraction, repeat visits and visitor support for fees.[48] Where there are guides, they can be a critical way to reach tourists with both site-specific and country-wide information.[49]

Finally, it is important to build awareness among local people so that they will be better able to participate in and benefit from a movement toward sustainability. Awareness-building can also increase support for the government's activities, making it easier to implement and enforce policies.[50] Many governments are already involved in a range of public awareness campaigns aimed at citizens. Thailand's "Magic Eyes Anti-littering Campaign," for instance, has greatly improved litter control in that country.[51] The Government of the Bahamas plans to offer a public environmental and tourism education program annually on each of the Out Islands. These programs will cover individual roles in responsible tourism development and environmental protection.[52] Education for local communities can describe tourists, how they will act, or what they will expect. In addition, this education should cover community rights with regard to tourism.[53]

In many cases, awareness-building among local people can be combined with training in tourism-related skills, allowing them to work in hotels, restaurants and other facilities or to be guides, where their knowledge can add significant value to the quality of tours. This can increase local

Public awareness-building can increase support for and understanding of environmental goals.

Photo: Tundi Agardy

people's role in and benefit from tourism, which can in turn increase their stake in tourism's success. Training local people can function as a subsidy to the private sector where local employment requirements are in effect. The government can also train local people to be involved in tourism more indirectly, for instance by building local capacity for monitoring the environmental impacts of hotels and tours.[54] One particularly effective way to provide local people with information about tourism and change local attitudes on the environment is through school curriculums.[55]

n Steps toward improving local knowledge and awareness:

- ✓ Implement general awareness-building campaigns for all relevant stakeholders to increase understanding and support of policies.
- ✓ Cooperate with the private sector and NGOs to build awareness of environmental and cultural issues among tourists and local communities.
- ✓ Work with the private sector to improve its practices.
- ✓ Train local people in responsible tourism-related skills.

5.2 DIRECT REGULATION AND CONTROL OF THE TOURISM INDUSTRY

In this section, we discuss a range of policy tools designed to place limits on various aspects of development, including location, size and type of business, levels of tourism, and specific activities and impacts. Direct controls over the industry include contracts, regulations, licenses and permits. While these tools are not specific to the tourism industry and, in most cases, were developed for other industries or sectors, they can be effective forms of control for a growing tourism industry. In order to minimize conflicts and disincentives to private sector investment, direct controls should be designed in a collaborative and sensitive way, with relevant stakeholder input.[56]

5.2.1 Contracts

- **Contracts can help to ensure that tourism developments follow locally appropriate practices and proscribed government guidelines and regulations.**

A contract between the government agency in charge of controlling tourism and the developer should specify the terms under which development will take place and the specific guidelines or legislation with which the development must comply. The contract should go beyond traditional information on fees, royalties, timetables and employment to include both environmental and social issues. Information about appropriate conditions and practices to include in the contract can come from environmental impact assessments (EIAs) development plans and other sources.

5.2.2 Specific regulations

- **National and site-specific regulations on the manner and scale at which tourism is developed can directly control activities within the tourism sector.**

The most basic way for governments to support choices about land uses and behaviors is to institute specific legal regulations, requiring or prohibiting certain behaviors. Although regulations can be a powerful tool for control over the sector, they will be most effective as part of an integrated tourism policy[57] to minimize conflict, maximize flexibility and take advantage of opportunities for cooperation. Some society-wide regulations, such as the protection of specific animal and plant species and habitats, will also apply to tourism. Examples of such regulations include prohibitions on fishing for lobsters, turtles or sharks, collecting certain shells for sale as souvenirs,[58] or cutting mangroves to clear land for development.[59] Other regulations will need to be designed specifically for tourism and can be applied nationally or locally.[60]

5.2.2.1 National regulations

On a national level, many countries have found that one of the most effective regulations for controlling impacts is the requirement that all new developments and major renovations be preceded by an EIA. (See Box 5.2) National tourism regulations may include, among other requirements, setback requirements in coastal areas,[61] guidelines on building materials, technology requirements, waste treatment standards,[62] local employment requirements, or the provision of beds and sewage facilities for non-local workers.[63] For example, in Thailand, a range of government agencies, including the Ministry of Science, Technology and Environment, the Ministry of Industry, and the Department of Environmental Quality Promotion, have developed general environmental guidelines related to tourism, addressing issues such as waste disposal, water quality and noise.[64]

Some governments have chosen to directly control tourism and its impacts through limits on the scale and type of tourism activities.[65] The Government of Bhutan, working cooperatively with religious leaders, for instance, limited foreign visitors, except for neighboring Indians, to only 2,000 per year until the mid 1980s.[66] This number has been allowed to increase very slowly; the target number of tourists for 1996, again except for Indians, was 6,000.[67] In addition to limiting numbers of tourists, the government also regulates their activities by requiring that they spend more than US$200 per day.[68] In the Seychelles, the government has chosen to focus on up-market development of some areas, in order to increase benefit and decrease negative impacts.[69] Instead of limiting the number of tourist arrivals, the country limits numbers of beds in tourist facilities.[70] This strategy has allowed the tourism industry to generate approximately 20 percent of employment and GDP,

Box 5.2: Tiered Environmental Impact Assessment Process

Environmental impact assessments (EIAs) are one of the most important tools available to policy makers to help regulate an industry and determine potential impacts and mitigation strategies for a particular project. However, despite their role in the long-term success of many responsible development strategies, EIAs have often been opposed because of their high costs. Particularly for small developers in remote areas, it may be difficult to conduct comprehensive EIAs due to the complexity and expense of the endeavor.[1] Many countries therefore require EIAs only for projects which meet certain minimum size requirements. For example, the Government of Thailand requires EIAs only for hotels with more than 80 rooms,[2] while the Government of Sri Lanka requires EIAs only for new tourism projects exceeding 99 rooms or 40 hectares.[3]

However, while these limits may help reduce financial burdens, they can be problematic, as developments that are not large enough to require EIAs are nonetheless often big enough to cause significant damage. Even the smallest developments can cause problems as unchecked impacts accumulate.[4] In order to ensure that the potential impacts of all developments and activities are analyzed without choking off investment, the Economic and Social Commission for Asia and the Pacific (ESCAP) recommends a "tiered" EIA process, composed of several stages of increasingly in-depth impact analysis.[5]

In a tiered process, a full EIA is always required only for developments in areas of high conservation priority. Some governments already use this approach. The Government of Malaysia, for instance, requires EIAs for all hill station resorts and tourist or recreational facilities in national parks or in national marine parks.[6] For all other projects, the first step in evaluating the acceptability of potential environmental and social impacts is a Screening Process (SP) to weed out projects that will clearly have an insignificant impact, and allow them to proceed without conducting a full EIA. This step should be conducted when the type, location and profitability of a project is first considered. Based on general information about the scale of the project, the scope of potential impacts, and the conservation and social priority of the area, reviewers can either allow the project based on clearly minimal impact, or require further study.[7]

If a project is not cleared by the screening process, developers are required to prepare and submit a preliminary EIA as their formal pre-feasibility planning proceeds. This study, sometimes called an Initial Environmental Examination (IEE), should provide the government with more information about key environmental and social impacts, including extent, severity, duration and significance. Like the SP, the IEE provides an opportunity to permit projects without requiring a full EIA.

If a full EIA is deemed necessary, it should begin before specific plans for siting, design and practices are developed. In cases in which potentially beneficial projects require an EIA but cannot afford to conduct one, mechanisms should be developed for government experts to provide support at low cost.[8]

In order to make EIA effective as a management tool, a single government agency must have the lead role in managing the EIA process and ensuring that its recommendations are followed.[9] Without adequate enforcement to ensure that recommendations are followed, the tool will generally fail to achieve the intended environmental and social goals.

To facilitate more rapid processing and decision making for whatever type of EIA is used, governments should publish comprehensive EIA guidelines.[10] The EIA should also be made available for review by community representatives, government agencies and other stakeholders, and public hearings should be held in local communities.[11] Governments and stakeholder groups should review the findings for both comprehensive coverage of impacts as well as whether or not these impacts are acceptable.[12]

1. Economic and Social Commission for Asia and the Pacific (ESCAP), *Guidelines on Environmentally Sound Development of Coastal Tourism* (New York: United Nations, 1995), 48.

2. Ibid., 44.

3. Shirani Yasaratne, "Presentation by Sri Lanka," in *Tourism2000: Building a Sustainable Future for Asia-Pacific*, final report from Asia Pacific Ministers' Conference on Tourism and Environment (Madrid: World Tourism Organization, 1997), 176.

4. Edward W. Manning and T. David Dougherty, "Sustainable Tourism: Preserving the Golden Goose," *Cornell Hotel and Restaurant Administration Quarterly* 36, no. 2 (1995): 32.

5. Economic and Social Commission for Asia and the Pacific (ESCAP), *Guidelines on Environmentally Sound Development of Coastal Tourism*, 48.

6. Datuk Ismail Adam, "Presentation By Malaysia," in *Tourism2000: Building a Sustainable Future for Asia-Pacific*, final report from Asia Pacific Ministers' Conference on Tourism and Environment (Madrid: World Tourism Organization, 1997), 163-4.

7. Economic and Social Commission for Asia and the Pacific (ESCAP), *Guidelines on Environmentally Sound Development of Coastal Tourism*, 48-50.

8. Ibid., 49.

9. Ray Ashton and Patricia Ashton, "An Introduction to Sustainable Tourism (Ecotourism) in Central America," Product of Paseo Pantera: Regional Wildlands Management in Central America (1995), 60.

10. Economic and Social Commission for Asia and the Pacific (ESCAP), *Guidelines on Environmentally Sound Development of Coastal Tourism*, 44.

11. Ibid., 47.

12. Ibid., 57.

and 75 percent of foreign exchange earnings. At the same time, 42 percent of the country is legally protected in nature reserves.[71] Although some of these strategies and numbers might be unrealistic in larger markets, they do provide effective examples of strict government regulations to limit tourism's impacts and take advantage of positive contributions to development and conservation.

5.2.2.2 Site-specific regulations

In many cases, governments will need to develop site-specific regulations based on the type of tourism development zone and the fragility of the environment in a local area. An effective means of control at specific sites is the instituting of building regulations that specify limits to size, height and density of structures.[72] These regulations may also specify issues such as when facilities can be built,[73] landscaping choices, colors, architectural styles, number of meters of beach per tourist bed or number of parking spaces per bed. As in all aspects of planning, the key to developing successful building regulation codes will be in adapting existing knowledge about local areas to tourism decisions.[74] For instance, a carrying capacity study of southern Thailand found that the number of rooms per kilometer of beach should be set at 200, 100 and 0 for intensive development zones, limited development zones and preservation zones, respectively.[75]

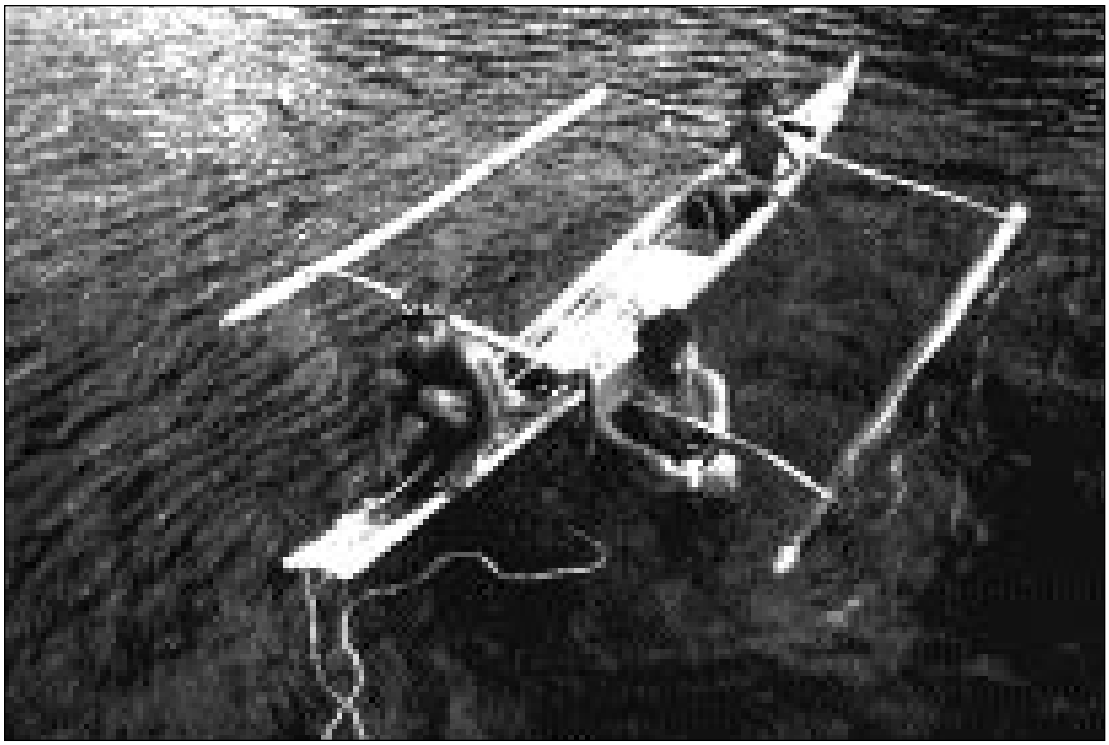
At national parks or natural heritage areas, requiring trained and licensed guides can play an important role in controlling tourist behavior and impacts.[76] The Japan International Cooperation Agency (JICA), in its plan for tourism in Northern Palawan, the Philippines, requires qualified and certified rangers, nature tour guides, divers and boat operators to accompany tourists on trips to sensitive trails, mangroves and reefs. This requirement will be supplemented by requiring permits for the use of land-based resources and mooring buoys for access to marine resources.[77]

Site-specific regulations may also prohibit uses which are judged to be incompatible with the goals of an area. For instance, in order to control rapidly increasing negative impacts from tourist numbers and behavior in Hanauma Bay, Hawaii, USA, in the early 1990s, the government implemented regulations including limited park hours, restrictions on what tourists could feed to fish and prohibitions on smoking. The government also placed restrictions on limousines, tour buses and tour vans discharging passengers at the park, allowing only a 15-minute sightseeing stopover. Although negative impacts continue, regulations have been effective in lessening impacts to the bay, by both reducing visitation numbers by approximately half and decreasing harmful behavior.[78]

5.2.3 Licenses and permits

- **Licenses or permits for certain activities can be a useful direct control over the form of tourism development in a certain area.**

Though their specific applications may vary, both licenses and permits work by obligating businesses or tourists to obtain permission to build and operate certain facilities or to participate in certain activities.[79] Instituting



Traditional fishing, Coron Island, the Philippines

Photo: Haroldo Castro

licensing requirements can be a powerful tool for controlling the location, degree, form and activities of tourism.[80] Furthermore, in many cases, governments can charge for licenses to raise additional revenue.[81]

In order to increase the degree of control which they provide, licenses should not be granted unconditionally, but should instead stipulate conditions. For instance, licenses may be granted only for a certain type of development or fishing technique, or may set a maximum allowable level of resource use or pollution.[82] Both the behaviors required and the number of licenses to be granted should be based on acceptable levels of change determined during site evaluation and land-use planning exercises.[83] In some cases, where licensing is already in use, governments may choose to revoke a number of licenses, or reduce the number of new ones that are awarded, until environmental and social assessments can be done in a certain area.[84] Similarly, governments can change licensing criteria in order to change behavior.[85]

Governments already use licenses and permits to control a wide range of industries.[86] In the tourism sector, many countries require businesses such as hotels, tour operators, taxis, bars, casinos and sports facilities to have licenses to operate.[87] Governments also require tourists or tourism businesses to apply for permits or licenses to undertake activities such as camping, fishing, diving or hunting.[88] Nepal, for instance, requires expedition groups to gain government permission before mountain climbing.[89]

In addition to preventing adverse impacts, governments can also use permits to regulate the level of certain activities, such as emissions of carbon dioxide or toxic chemicals.[90] For example, in order to effectively implement new national pollution standards, the government of Sri Lanka recently required all new and existing tourist developments to obtain licenses to pollute. To facilitate the implementation of this scheme, the government is granting existing tourism businesses a grace period to install new technologies. These regulations have resulted in the incorporation of pollution control techniques by most hotels in the country.[91]

n Steps toward direct regulation and control of the tourism sector:

- ✓ Institute contracts between private developers and government agencies to ensure that regulations are followed.
- ✓ Require that all new tourist developments and major expansions conduct an environmental impact assessment.
- ✓ Set national guidelines on materials, technology, waste treatment, employment and resource use.
- ✓ Set site-specific regulations for certain types of tourism and sensitive environmental or cultural areas.
- ✓ Control the location and form of tourism activities through tools such as licensing and permitting requirements.

5.3 ECONOMIC AND FINANCIAL TOOLS TO ADDRESS THE POTENTIAL IMPACTS OF TOURISM

Economic and financial tools, including traditional strategies such as taxes, subsidies and entrance fees, as well as more innovative approaches such as performance bonds, trust funds and offsets, can be an important and effective supplement to direct regulations. While the direct controls discussed in the previous section allow governments to focus on the specific scale and nature of tourism, control through fiscal tools is based on creating positive or negative incentives via rewards or penalties.

Financial mechanisms can also have important advantages over direct regulation in certain cases. Taxes, for instance, in addition to controlling impacts also raise revenue. Positive incentives, on the other hand, can influence developers to benefit local communities and conservation without the conflicts that might arise from requiring them to do so. Performance bonds and trust funds can help to ensure that money will be available to mitigate any unexpected environmental or social damages. Fiscal controls may also have the advantage of allowing the private sector to make its own choices of behavior, based on the new set of costs it faces, which may result in a more dynamic and adaptable private sector and fewer illegal activities.[92]

5.3.1 Taxes

- **Taxes can create a disincentive for undesirable activities and raise revenue to support conservation and community development.**

In designing a tax, a government may use a range of options, such as a per unit tax, a tax on units above a certain threshold or a tax that grows as the scale or impact of the activity grows. There is increasing support for requiring developers to pay a tax on all resource use or environmental damage, even if it is not due to negligence,[93] on the grounds that these resources are valuable to everyone and certain individuals should not be able to benefit from their use at the expense of others.

Governments can impose taxes on a range of actions and impacts. For instance, in the tourism sector, developers may be taxed for building in certain areas.[94] Such a tax will generally be considered more legitimate if it is supported by protected areas legislation.[95] Governments can also tax hotels and tour operators for resource use or pollution generation, based, for instance, on the amount of air- and waterborne pollutants emitted, the amount of erosion caused, acres of land cleared or gallons of fresh water used.[96] Requiring the private sector to pay for resource use can provide an important incentive to continually reduce use, rather than simply cutting pollution generation to the level of direct regulatory controls.

Unlike taxes on the private sector, taxes which apply to tourists are generally aimed solely at revenue generation. These may include arrival or departures taxes, hotel taxes or sales taxes.[97] Senegal, for instance, has instituted a charge of approximately 70 cents per tourist per night, with revenues used to support tourism promotion activities.[98] Similarly, Belize collects US$3.75 from all visitors upon departure from the country. St. Lucia, in cooperation with six other eastern Caribbean nations, recently began to charge disembarking cruise ship passengers a US$1.50 waste management tax; industry pressure to repeal this tax was countered in large part by education and outreach efforts by the World Bank.[99]

In determining the ultimate uses of tax revenues, governments should ensure that a significant portion is used for the improvement of the tourism sector, for instance by providing public utilities and infrastructure.[100] Revenues can also be used for other activities which support tourism, local needs and conservation, including training local people as guides, rangers, planners, managers, tourism professionals and entrepreneurs, creating funds to supply local entrepreneurs with capital, funding the management of protected areas used by tourism, or improving degraded ecosystems.[101]

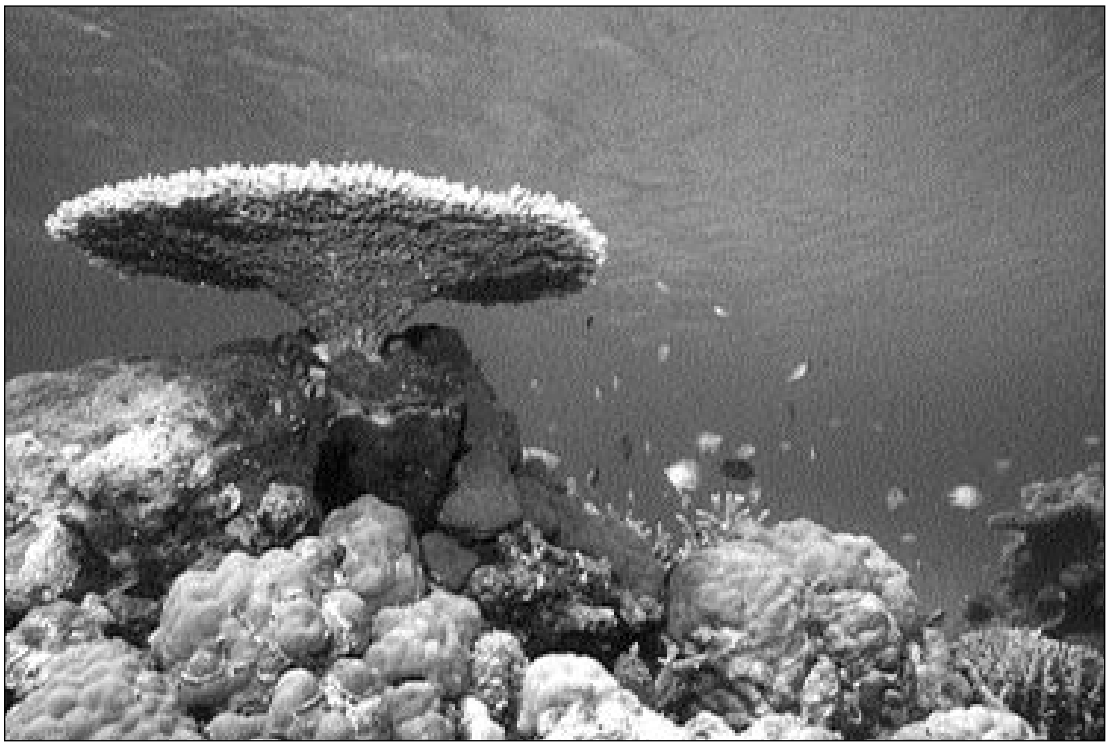
5.3.2 Entrance fees

- **Instituting entrance fees for publicly owned natural areas and tourism attractions can help to regulate access and raise funds for management of the attraction.**

By regulating and limiting the number of tourists that visit a certain area, entrance fees can reduce unwanted development and adverse impacts on local communities and natural resources. In some cases, unrestricted access to a natural or historical site can result in degradation of the quality of the area for tourism. By requiring users of natural resources to pay for their use, entrance fees may be an important way to reduce overuse and raise revenues to compensate for damage. Fees may therefore be viewed as a way to correct the market failure that results when natural resources are "free."[102]

Requiring resource users to pay entrance fees can be justified on the grounds that users should support the upkeep and management of the resource by paying fees which will in turn be used to cover management costs. Where visitors do not support management, costs must be covered by tax payers, which reduces the government's ability and incentive to protect natural areas.[103] Nevertheless, even in areas that do require entrance fees, they are often too low to raise adequate revenue for management,[104] even in well-visited areas, and may be well below the amount that visitors are actually willing to pay.[105] After entrance fees were increased at the Park National des Volcanes in Rwanda, where tourists go to see mountain gorillas in the wild, visitation levels continued to rise, even after fees reached as high US$200 per person for a single visit.[106]

Although visitors may think their fees are going to support the local environment, in many cases, only a small share of money spent by visitors in natural areas ever goes toward managing and protecting these resources.[107] For instance, although Ecuador's Galapagos National Park generates about US$3 million per year, only about 20 percent of this revenue goes to the national park system, with the rest



Coral reefs, a popular tourist attraction, are home to more than a quarter of all known marine fish species.

Photo: Tim Werner

going to general government revenues.[108] Besides having the potential to lead to further environmental degradation, failure to allocate entrance fees toward the management of those resources represents a poor economic choice. A sizable portion of fees should therefore be used for protection, tourist education, management and improvements to the area from which they are collected.[109] However, policymakers should be wary of protected areas trying to increase revenue for park management by maximizing tourist numbers beyond sustainable levels, which can result in environmental degradation. Entrance fees can also be used, in part, to compensate local residents, who, in many cases, lose access to resources designated for tourism and receive nothing in return.[110]

Despite the potential benefits of entrance fees, policymakers should be aware that fees may be controversial or unpopular.[111] Critics of fees argue that access to natural resources should be free for everyone and that fees are biased against the poor. One way to address these concerns is to institute differential fees, for instance charging local people, seniors or students a lower fee in order to ensure that they retain access to resources, while charging comparatively wealthier foreign tourists a higher fee.[112] Similarly, entrance can be reserved for local people on certain days.[113] Another important strategy for increasing support for fees is education of visitors at both a site-specific and national level to explain the use of their money. Studies have shown that this education increases visitor support for fees, especially if the money is used for conservation of the area.[114]

Finally, although fees can help to limit visitation, they do not provide exact control over visitor numbers, and, in critically important areas they should be combined with other controls such as use schedules and licenses, in order to ensure that impacts are limited. The importance of supplementing fees with other means of control is demonstrated by the Galapagos Islands, Ecuador, where all visitors must

Box 5.3: Direct Valuation as a Tool for Determining Fees

Determining the appropriate level at which to set entrance fees can be aided in part by economic valuation tools that attempt to put a financial value on a non-marketed resource. In many cases, analysis of tourism-generated returns on natural resources has demonstrated that preserving natural resources for tourism creates much higher returns than direct exploitation, even in the short-term.[1] Although these tools are not an exact science, they can yield useful and interesting information that can be used not only in setting fees but also in awareness campaigns and education curriculums to demonstrate the value of natural resources.

Such economic analyses are often used to place a financial value on a single representative of a species to show the higher value of preserving it in the wild, or on a protected area as a whole. For example, the sale of various parts of a tiger carcass on the black market in the Far East will bring about US$7,000.[2] In contrast, a World Bank study based on annual tourist revenue in Kenya found that each lion in Amboseli National Park was worth about US$27,000 and each herd of elephants about US$610,000.[3] A similar study of the overall value of tourism in protected areas in Kenya found that protecting an area to maintain a population of big animals such as lions and elephants was worth more than US$40 per hectare, compared to only US$0.80 per hectare for agricultural development under optimistic assumptions.[4]

In the Maldives, a government study found that a single live shark yields approximately US$33,500 in tourist revenue, as opposed to a mere US$32 when sold by a fisherman. Taking action on this and similar findings, the Maldives has made sharks, turtles and dolphins protected species, a measure that is generally supported by the private sector.[5] Similarly, in Canada, in response to worldwide pressure, the government banned the hunting of baby harp seals. Annual income from tourists coming to watch the seals today is three times greater than the income that sealers used to earn.[6]

Despite the startling differences in estimated incomes, it is important to note that these analyses only imply an economic improvement for society as a whole and, in many cases, will be controversial among people whose activities are banned. In the case of seal hunting in Canada, government regulations prevented a traditional native practice that dated back thousands of years and had significant cultural and historical meaning. In such cases, it may be possible to work with local groups to permit some form of traditional use of natural resources.

1. Denis Hayes, "Green Tourism: Antidote to Deuteranopia," presentation at Bell Harbor International Conference Center, Port of Seattle, Washington, 7 June 1996, 7.

2. Richard Ives, "Twilight of the Tiger," *Conde Nast Traveler*, March 1998: 152-7, 182-3.

3. Hayes, "Green Tourism: Antidote to Deuteranopia," 7.

4. John A. Dixon and Paul B. Sherman, *Economics of Protected Areas: A New Look at Benefits and Costs* (Washington, DC: Island Press, 1990), 184.

5. World Tourism Organization, *Tourism2000: Building a Sustainable Future for Asia-Pacific*, final report from Asia Pacific Ministers' Conference on Tourism and Environment (Madrid: World Tourism Organization, 1997), 6.

6. Hayes, "Green Tourism: Antidote to Deuteranopia," 7.

pay an entrance fee to cover management costs,[115] but there are no absolute limits on visitor numbers. As the fee is insufficient to restrict visitation to acceptable levels, there has been severe overcrowding and environmental damage, suggesting that more strict regulation might be necessary in such a unique environmental area.

5.3.3 Subsidies and positive financial incentives

- **Subsidies can help to encourage responsible behavior by creating positive incentives.**

With nearly 200 countries, thousands of destinations and millions of individual tourism products[116] all trying to attract tourists worldwide, the market for development is extremely competitive. In some cases, rather than creating disincentives in the form of taxes or fees, governments may choose to provide positive incentives to the private sector. Positive incentives may include grants for equipment, inexpensive loans, technical assistance, tax breaks, guarantees on exchange rates, subsidies for the employment or training of local labor, or relief from import duties on environmentally sound building materials and equipment.[117] Governments can use these tools for several purposes, including encouraging investment, promoting and facilitating compliance with regulations and land-use plans, and promoting other socially and environmentally beneficial behaviors.

A more specific use for incentives is to aid the private sector in meeting zoning criteria and operational standards. Governments are increasingly offering incentives for this purpose, making funding packages available to support compliance with proactive land-use planning measures.[118] For instance, governments can support private investment in pollution control equipment, such as incinerators, recycling plants and gray water systems,[119] or other technology such as solar energy systems. This type of incentive may be necessary if firms are either unwilling or unable to pay for changes. For example, in Grenada, where small hotels have caused severe contamination of the beach and water, a study found that the majority of small hotels simply could not afford water treatment.[120]

While governments may choose to implement a wide range of positive incentives and subsidies to attract developers,[121] they should all be based on adequate planning, encouraging development only in appropriate areas.[122] Offering subsidies also should not come at the cost of regulations necessary for sustainability. General incentives encouraging uncontrolled investment have, in many cases, resulted in serious negative impacts. While some incentives may be necessary to initiate development, excessive subsidies may mean that countries actually receive little economic benefit from development[123] and may be unable or unwilling to impose environmental regulations on developers. Governments should study this tradeoff before offering incentives.

5.3.4 Performance bonds

- **Requiring performance bonds for tourism developments can provide an incentive for positive environmental and social activities and ensure the availability of funds for mitigation of potential damages.**

Performance bonds, which have long been required in developed countries for construction and extractive industries such as oil and mining, can be an effective policy tool for both mitigation and prevention of environmental and social harm. Requiring developers to post a performance bond before development begins will both ensure the availability of funds for mitigation of any unexpected environmental or social damages and offer a positive incentive for the developer to implement good environmental and social practices.

A performance bond is basically a form of insurance policy that the developer posts through a third party surety or bank. If environmental or social damage does occur, the government may take all or part of the funds in the performance bond to mitigate those impacts or compensate those directly affected. To ensure that a bond contains sufficient funds to finance any clean-up, bond amounts can be set to compensate for "worst-case" scenarios. If environmental and social damages are avoided during construction and for a certain amount of time into operations, the bond will eventually be canceled and the money returned to the investor.

While performance bonds can be an important tool for mitigating damages and creating incentives to avoid damages, they may also impose a financial burden on companies or investors. One way to lessen this burden is to phase bonds in and out during various stages of a development. During the most intensive stages of development, for instance during construction of a resort, a higher amount of money could be required, whereas, during less intensive operations stages, the bond could diminish and interest payments would decrease.

Although performance bonds should never be used as a substitute for regular insurance—which should always include environmental and social provisions—they are a useful supplement to traditional insurance policies. Traditional insurance provides no positive incentive for preventing damage, since, even if the policy is paid out, the policy holder does not directly assume the costs of mitigation. With a performance bond, negative impacts mean that the bond holder loses money. In addition, the bond is automatically released in the event that environmental or social damages occur, whereas insurance companies can exercise considerable discretion over what is covered under their policies.

In Nepal, performance bonds are used on a small scale to ensure that mountaineering teams comply with government regulations on waste management. Any team planning to climb a peak in the Khumbu area of the country must leave a deposit with the Ministry of Tourism and Civil Aviation before beginning their ascent. During the trip, the team

is monitored by local NGOs and a government liaison officer who must accompany the team. If environmental performance on the climb is not acceptable, the deposit is not refunded. This requirement has contributed to highly effective management of pollution and solid waste in the region.[124]

5.3.5 Trust funds

- **Trust funds can provide resources for proactive conservation, community well-being and responsible tourism development.**

Environmental trust funds have been set up in more than 40 countries since 1990, generating hundreds of millions of dollars for conservation and local development.[125] For tourism, the government can create a fund using required or voluntary contributions from private sector developers, revenues from license and permit fees, and taxes levied on tourists. Although often created through government legislation, funds are generally independent of direct governmental control, though the board of directors may include government representatives.[126]

A conservation trust fund or foundation can provide many benefits to a country or region, most notably a long-term, stable source of financing for environmental protection and social development, which can, in turn, ensure higher quality resources for tourism. The longevity of financing allows for more secure and confident long-term planning and investment for both the government and the private sector. A single fund allows for greater coordination of independent contributions to sustainable development, leading to more effective use of scarce resources.[127] And, the participation of a wide-range of stakeholders in designing, implementing and managing the fund can lead to greater cooperation among interested parties and a stronger mandate for the environmental and social investments that come through the fund.

A conservation and community development fund can be established as a trust fund, foundation or nonprofit corporation. This decision will often depend on the type of legal system in the country.[128] Depending on the stability of the country's currency and economy, some or all of the assets of the fund may be held offshore.[129]

The financial structure[130] of a fund will ultimately be determined by the goals and scope of the fund. A fund may be set up to help manage a single national park or an entire national protected areas system. Other goals may include buffer zone management, sustainable economic development in local communities, or national capacity building for environmental or tourism agencies.[131] Regardless of the scope, it is important to clearly define these goals and purposes at the start.[132]

A process of stakeholder participation in the setting of goals and the general structuring of the fund will help to ensure its mandate and promote success in the long run. The determination of the management and composition of the fund's governing board is an important and potentially difficult negotiation, which should include relevant stakeholders. A board should include representatives from major stakeholder groups, including government, NGOs, local communities and the private sector.[133]

Because the establishment of a trust fund is a complex legal and political process, in some countries it may be possible to create a tourism fund as a sub-account of an existing environmental trust. Although the sub-account will still need by-laws and a governing body, it can be easier, faster and less expensive than establishing a totally separate fund. Bolivia's Fondo Nacional Para El Medio Ambiente (National Fund for the Environment), for example, has at least 17 different sub-accounts under a single umbrella trust.[134]

Belize's Protected Area Conservation Trust (PACT) is an example of a tourism-based conservation trust fund. PACT,

For More Information

Economic and Financial Tools

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which began operating in June 1996, raises its funds through a US$3.75 tourist tax levied on every foreign visitor as they depart the country. This tax, which generates about US$750,000 per year for conservation, is supplemented by 20 percent of all site entry fees, recreational licenses, permit and concession fees, cruise ship fees and fines. The trust also accepts grants from international donor agencies. While the fund is principally designed as a revolving fund, five percent of its income each year is set aside in a permanent endowment, ensuring a long-term source of funding. The fund, which was created through an act of Parliament, is governed by a nine-member board that includes representatives from government, local environmental and social NGOs, and the private sector.[135]

5.3.6 Offsets and set-asides

- **Conservation offsets to development can provide resources for long-term conservation and community development efforts by offsetting the effects of development.**

An offset, which can be required or voluntary, is a financial or in-kind contribution by a developer or other entity to conservation or community development, which serves to offset the impact of a project or development. Typical offsets might include funding the management of a nearby protected area, encouraging the creation of new protected areas or the rezoning of certain areas toward higher conservation, or contributing staff time or equipment to natural resource management. In general, it is often more effective for a developer to support government monitoring and management efforts, rather than attempt to protect or manage a park itself. Offsets allow a development to proactively contribute to regional conservation strategies and ensure the promotion of sustainable development of the region, even if it is not directly causing any significant adverse environmental or social impacts.

Although offsets can take the form of voluntary contributions, governments can require each development to invest in some sort of offset or set-aside in return for land acquisition, building rights or permits. The level and scope of the offset should be determined by the significance of potential impacts from development, based on, for example, land area affected, materials used or waste and pollution produced. If a development is proceeding in an area that is already relatively degraded, offsets can provide an effective way to distribute environmental contributions to other, more critical areas. In extremely rare cases, where outstanding tourism resources exist in sensitive areas, development may be allowed to proceed with appropriate practices in exchange for a large offset in another equally or more critical area. Nevertheless, it is important that investment in an offset should not be seen as a license to degrade or pollute the local environment or a blanket permission to develop in any part of a region.

Funding for a conservation offset can come from NGOs or international donor agencies as well as private sector developers. An example of such an offset is the Serra do Conduru State Park in Bahia, Brazil. In 1997, the Government of Bahia decided to pave a local road in order to increase tourist access to an isolated beach and fishing village and increase tourism revenues. The project also threatened an unbroken corridor of rare Brazilian Atlantic Forest. Working together with the Inter-American Development Bank, which was financing the road project, and the government of Bahia, Conservation International and its local partners designed the Serra do Conduru State Park, a conservation offset corridor along the road that doubles the area of protected forest in the region.[136]

n Steps toward promoting responsible tourism development with economic and financial tools:

- ✓ Consider using taxes to reduce undesirable activities and raise revenue.
- ✓ Use tax revenues to support sustainability in the tourism sector.
- ✓ Consider charging entrance fees to certain areas in order to earn revenue and limit visitation.
- ✓ Use revenue from entrance fees to support the management of the resource.
- ✓ Consider using subsidies and financial incentives to encourage positive behavior.
- ✓ Require the use of performance bonds to encourage good practices and ensure the availability of funds for mitigation.
- ✓ Create a trust fund to provide resources for conservation and community development.
- ✓ Require conservation offsets or set-asides to balance out the real and potential impacts of tourism development.

5.4 POSITIVE CONTRIBUTIONS TO RESPONSIBLE TOURISM DEVELOPMENT

In addition to the use of direct regulatory controls and financial incentives for guiding the development of the tourism sector, governments can implement a variety of proactive policy strategies designed to offer support for and promote the growth of an environmentally and socially responsible tourism industry in their country. These actions can include becoming more involved in the global marketing of a country's image as a destination, providing infrastructure for development, supporting local employment and ownership, and instituting award and certification programs recognizing good environmental and social practices. In all cases, proactive promotion of a responsible industry will require coordination and consultation with the private sector and other stakeholders to determine where these government policies can have the greatest impact.

5.4.1 Marketing the image of a destination

- **Government involvement in the marketing of an area as a tourism destination can help to promote a positive image and encourage responsible tourism development.**

In general, tourism marketing strives to create an image of a destination that is attractive to tourists. In most countries, marketing continues to focus on maximizing growth in arrivals,[137] a strategy that often ignores the important role that destination image plays in controlling types of investments and attractions, types of visitors, and their activities, all of which can have a major impact on the environmental and social sustainability of a tourism strategy.[138] Negative results can range from exploitation of local people and cultures to all-inclusive tourism development which brings few local benefits. Critics have argued, for instance, that government advertising of Barbados as a "belly and butt" destination has been partly responsible for problems with the character of the industry, including "beachboys" selling marijuana, harassment of tourists and tourists' lack of interest in the country's cultural heritage.[139]

In order to avoid these kinds of problems and instead use marketing as a positive tool for attracting beneficial tourism, the government should take an active role in both choosing an image for a destination and controlling marketing to reflect that image. This means that governments should also take an active role in deciding what types of tourism are appropriate to target. Appropriate marketing can make a strong contribution to promoting advantageous tourism, for instance by attracting investors interested in developing tourism based on relatively pristine natural resources, or tourists interested in positive cultural exchange.

The current tourism master plan for Fiji, for example, contains a variety of policies designed to focus tourism development on the country's high quality environmental resources, cultural and historical attractions, and opportunities for learning. These efforts are supported by the Fiji Visitors Bureau's marketing campaigns, "Discover the Fiji You Don't Know," and "Discover the Fiji You Will Never Forget," which stress history and culture as a basic frame of reference for tourists.[140] In addition to attracting appropriate visitors, this type of strategy may also increase the attractiveness of Fiji for investors interested in tourism based on high environmental quality and cultural attractions, who will benefit from these resources and from the government's marketing efforts.[141]

Effective environmental and social policies can help ensure the continuation of local cultural traditions.

Photo: Russell Mittermeier

In recent years, both national and local governments have become increasingly involved in marketing tourism destinations. In many cases, marketing is now carried out in partnership between the public and private sector.[142] Although there are often conflicts between the interests of the two groups, working directly with the private sector on marketing gives the government an important means of control.[143] Where the government is not directly involved in marketing, it should provide guidelines for acceptable images and monitor publicity activities.[144] One way to monitor marketing strategies is to visit travel fairs to identify any unacceptable images of a destination.[145]

When using marketing as a form of control, it is important to remember that all images must be supported by other policies, or they may cause problems of their own. For instance, although marketing that

promotes local cultures as an attraction can increase the role of local people in tourism, it can also increase the number of operators offering cultural tours based on exploitation. To ensure that cultural resources are not over-commercialized or portrayed in a disrespectful manner, marketing should be combined with other policy tools that benefit local communities.

5.4.2 Providing appropriate infrastructure

- **Providing appropriate infrastructure in tourism areas can increase the positive contribution of tourism to conservation and community development.**

Although the private sector contribution to infrastructure is increasing, the public sector generally has the primary role in providing means of access, maintaining natural resources and providing tourist facilities such as marinas,

Box 5.4: The Maldives' National Tourism Plan: Enclave Tourism

Tourism in the Maldives generates 10 percent of total employment, 20 percent of gross national product and 60 percent of foreign exchange earnings.[1] Revenues from tourism have contributed to the provision of piped water, health services and sanitation for the people of the capital city of Male'.[2] However, as development has progressed in the tourism industry, the country has suffered significant environmental impacts from construction and operation of tourism facilities, including coastal erosion, reef destruction and water pollution from waste and sewage disposal. More recently, increased use of speedboats, helicopters and other high-impact transportation have begun to adversely affect the environment as well.[3]

In recognition of the potential impact of tourism on local cultures and ecosystems, the government has implemented a range of control measures to make its tourism industry more responsible. In order to minimize cultural change in the strongly Islamic country, tourism is only allowed on certain uninhabited islands. While tourists are encouraged to visit inhabited islands, they are allowed to do so only with a local guide,[4] and only male Maldivian staff members are permitted to visit or live on a tourist island.[5]

Environmental regulations in the tourism sector require that the built-up area of each island may not exceed 20 percent of its total land area.[6] Density limits and increasingly strict regulations requiring bottle crushers, can compactors and a desalinization plant for every developed island have helped to control pollution and environmental impacts,[7] although sewage disposal continues to degrade the environment in some places.[8] The use of coral rocks for construction, which contributed to high levels of reef destruction and beach erosion in the past, has been reduced and replaced with imported cement.[9] Certain islands have been designated source islands for raw material. Species such as sharks, turtles and dolphins, which are important to tourism, are protected.[10]

A critical component of the Maldives' environmental protection plan is close cooperation with the private sector, for example on a program to remove garbage generated by tourists.[11] However, despite these efforts by all stakeholders, biodiversity in the Maldives is still under threat.[12] To address the need for greater environmental protection efforts, the national tourism master plan for 1996-2005 recommends that further development be tightly managed, and that new environmental control measures be implemented and paid for by increasing prices for tourism facilities.[13]

1. Prabhu Ghate, "Maldives: Tourism Booming, but Environment, Culture Still Safe," *Interpress Services*, 23 May 1997, 1.

2. World Tourism Organization, *Tourism2000: Building a Sustainable Future for Asia-Pacific*, final report from Asia Pacific Ministers' Conference on Tourism and Environment (Madrid: World Tourism Organization, 1997), 7.

3. Ute Guthunz and Friedrich von Krosigk, "Tourism Development in Small Island States: from Mirab to Tourab?" in Lino Briguglio, et al. eds., *Sustainable Tourism in Islands and Small States: Case Studies* (London: Pinter, 1996), 22.

4. Ministry of Tourism of the Maldives, *Sustainable Tourism in Maldives* (Maldives: Ministry of Tourism, 1998).

5. Manfred Domroes, "Maldivian tourist resorts and their environmental impact," in P.P. Wong, ed., *Tourism vs. Environment: The Case for Coastal Areas* (Netherlands: Kluwer Academic Publishers, 1993), 76.

6. World Tourism Organization, *Tourism2000: Building a Sustainable Future for Asia-Pacific*, 6.

7. Ibrahim Hussein Zaki, "Opening Statement by the Chairman," in *Tourism2000: Building a Sustainable Future for Asia-Pacific*, final report from Asia Pacific Ministers' Conference on Tourism and Environment (Madrid: World Tourism Organization, 1997), 28.

8. Ghate, "Maldives: Tourism Booming, but Environment, Culture Still Safe," 1.

9. Domroes, "Maldivian tourist resorts and their environmental impact," 78.

10. World Tourism Organization, *Tourism2000: Building a Sustainable Future for Asia-Pacific*, 6.

11. Ibid., 7.

12. Maumon Abdul Gayoom, "Inaugural Address by the President of Maldives," in *Tourism2000: Building a Sustainable Future for Asia-Pacific*, final report from Asia Pacific Ministers' Conference on Tourism and Environment (Madrid: World Tourism Organization, 1997), 20.

13. Ghate, "Maldives: Tourism Booming, but Environment, Culture Still Safe," 2.

and utilities such as water, electricity and solid waste disposal sites.[146] As discussed in Chapter 3, nonexistent or poorly planned and designed infrastructure can lead to serious adverse impacts in a local area. Thus, governments should design and construct this infrastructure with sustainability criteria in mind.

Perhaps the simplest way to use infrastructure provision to reduce negative impacts is to offer services where they are inadequate.[147] Particularly in developing countries, tourism facilities often operate without infrastructure, such as sewage treatment, or overuse existing infrastructure, such as water supplies and roads.[148] However, the provision of infrastructure for tourists that does not benefit local people has caused local resentment and protests in many locations.[149] Thus, to the extent that it is economically feasible, when governments provide infrastructure that will benefit the tourism industry, they should extend these services to local people. In addition, to ensure that communities do not bear the financial cost of supplying tourist infrastructure through domestic taxes, the government should institute a tax or other revenue-raising mechanism on tourism to pay for the services.[150]

Governments can also use infrastructure provision to determine and thus manage the capacity of an area in terms of numbers and types of tourists who can access and use the area.[151] A significant amount of potential damage can be avoided by minimizing the number of roads and additional areas which must be cleared for development. Roads should not be built based on predictions of growth in traffic. Instead, the government should seek to influence the overall level of vehicle traffic by providing incentives to use public or non-motorized transportation, and institute policies aimed at restricting automobile use.[152] Infrastructure that promotes the use of non-motorized transport, such as roads with bicycle lanes or no-car areas, can also significantly reduce the need for large-scale land clearing to support transportation.

By providing or denying infrastructure, the government can therefore encourage or restrict tourism in specific areas.[153] For instance, provision of varying levels of access infrastructure, such as roads, public transportation or campsites in parks, can be used to facilitate or improve access, and therefore increase visitation. On the other hand, not providing access, by refusing to build or allow parking lots, or denying access, by closing roads or restricting types of transport, can allow governments to restrict visitation. Although denial of access is not a popular option, it has already been used effectively by governments in several areas that are threatened by overuse.[154]

5.4.3 Promoting local ownership and involvement in tourism development

- **Local ownership and involvement in tourism activities can increase local benefit and minimize potentially adverse social consequences of tourism development.**

Lack of local ownership or involvement in tourism development is often a serious issue in destinations that have relied on foreign investment to build up their tourism industries, because of lack of capital and capacity at the local level. In many areas, particularly where package vacations predominate, nearly all of the tourism services are provided by foreign-owned businesses, meaning that nearly all of the revenues accrue to foreigners.[155]

To address the problems of leakage of revenues and lack of local employment generation, governments can provide credit and training to local businesses and entrepreneurs, encourage joint ventures with foreign-owned businesses and institute local employment requirements. In order to promote local ownership and employment, many governments place minimum limits on numbers of local workers or ownership of companies. Some governments use more adaptive strategies. For example, in Indonesia in October 1997, 90 percent of all star-rated hotels were foreign-owned. To address this problem, the government required that foreign-owned hotels establish joint ventures with Indonesian companies.[156] In some cases, joint ventures may be a preferable option for local people by providing needed capital and expertise.

Local ownership and involvement can significantly increase local benefits from tourism and will often promote other goals through broader local support for initiatives. In Zambia's South Luangwa National Park, poaching was once a primary threat to wildlife. To create a local stake in tourism and conservation, the government provides 35 percent of wildlife tourism revenues to the communities in which the revenues are generated. As a result, local support for tourism and conservation has increased significantly, and village volunteers supplement paid wildlife scouts in patrolling for poachers.[157]

To ensure the greatest local benefits, local residents should develop and manage tourism facilities to the greatest extent possible. Although resort developments will do the actual hiring, governments can help to encourage local employment. This local participation can be promoted through education and training, as well as through access to credit for local businesses. Businesses should train local people to work at all levels of an operation. Further, the development of links between local businesses to avoid leakages will result in greater local benefit.[158]

An example of locally owned and controlled tourism development is Senegal's Campaments Villageois, or village camps. Beginning in the 1970s in the lower Casamance region, villagers and planners worked together to develop a form of tourism that would bring local economic benefits and remain in local control. Tourists are transported to villages by traditional canoes and accommodations and meals are provided in the local style. This type of infrastructure development is inexpensive and reduces contrasts in lifestyle between tourists and residents, providing tourists with a more authentic experience and allowing local people to take pride in their lifestyle. Management and staff in the

camps are from local villages and are changed each year. The use of revenues is also determined communally. In order to limit the impact of tourists, tourist camps are located only in villages with populations greater than 1,000, and villages set limits at between 20 and 30 beds per camp.[159] To date, 19 camps with a total of 400 beds have been created and are regarded as the most successful rural economic development projects in the country.[160] Revenues have been used to build health clinics, support fishing projects and create a metal workshop.[161]

5.4.4 Awards and certification

- **Implementing a system of environmental and social performance awards and certification can help to set and promote standards of excellence and increase marketing opportunities for responsible businesses.**

Awards and certification can increase the visibility, legitimacy and prestige of the businesses who receive them, thus increasing the success of exemplary businesses. Such a system can also provide positive incentives for good practices and contribute to the development of a more responsible tourism industry.

Awards are a relatively well-received and accepted form of recognizing good behavior. By developing an award to honor businesses that exemplify good performance, governments can encourage the private sector to improve its practices. The Tourism Authority of Thailand, for instance, runs a national award project to recognize tourism businesses with outstanding contributions to environmental and cultural protection.[162]

Certification, on the other hand, is a much more controversial subject, and has been accused of facilitating "greenwashing," by allowing businesses to increase profits while continuing environmentally destructive practices.[163] One important reason for this controversy is that there are currently no internationally accepted guidelines for acceptable practice, although many groups offer certification. As a result, certification standards vary widely. In addition, because certifiers are often paid directly by tourism businesses, even if their criteria are sound, it may be difficult for them to refuse certification.

Nonetheless, certification may be an important part of an overall tourism strategy. The Costa Rica Tourism Institute recently implemented a national certification program, in partnership with the Costa Rican Department of Natural Resources. The goals of the certification program are to improve the use of environmental and social resources, increase local participation in tourism and increase the competitiveness of the private sector. The program is based on evaluating the degree to which businesses approach nationally determined ideals of sustainability. Businesses are evaluated in four general areas: positive and negative interaction with the environment, management policies and operation systems, interaction with clients, and positive and negative interaction with communities.[164] In 1996, Australia launched its "National Ecotourism Accreditation Program" (NEAP). The program is designed to help tourists and other industry players to identify ecotourism operators who observe a set

Award-winning Harmony Resort, St. John, U.S. Virgin Islands

Courtesy Harmony Resort, Maho Bay Camps

of "best practice" standards. Organizations and products which meet specific ecotourism criteria receive the right to display an official logo of either "accreditation," or "advanced accreditation."[165]

In some cases, private certification programs can complement government-sponsored programs. In Costa Rica in 1992, Becher and Blake began writing a travel guide certifying ecotourism establishments (defined as lodging with its own reserve, or which takes tours into a nearby reserve), called *The New Key to Costa Rica*. They used preliminary phone calls, site visits and personal interviews to evaluate positive and negative impacts on environmental conservation, local culture and the local economy. Although their certification effort was not comprehensive, their work has had an impact in that the lodges which were recognized benefited from increased business and publicity. Further, recognition has resulted in greater attention to environmental and social issues on the part of managers. Their recommendations for a more comprehensive certification program include a broader-scale effort with greater funding, contracting experts to evaluate specific aspects of lodging such as sewage systems, and appointing a responsible tourism umbrella group to undertake all of the certification efforts in a country, to avoid a perception by tourists that certification is simply an effort to "greenwash."[166]

The World Travel and Tourism Council's GREEN GLOBE initiative has developed a standards and certification program that is being implemented worldwide. Initially this program was heavily scrutinized by people who claimed it provided a seal of approval to companies that did not have to undergo any type of verification procedure. To address these issues, GREEN GLOBE launched its Certification program in 1997 following the establishment of a partnership with SGS, a testing, inspection and verification organization. GREEN GLOBE Certification is available to all travel and tourism organizations that wish to have independent verification of environmental improvements. Certification to the standard requires an organization to reach a level of environmental management deemed to be appropriate to its size, type and location. This level is determined through an ongoing process of consultation with local, national and international stakeholders.[167]

n Steps toward increasing positive contributions to responsible tourism:

- ✓ Work with the private sector on destination marketing efforts to promote a sustainable image and control the types of tourism that develop.
- ✓ Provide infrastructure services in areas where they are inadequate.
- ✓ Extend infrastructure services developed for tourism to local people.
- ✓ Encourage and promote local ownership and employment through incentives and regulations.
- ✓ Provide credit and training to local businesses and entrepreneurs.
- ✓ Encourage joint ventures with foreign-owned businesses.
- ✓ Implement a system of environmental and social performance awards for the private sector.
- ✓ Consider a national, independently verified standards and certification system to recognize and publicize good practices, or adopt an existing international standards system.

5.5 ENFORCEMENT AND MONITORING OF POLICY STRATEGIES

Effective management and control of a growing tourism industry will require a broad mix of the policy tools and strategies discussed in this chapter. Regardless of which strategies a government chooses, it is important to include provisions for both enforcement and monitoring and evaluation (M&E) in any broad-scale tourism sector management plan. In many countries, poor enforcement has rendered even the most well-designed policies ineffective through lack of compliance.[168] In addition, monitoring and evaluation of policy effectiveness will allow the public sector to adapt its policy strategies to changing information availability, conditions and needs within a country's tourism industry.

5.5.1 Enforcement

- **A comprehensive enforcement strategy is critical to the effective implementation of environmental and social policies.**

An effective enforcement strategy requires measures for both detection of violations and for ensuring that violations cease. In general, detection of violations must be frequent enough and penalties high enough that potential violators feel the benefits they would gain from violation do not outweigh the costs of being caught.[169]

In all cases, in order to halt violations once they are detected, the government should ensure that the agency which processes violations and enforces compliance has adequate capacity and motivation to do so.[170] Potential tools for enforcing regulations include imposing fines, requiring violators to pay for the damages they cause, or shutting down operations.[171] In addition to halting current violations, penalties create an incentive not to commit further violations.

Depending on the type and scale of tourism, the most effective enforcement options will vary. Employing and training inspectors is one method that can be effective for detecting violations in major developments. In Jamaica, the Tourism Product Development Company (TPDCo), is responsible for, among other things, developing and enforcing environmental performance standards. All registered tourism establishments are subject to inspections twice a year by one of TPDCo's ten inspectors. To ensure that compliance with regulations is enforced, TPDCo has the power to request full or partial closure of facilities.[172]

In parks and protected areas governments may require tour groups to be accompanied by official or licensed guides. Where governments require guides, they should train them in issues of tourist management and environmental sustainability. Where possible, guides should represent local communities and cultures. Properly trained guides have proven to be one of the most effective ways of preventing negative impacts.[173] Employing trained wardens with police powers can also be an effective way to enforce regulations.[174]

Policy-makers should also facilitate monitoring and enforcement of regulations by both NGOs and local communities. Citizen-led enforcement can provide a critical supplement to official means of enforcement, increasing capacity to both detect and prosecute violations.[175] To increase citizen involvement and capacity, the government can provide communities and NGOs with information about the nature of policies, ways to detect violations and options for forcing compliance. For example, a passenger's home video of a cruise ship dumping trash directly into the Caribbean Sea was instrumental in forcing stronger regulations on waste disposal at sea.[176] The government should also develop and strengthen mechanisms to allow citizens to sue developers to force them to comply with regulations or pay for damage they have caused.[177]

Costa Rica uses a range of strategies to monitor compliance with its coastal building law, Law 6043. Although there have been problems with imposing penalties after violations were reported, the system has proven to be an effective detection strategy. Three factors have contributed to this success: First, all of the coastal communities have had significant experience with the enforcement of the law, and therefore have a general knowledge about what actions are or are not acceptable, and to whom to report violations. Second, Law 6043, has provided for significant increases in local government capacity to detect and evaluate developments, by nearly tripling the number of counties that have coastal inspectors. Third, coastal sites are widely accessible by car or airplane, facilitating visits by inspectors.[178]

Waterfall in the Atlantic Forest, Parana, Brazil

Photo: Russell Mittermeier

5.5.2 Monitoring and evaluation

- **Periodic monitoring and evaluation of environmental and social policies can help to highlight effective programs and identify areas for improvement.**

In addition to enforcing compliance with government policies, the public sector should also periodically monitor and evaluate the effectiveness of those policies in achieving their stated objectives. Failure to adequately monitor impacts and use this information to evaluate and revise strategies can result in wasted resources, and can allow problems to reach serious proportions before action is taken, often resulting in irreversible damage.[179]

In many cases, although central agencies may have more experience than local branches in monitoring and managing ecosystems, relying only on central agencies for monitoring and evaluation is impractical and uneconomical. Instead, the roles, powers and responsibilities of local administrators, who are often more familiar with local conditions, should be strengthened, allowing them to evaluate and redesign policies from the bottom-up.[180] This leaves the central tourism agency to focus on general policy formation, marketing and promotion, standard setting and coordination.[181] Providing local branches with the capacity to fill an expanded role may

require workshops and training.

There are a range of ways to monitor and evaluate progress toward objectives. Generally, as described in Box 4.4 above, managers should determine measurement indicators for important characteristics, collect baseline data, and set target levels based on policy objectives. They should then periodically monitor indicators and evaluate them against targets and baseline levels in order to evaluate the effectiveness of policies.[182] It is extremely important to ensure that the data collected through this process is actually used in making management decisions.[183]

Monitoring techniques will vary by situation, and may include Global Imaging Systems (GIS), direct studies including sampling and interviews with community groups, or aerial photography. Priority for allocating monitoring resources should be based on sensitivity and significance of the area, severity of potential threat or change (important information about potential impacts from tourism can come from EIAs), closeness of current indicators to desired levels, quality of baseline data, and unanticipated changes in the area.[184]

One effective M&E technique that can be used for monitoring tourist destinations is environmental auditing. Environmental auditing is a management tool that includes periodic evaluation of the performance of organizations, management practices and equipment in protecting the natural environment, including compliance with regulations and standards.[185] Many forms of auditing exist, although most are company-oriented, emphasizing flows of resources in and out of a company. Nevertheless, tourism authorities can adapt these frameworks to entire destinations.[186] The town of Molyvos, Greece, for instance, recently used an environmental audit to identify significant problems and potential solutions relating to water, sewage, waste, energy and land-use practices and infrastructure.[187]

The importance of M&E for finding problems and improving policies was demonstrated on a small-scale at the Delaware Water Gap National Recreation Area in Pennsylvania and New Jersey, USA. In the mid-1980s, the area's impact monitoring system revealed that campers in certain areas were causing significant environmental degradation. Park managers used this information to design a new management strategy, which included eliminating certain designated campsites and increasing the capacity of others by installing fire grates. Peripheral areas were thus allowed to recover, while less environmentally important campsites with fire grates were able to receive more campers, reducing degradation by 50 percent.[188]

Steps toward effective enforcement, and monitoring and evaluation of government policies:

- ✓ Implement an effective enforcement strategy to detect and punish violations of government regulations.
- ✓ Ensure that the enforcement agency has sufficient capacity, motivation and power to enforce compliance.
- ✓ Facilitate monitoring and enforcement of regulations by local communities and NGOs.
- ✓ Increase the capacity of local government offices to enforce regulations and implement monitoring programs.
- ✓ Monitor and evaluate public sector policies to ensure their effectiveness.

CHAPTER 6
Conclusion and Recommendations

In this paper, we have presented an integrated approach to tourism and resort development, an approach that includes environmental and social considerations throughout each stage of design, development and operations. Such a sustainable development model will be the most appropriate and responsible option for tourism development that seeks to conserve an area's critical ecosystems and unique cultural heritage. The strategies and tools described in this document will help to increase the sustainability of tourism developments by minimizing their negative impacts on surrounding ecosystems and cultures while increasing their positive contributions to biodiversity conservation and community development. The use of these tools must take place in the context of a fundamental shift in thinking – among developers, governments and other stakeholders – about the traditional models and goals of tourism development. Areas that are developed for tourism without the consideration of environmental and social factors will ultimately prove unsustainable and lose the very resources on which they depend for attracting tourists. Thus, good environmental and social practices also make good business sense, not only for protecting key tourism attractions, but also for appealing to increasingly environmentally conscious consumers throughout the world and saving money on disposal, mitigation and resource costs.

The following is a summary of key recommendations for responsible tourism development, based on more detailed discussions of each issue in the previous chapters. For each category of recommendations, we have included page references to the main text. Although some recommendations will apply more clearly to one sector and others to another, all should be adopted and implemented in the spirit of cooperation among "Green Hosts" – governments, the private sector, communities and other stakeholders – to ensure the continued sustainability of tourism development in critical ecosystems worldwide.

Recommendations

I. Private Sector Practices

A. Environmental and social impact assessment, pages 15-16

- Hold discussions with local stakeholders and experts and ensure that they get an opportunity to review the results.
- Determine potential primary, secondary and tertiary impacts and their significance.
- List possible mitigation and management alternatives and describe which ones will be used.
- Ensure that the EIA's recommendations are followed closely.

B. Infrastructure and facility development

1. Land-use practices, pages 16-22

- Site resorts only where environmental conditions can support the proposed development and local people are in favor of development.
- Never site developments in protected areas or culturally sensitive areas.
- Use the principles of sustainable design to integrate the

siting and design of a resort into the local setting and conditions and take advantage of natural features.
- Minimize road-building and land-clearing at all times.
- Contribute to habitat restoration efforts.
- Create private reserves to promote ecological health and preserve resources in surrounding areas.
- Support conservation and community development projects through financial and in-kind support and volunteer programs.

2. Facility construction and design, pages 23-25

- Choose materials based on sources that minimize damage, and properties such as insulation, durability, recyclability and availability.
- Use recycled and renewable materials whenever practical.
- Do not use timber harvested from primary forests; rather, seek wood extracted from tree farms, secondary forests or already degraded lands.
- Work with local architects and communities to incorporate local styles and knowledge in building design.
- Take advantage of natural climate conditions for cooling, energy and other needs.
- Use native plant species for landscaping and natural insect control measures such as fish and other animals.

C. Daily operations and tourist activities

1. Environmental strategy development, pages 26-27

- Implement environmental and social practices as part of a broad-scale strategy that guides operating decisions.
- Appoint a task force to develop, implement and evaluate the strategy.
- Conduct a thorough review of current practices to find opportunities for improvement and set priorities for activities.
- Work with staff from all levels to assign roles and implement the strategy.
- Challenge suppliers and other business partners to improve their practices.
- Regularly audit and evaluate the strategy to ensure its effectiveness.

2. Guest education and involvement, pages 27-28

- Design an interpretive program to revolve around specific themes, with clear messages relating to local environmental and cultural issues.
- Implement various levels of guest education, appropriate to the type of guest and requiring varying degrees of staff time and expense.
- Provide a means for guests to support local conservation and community development efforts.

3. Energy use, pages 29-31

- Design facilities to take advantage of natural cooling, heating and light.
- Use renewable energy sources, such as wind and solar power, whenever feasible.
- Conduct regular monitoring and servicing of equipment to ensure efficiency.
- Replace older equipment with newer or more efficient models.

4. Water use, pages 31-32

- Choose water sources based on environmental and local use characteristics of the surrounding area.
- Avoid wasteful practices and install water-saving devices.
- Increase the efficiency of existing equipment and replace older, inefficient hardware.

5. Solid waste and product purchasing, pages 32-34

- Buy products with minimal or no packaging, bulk items, recycled items, durable, reusable products and organic or natural products.
- Challenge suppliers to meet demands for improved products.
- Buy local products to reduce transport, packaging and storage costs and support local communities.
- Replace disposable items with reusable ones.
- Recycle whenever possible.
- Compost organic wastes.

6. Wastewater and sewage, pages 34-36

- Ensure that all wastewater is properly treated before it is released into the environment.
- Reduce contaminants entering wastewater.
- Consider local climatic and geographical features when designing wastewater treatment facilities.
- Replace traditional, chemical-based wastewater treatment plants with more natural options.
- Reuse treated wastewater for washing floors, flushing toilets and irrigating gardens.

7. Tourist interaction with local people, pages 36-38

- Respect locally determined limits on scale and activities.
- Work with local people when developing culturally based attractions.
- Educate guests and local people about different cultures and acceptable behaviors.
- Hire guides from local communities.

8. Tourist transportation, pages 38-41

- Consider the use of non-motorized transportation and electric motors to decrease pollution and noise.
- Consider "no-vehicle zones."
- Choose an efficient mode of transport, such as buses and trains, to decrease energy consumption and emissions.
- Train staff in the proper maintenance of vehicles and boats, and mandate maximum speeds.
- Stay on roads or in boat lanes.

9. Recreational activities, pages 41-42

- Utilize guidelines and training programs to improve behavior and increase awareness.
- Require guests to receive instruction for certain activities, such as scuba diving.
- Require the use of guides in sensitive areas.
- Advise guests to maintain an appropriate distance from wildlife.
- Provide guests with lists of products and souvenirs to avoid.
- Provide ways for guests to volunteer for local conservation or community development projects.

D. Increasing local benefits, pages 42-45

- Develop and support tourism-related businesses in partnership with local groups or entrepreneurs.
- Use locally provided services.
- Employ local people.
- Train local workers and phase them into management positions over time.
- Support local community development projects with money, time and under-utilized resources.

II. PARTICIPATORY LAND-USE PLANNING, PAGE 46

- Design a regional or national land-use plan that integrates tourism, environmental and socio-economic priorities.
- Involve all stakeholders in a participatory or "bottom-up" planning process.
- Promote consensus-building among the full range of stakeholders.

A. Setting objectives and assigning roles, page 49

- Determine concrete objectives of tourism development, based on social, environmental, political and economic conditions, problems and opportunities.
- Resolve and define the roles and responsibilities of the government agencies with jurisdiction over tourism.

B. Priority setting and mapping, pages 49-50

- Rank areas in terms of their priority for tourism, conservation and socio-economic development.
- Determine priorities by surveying resident, expert and tourist opinion.
- Create tourism, environmental and community-use maps showing different levels of priority.

C. Synthesizing priorities, pages 51-54

- Overlay tourism, environmental and community-use priority maps to determine areas of conflict and opportunity.
- Synthesize priorities into a land-use plan using a participatory, consensus-building approach.
- Allocate specific land areas to various levels of tourism development or conservation.
- Prohibit tourism development in critical areas.
- Formalize the land-use plan into law through zoning.
- Create more specific local land-use plans for each development area.

III. PUBLIC SECTOR POLICY TOOLS

A. Public sector capacity, pages 57-59

- Develop national tourism training strategies for government personnel.
- Increase financial commitment to training programs.
- Coordinate roles among the various governmental agencies with jurisdiction over tourism in order to reduce conflict.
- Coordinate with other national governments, the private sector, NGOs and local residents to improve the overall capacity of the government tourism sector.

B. Local education, training and awareness-building, pages 59-61

- Implement general awareness-building campaigns for all relevant stakeholders to increase understanding and support of policies.
- Cooperate with the private sector and NGOs to build awareness of environmental and cultural issues among tourists and local communities.
- Work with the private sector to improve its practices.
- Train local people in responsible tourism-related skills.

C. Direct regulation and control, pages 61-64

- Institute contracts between private developers and government agencies to ensure that regulations are followed.
- Require that all new tourist developments and major expansions conduct an environmental impact assessment.
- Set national guidelines on materials, technology, waste treatment, employment and resource use.
- Set site-specific regulations for certain types of tourism and sensitive environmental or cultural areas.
- Control the location and form of tourism activities through tools such as licensing and permitting requirements.

D. Economic and financial tools, pages 64-69

- Consider using taxes to reduce undesirable activities and raise revenue.
- Use tax revenues to support sustainability in the tourism sector.
- Consider charging entrance fees to certain areas in order to earn revenue and limit visitation.
- Use revenue from entrance fees to support the management of the resource.
- Consider using subsidies and financial incentives to encourage positive behavior.
- Require the use of performance bonds to encourage good practices and ensure the availability of funds for mitigation.
- Create a trust fund to provide resources for conservation and community development.
- Require conservation offsets or set-asides to balance out the real and potential impacts of tourism development.

E. Positive contributions to responsible tourism, pages 69-74

- Work with the private sector on destination marketing efforts to promote a sustainable image and control the types of tourism that develop.
- Provide infrastructure services in areas where they are inadequate.
- Extend infrastructure services developed for tourism to local people.
- Encourage and promote local ownership and employment through incentives and regulations.
- Provide credit and training to local businesses and entrepreneurs.
- Encourage joint ventures with foreign-owned businesses.
- Implement a system of environmental and social performance awards for the private sector.
- Consider a national, independently verified standards and certification system to recognize and publicize good practices, or adopt an existing international standards system.

F. Enforcement and monitoring, pages 74-76

- Implement an effective enforcement strategy to detect and punish violations of government regulations.
- Ensure that the enforcement agency has sufficient capacity, motivation and power to enforce compliance.
- Facilitate monitoring and enforcement of regulations by local communities and NGOs.
- Increase the capacity of local government offices to enforce regulations and implement monitoring programs.
- Monitor and evaluate public sector policies to ensure their effectiveness.

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CHAPTER 1

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CHAPTER 4

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