

Tourism and biodiversity

The quality of their natural environments gives many developing countries a comparative advantage in tourism. Tourism can capture some of the global willingness-to-pay for biodiversity by raising funds for investment in conservation and sustainable use, and can raise the awareness of developing countries of the value of their biodiversity. But at the same time, tourism can threaten the biological resources on which it and other economic activities depend. A major challenge is therefore to enhance the economic benefits of tourism while limiting its negative environmental and social impacts.

Global significance of tourism

Tourism is an important part of the global economy. According to the World Travel and Tourism Council, global travel and tourism directly and indirectly generates 11% of global GDP. This supports 200 million jobs, which accounts for 8% of the world's employment;

an estimated 5.5 million new jobs will be created in tourism each year until 2010.

The opportunities for tourism development continue to expand as the number of tourists increases, but tourism activities are not evenly distributed between or within different continents. In Africa, for example, about 50% of tourists only visit the north, and most of the rest go to southern and eastern Africa.

Some definitions

Nature-based tourism incorporates all forms and scales of tourism that are based on the enjoyment of natural areas and wildlife. It is often used to promote national development objectives rather than conservation objectives.

Ecotourism is nature-based tourism generally promoted as consistent with conservation because of its small scale and limited ecological and social impact. It is based on the principle that nature tourism should support the conservation of nature, and that local communities should benefit.

'In the long-term, with regard to current and future generations, sustainable tourism is ethically and socially equitable, culturally compatible, ecologically viable and economically appropriate and productive.'

Benefits of tourism

Tropical countries need to use tourism benefits to encourage local people to support biodiversity conservation and sustainable management. This is one of the greatest challenges for development, which can be done especially where there are:

- relatively secure access or tenure rights over land and other biological resources (including exclusion rights) – this is fundamental to the local people's ability to participate in decision-making and gain benefits from tourism;
- local communities with the management and marketing skills to participate in tourism;
- direct linkages to the economy through employment of local labour, or purchase of local goods and services.

Coral reefs and the fish they attract are an important resource for ecotourism development.

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Tourism can reduce local access to natural resources, for example, where game-viewing leads to tighter access restrictions on the areas in which local people can harvest wild resources. This could have negative impacts on biodiversity by concentrating local resource use in smaller areas and/ or by undermining local management systems. The scope for improving livelihoods through tourism is therefore very variable, as are its impacts.

International tourist arrivals (millions)

	World	Africa	Americas	E.Asia & Pacific	South Asia
1999	662.9	27.3	123.0	96.6	5.7
% increase 1998/99	4.1	9.1	2.5	10.5	8.3

Source: World Tourism Organisation (WTO) from WTO database May 2000

The nature of the link between local communities and economic development can alter the pattern of incentives to improve biodiversity use. Where local people earn significant income through participation in tourism, tourism can shift livelihood strategies away from unsustainable use of biological resources. But where benefits from tourism are smaller, they may be invested in activities that do not support biodiversity or even threaten it (for example, investment in livestock in areas of wildlife/ livestock conflict). Serious disagreements over biological resource use may emerge, where some local groups benefit more than others.

In the wider development framework, tourism can be an important mechanism for stimulating private sector support for biodiversity conservation. It can also provide essential economic justification for improved biodiversity management, within and outside protected areas. Moreover, tourism can be a tool for enhancing public education and raising awareness of the value of local resources, especially where nationals are encouraged to participate in nature-based tourism.

Impact of tourism

Mass tourism with destinations in urban or resort areas, is often considered to have limited negative impacts on biodiversity, especially where destinations are already developed. But all forms of mass tourism depend to some extent on environmental processes and ecosystem functions. Mass tourism can have significant impact through excess demand for resources (notably water and aviation fuel), through pollution (particularly when linked to inadequate waste management) and through construction.

Benefits and impacts of tourism

<i>Potential benefits of tourism</i>	<i>Potential impacts of tourism</i>
Revenue creation for the maintenance of natural areas	Environmental impacts, including: <ul style="list-style-type: none"> ■ use of land and resources, ■ impacts on vegetation, wildlife, mountain environments, marine and coastal environments, water resources, ■ waste management
Contribution of tourism to economic development, including: <ul style="list-style-type: none"> ■ funding infrastructure, ■ providing jobs, ■ enabling communities to receive revenue from biodiversity, ■ generating incomes, ■ supporting public education and awareness 	Socio-economic and cultural impacts, including: <ul style="list-style-type: none"> ■ influx of people and related social degradation, ■ impacts on local communities, ■ impacts on cultural values

Source: adapted from CBD Decision V/25

Nature-based tourism attracts tourists to fragile ecosystems and therefore has the potential to inflict significant damage through habitat degradation and disturbance of wildlife. The impact of increasing visitor numbers on wildlife behaviour is not well researched, but available evidence gives cause for concern.

Consumptive tourism, such as game hunting and sport fishing, is often assumed to have negative implications for biodiversity through overuse of target species, and secondary impacts on non-target species. In fact, such tourism – if well managed, properly monitored and based on an understanding of population dynamics and the principles of sustainable use – can generate significant funds, and provide incentives for habitat and species conservation. Consumptive tourism can also be one of the few options for realising the value of ecosystems where other forms of tourism are not viable.

Relatively little attention has been paid to the rapid growth of **domestic and regional tourism** which has been especially evident in the Indian sub-continent and East Asia. Analysis of the development impacts of domestic and regional tourism suggests that it may be less demanding on local resources than international tourism. Domestic tourism may encourage the emergence of a valuable in-country constituency that supports the improvement of environmental management.

Opportunities

Different types of tourism generally depend on different types of biodiversity. Some ecosystems are naturally better suited for generating significant tourism revenue than others:

- Open savannas, with large populations of charismatic animals in a landscape that allows them to be easily seen, are well-suited to game-viewing.
- Wetlands can be attractive centres for bird-watchers and anglers.
- Mountains and other scenic landscapes are important for recreational tourism, especially trekking.
- Coastal ecosystems have high potential for watersports and other recreational tourism.
- Despite a high biodiversity, forests and closed woodland have relatively low recreational value due to low populations of charismatic species and poor visibility. They can however be attractive for some specialist tourism, such as sport hunting and bird-watching, and for short visits from nearby, more-popular tourism destinations.

Domestic and foreign visitors to national parks

	Gonarezhou NP, Zimbabwe 1995–6	Keoladeo NP, India 1995–6	Komodo NP, Indonesia 1994–5
Total no. visitors	6,179	2,873	173,000
% domestic visitors	53.4	70	7
% foreign visitors	46.6	30	93

Source: Goodwin *et al.* (1997)

Constraints

Most forms of tourism require easy access and developed infrastructure. Where new developments are planned, it may be necessary to establish participatory structures for decision-making, with capacity building of institutions capable of managing tourism activities and sharing benefits equitably. Constraints on the local population are particularly severe where the inhabitants lack ownership or control over marketable tourism resources, as this limits their bargaining power with investors. Local people may also lack financial capital, entrepreneurial skills and access to tourism markets.

Research into the impacts of tourism on national parks revealed that revenues were generally below operating budgets, although entrance fees were often below what visitors were actually willing to pay. In many cases, such revenues are passed directly to national treasuries, so that these funds are not necessarily reinvested in park management. A further problem is that park managers who are dependent on tourism revenues may be required to manage conservation areas for tourism rather than for biodiversity benefits.

A further concern is the volatility of the international tourism industry, which is sensitive to changes in purchasing power and to political



Sirubari in western Nepal – Nepal's first model for village tourism.

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instability. Domestic and regional tourism may be less volatile, but they are still vulnerable to domestic or regional economic cycles. The table on page 3 indicates the percentage of foreign and domestic visitors to three national parks in different continents. The implications for conservation are ambiguous – foreign visitors are generally assumed to spend more (and often pay higher admission fees), but the spending patterns of domestic visitors may contribute more to the local economy in the vicinity of the park. More research is needed to clarify the impact of either type of tourism on biodiversity.

Recommendations

- Ensure an appropriate allocation of tourism revenues between national governments, tourism site managers and local populations.
- Use participatory strategic environmental assessment, including tourist carrying-capacity assessments and zoning (in space and/or time), to keep tourists away from the most fragile and significant areas for biodiversity. Develop destination-level environmental management plans that encourage appropriate forms of transport, accommodation and a mix of activities.
- Develop appropriate national and international standards or codes of practice (for example guidelines on waste management), and prepare licensing systems which incorporate environmental criteria and which can be supported by effective monitoring and enforcement capacity.
- Strengthen local tenure rights over land (including access to wildlife, scenic destinations and other tourism assets).
- Support local communities with targeted capacity building, and access to finance (including micro-finance) to enable them to participate effectively in tourism. This should include education and training to disadvantaged and poor groups (particularly women), to enable them to take up employment and self-employment opportunities.
- Develop core tourism assets and infrastructure in relatively poor areas where there is potential for commercially viable products.
- Encourage tourism developments which take place gradually and avoid crash developments which rely on outside investment. This requires business and private sector support to improve quality, reliability, and transport links.

Further information:

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- reference to other Biodiversity Briefs is denoted as (see BB#).

Website

All Biodiversity Development Project (BDP) documents can be found on the website: <http://europa.eu.int/comm/development/sector/environment>

