Sustainable Tourism, Environmental Protection and Natural Resource Management: Paradise on Earth?*

Frederico Neto**
(United Nations)
February 2002

Abstract - Tourism is one of the largest and fastest growing industries in the world. It is an increasingly important source of income, employment and wealth in many countries. International tourism now accounts for a larger share of foreign exchange receipts and export earnings than any other industry in the world. But, while tourism provides considerable economic benefits for many countries, regions and communities, its rapid expansion has also had detrimental environmental and socio-cultural impacts. Natural resource depletion and environmental degradation associated with tourism, for example, are often serious problems in tourism-rich regions. The paper argues that the promotion of sustainable tourism development is essential for maximizing its socio-economic benefits and minimizing its environmental impact.

Contents

1. Introduction: Recent and future trends in tourism
2. Main economic benefits of tourism
3. Environmental impacts of tourism
   3.1 Pressure on natural resources
   3.2 Pollution and waste generation
   3.3 Damage to ecosystems
   3.4 Environmental threats to tourism
4. Sustainable tourism: The way forward
   4.1 National and regional strategies for sustainable tourism development
   4.2 Regulatory mechanisms and economic instruments
   4.3 Voluntary industry initiatives
   4.4 International activities in support of sustainable tourism
5. Conclusion

* Paper submitted to the International Colloquium on Regional Governance and Sustainable Development in Tourism-driven Economies, Cancun, Mexico, 20-22 February 2002.

** All views expressed in this paper are those of the author and do not necessarily reflect the views of the United Nations.
1. Introduction: Recent and future trends in tourism

Tourism can be considered one of the most remarkable socio-economic phenomena of the twentieth century. From an activity “enjoyed by only a small group of relatively well-off people” during the first half of the last century, it gradually became a mass phenomenon during the post-World War II period, particularly from the 1970s onwards.\(^1\) It now reaches larger and larger numbers of people throughout the world, and is a source of employment for a significant segment of the labour force.

Although domestic tourism currently accounts for approximately 80 per cent of all tourist activity\(^2\), many countries tend to give priority to international tourism because, while the former basically involves a regional redistribution of national income, the latter has now become the world’s largest source of foreign exchange receipts. According to the latest figures compiled by the World Tourism Organization (WTO), foreign exchange earnings from international tourism reached a peak of US$ 476 billion in 2000, which was larger than the export value of petroleum products, motor vehicles, telecommunications equipment or any other single category of product or service.\(^3\)

International tourist arrivals grew at an annual average rate of 4.3 per cent during the 1990s, despite major international political and economic crises, such as the Gulf War and the Asian financial crisis.\(^4\) According to the latest WTO figures, compiled with data received up to August 2001, the turn of the millennium recorded one of the most impressive annual growth rates in international tourism. As Table 1 shows, all regions of the world recorded significant growth in international tourism in 2000, during which the number of international arrivals grew at an extraordinary rate of 7 per cent to reach almost 700 million arrivals.

<table>
<thead>
<tr>
<th>Region</th>
<th>Million Arrivals</th>
<th>Market Share (%)</th>
<th>Growth Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>15.0</td>
<td>26.5</td>
<td>27.6</td>
</tr>
<tr>
<td>Americas</td>
<td>92.9</td>
<td>122.2</td>
<td>128.5</td>
</tr>
<tr>
<td>East Asia &amp; Pacific</td>
<td>54.6</td>
<td>97.6</td>
<td>110.6</td>
</tr>
<tr>
<td>Europe</td>
<td>282.7</td>
<td>380.2</td>
<td>403.2</td>
</tr>
<tr>
<td>Middle East</td>
<td>9.0</td>
<td>18.2</td>
<td>21.2</td>
</tr>
<tr>
<td>South Asia</td>
<td>3.2</td>
<td>5.8</td>
<td>6.4</td>
</tr>
<tr>
<td>World</td>
<td>457.3</td>
<td>650.4</td>
<td>697.5</td>
</tr>
</tbody>
</table>

Note: Totals may differ from the sum of columns because of rounding.


---

\(^1\) See “Sustainable development of tourism,” Report of the Secretary-General (document E/CN.17/2001/PC/21), United Nations, New York, 2 March 2001. According to the World Tourism Organization (WTO), tourism is defined as “the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited” (see Basic References on Tourism Statistics, WTO, Madrid, 2000). See also World Economic and Social Survey 1997 (Sales No. E.97.II.C.1), chapter X, United Nations, New York, 1997.


\(^4\) Even the Gulf War year of 1991 recorded a small increase of 1.2 per cent in international arrivals. Annual international arrivals include different visits to the same country by the same international visitor during a single year. International tourists include both overnight and same-day visitors. See Compendium of Tourism Statistics - 2001 Edition, World Tourism Organization, Madrid, 2001.
The September 2001 terrorist attacks in the United States, however, appear to have had a more serious impact on the tourist sector than any other major international crisis in recent decades. The attacks had a particularly severe impact on air transport, business travel and long-haul travel. Worldwide travel reservations were estimated to have dropped by 15 per cent at the end of October 2001, although not every destination nor every part of the tourism sector was badly affected.\(^5\) For example, while air transport and luxury hotels have suffered from considerable fall in demand, travel within the same country or region, as well as travel by rail and road, appear to have weathered the worst effects of the crisis, or even benefited from it.

Nevertheless, initial forecasts of 3-4 per cent rise in international tourist arrivals for 2001, made before the September 2001 attacks, were subsequently revised downwards to around a 1 per cent increase over the 2000 figures.\(^6\) The latest data, released by WTO in January 2002, show that there was a sharp decline of 1.3 per cent in international arrivals, to a total of less than 690 million, in 2001.\(^7\) Given that the northern hemisphere summer holiday season was coming to end by the time the attacks took place, this significant drop confirms that the short-term impacts of the attacks were devastating to international tourism as a whole. The last four months of 2001, in fact, recorded a drop of almost 11 per cent in arrivals worldwide and substantial decreases in all regions of the world.\(^8\)

It is worth noting, however, that this considerable fall in international arrivals was caused not only by a widespread fear of traveling generated by the attacks – particularly in airplanes and to certain destinations – but also by a downturn in the world economy. The economic downturn that began in the United States during the first half of 2001 had already been affecting the tourism sector before the terrorist attacks were carried out. The attacks merely aggravated the economic slowdown already under way.

According to the most recent United Nations economic forecasts,\(^9\) growth of only 1.5 per cent in gross world product (GWP) is expected in 2002, as compared to 1.3 per cent last year. Such a modest improvement is linked to a number of economic uncertainties, notably the high dependency of the global economy on the recovery of the United States. Higher rates of population growth would thus make 2002 the second consecutive year with no real growth in per capita GWP. This, in turn, is also likely to undermine the short-term prospects for a recovery in international tourism, at least until mid-2002, when the summer holiday season begins in the northern hemisphere, and probably until the end of the year. Although much will depend on the evolution of the world economy during this year, it is also likely that some destinations will experience a prolonged decline in tourism revenues regardless of any world economic improvements.

In the medium and long term, however, international tourism is expected to resume its rapid growth, in view of rising living standards and discretionary incomes, falling real costs of travel, expansion and improvement of various transport modes, increasing amounts of free time and other


\(^{6}\) Idem.


\(^{8}\) Idem. The estimated drop in the number of international arrivals by region are: 30 per cent in the Middle East, 24 per cent in both the Americas and South Asia, 10 per cent in East Asia and the Pacific; 6 per cent in Europe and 3.5 per cent in Africa, respectively.

factors. The World Tourism Organization has recently reiterated its long-term forecasts, made before the September 2001 attacks, of an average annual growth rate in international arrivals of over 4 per cent in the period up to 2020.\textsuperscript{10} The number of international arrivals is thus expected to reach the striking mark of 1 billion by 2010 and 1.6 billion by 2020.\textsuperscript{11}

2. Main economic benefits of tourism

Tourism, as a sector that comprises an extensive range of economic activities, can be considered the largest industry in the world.\textsuperscript{12} International tourism is also one of the fastest growing and most ramified sectors of the global economy, covering a broad range of enterprises, sectors and stakeholders. During the 1990s, when the globalization of tourism reached unprecedented proportions, international tourism receipts had a much higher average annual growth rate (7.3 per cent) than that of gross world product.\textsuperscript{13} By 1999, international tourism receipts accounted for more than 8 per cent of the worldwide export value of goods and services, overtaking the export value of other leading world industries such as automotive products, chemicals, and computer and office equipment (see Table 2).

<table>
<thead>
<tr>
<th>Industry</th>
<th>Export Earnings (US$ billion)</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Tourism\textsuperscript{2}</td>
<td>555</td>
<td>8.1</td>
</tr>
<tr>
<td>Automotive Products</td>
<td>549</td>
<td>8.0</td>
</tr>
<tr>
<td>Chemicals</td>
<td>526</td>
<td>7.6</td>
</tr>
<tr>
<td>Food</td>
<td>437</td>
<td>6.3</td>
</tr>
<tr>
<td>Fuels</td>
<td>401</td>
<td>5.8</td>
</tr>
<tr>
<td>Computer and Office Equipment</td>
<td>394</td>
<td>5.7</td>
</tr>
<tr>
<td>Textile and Clothing</td>
<td>334</td>
<td>4.8</td>
</tr>
<tr>
<td>Telecommunications Equipment</td>
<td>289</td>
<td>4.2</td>
</tr>
<tr>
<td>Mining Products (other than fuels)</td>
<td>155</td>
<td>2.3</td>
</tr>
<tr>
<td>Iron and Steel Products</td>
<td>126</td>
<td>1.8</td>
</tr>
<tr>
<td>Total Worldwide Export of Goods and Services (including other industries)</td>
<td>6,890</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Notes: 1. For economic purposes, international tourism receipts are considered exports and international tourism expenditures as imports.
2. Total international tourism receipts include those generated by international fares.


\textsuperscript{10} \textit{Tourism after 11 September 2001: Analysis, remedial actions and prospects}, op. cit.
\textsuperscript{12} See “Sustainable development of tourism,” \textit{Report of the Secretary-General} (document E/CN.17/2001/PC/21), op. cit. The broad definition of tourism includes a complex range of economic activities accounted for in several other sectors (such as, agriculture and transport) by means of a ‘tourism satellite account’. According to a set of methodological references to a tourism satellite account recently adopted by the United Nations Statistical Commission (see \textit{Tourism Satellite Account: Recommended Methodological Framework}, document no. ST/ESA/STAT/SER.F.80, United Nations/WTO/OECD/EUROSTAT, New York, 2001), tourism is measured from a demand side perspective as opposed to the supply side approach used for more homogenous sectors.
Tourism is also the only major service sector in which developing countries have consistently recorded trade surpluses relative to the rest of the world. Between 1980 and 1996, for instance, their travel account surplus increased from $4.6 billion to $65.9 billion, due primarily to the impressive growth of inbound tourism to countries in Africa, the Caribbean, and the Asia and Pacific regions. The 1990s also experienced a significant growth of international tourism receipts in the 49 poorest developing countries: total tourism receipts in these countries more than doubled from US$ 1 billion in 1992 to over US$ 2.2 billion in 1998. Tourism is now the second largest source of foreign exchange earnings in the 49 least developed countries (LDCs) as a whole, after the oil industry, which is concentrated in only three of these countries.

Tourism has become the main source of income for the economies of an increasing number of small island developing States (SIDS) – as well as less developed regions of large countries – with a natural environment appealing to tourists. Foreign exchange earnings can, however, vary significantly among these tourism-driven economies because of ‘leakages’ arising from imports of equipment for construction and consumer goods required by tourists, repatriation of profits earned by foreign investors and amortization of foreign debt incurred in tourist development.

Besides export earnings, international tourism also generates an increasingly significant share of government (national and local) tax revenues throughout the world. In addition, the development of tourism as a whole is usually accompanied by considerable investments in infrastructure, such as airports, roads, water and sewerage facilities, telecommunications and other public utilities. Such infrastructural improvements not only generate benefits to tourists but can also contribute to improving the living conditions of local populations. This increase in social overhead capital can also help attract other industries to a disadvantaged area and thus be crucial to regional economic development.

The tourism sector is an increasingly important source of employment – including in tourism-related sectors, such as construction and agriculture – primarily for unskilled labour, migrants from poor rural areas, people who prefer to work part-time, and notably women. Because the sector is relatively labour-intensive, investments in tourism tend to generate a larger and more rapid increase in employment than equal investment in other economic activities. Furthermore,

---

17 According to the International Labour Office (see Hotels, Catering & Tourism, electronically available at http://www.ilo.org/public/english/dialogue/sector/sectors/tourism.htm), women account for about 60 per cent of employees in the hotel and restaurant sector in most countries.
18 Ibid. According to the same document, one job in the direct tourism industry worldwide induces around one and a half additional indirect jobs in the tourism-related economy: the ratio varies from 1.2 in North and Latin America, to around 2.0 in the Caribbean and Europe.
given that the sector provides a considerable amount of jobs for women and unskilled workers, tourism can significantly contribute to empowering women and alleviating poverty.

At the same time, available data suggests that most workers in the tourism sector, notably in hotels and catering, tend to earn less than workers in socially comparable occupations in both developed and developing countries. In addition, the differential tends to be larger in less developed countries and regions, particularly those with high rates of unemployment amongst unskilled labour. Informal employment relations in small and medium-sized enterprises, which employ about half of the labour force in the hotel and catering sub-sectors worldwide, also contribute to a relatively high proportion of child labour and non-remunerated employment in these sub-sectors in many countries.

The increasing reliance of less diversified economies on tourism also increases their vulnerability to international shocks, such as, natural disasters, regional wars and other unexpected events. The recent crisis generated by fear of international terrorism, for example, caused devastating immediate effects on tourism-dependent economies, including regional economies in large countries. In addition, sudden changes in consumer tastes and sharp economic downturns pose significant risks to such economies, given that demand for mass tourism tends to be relatively income-elastic and can produce drastic negative responses to economic recession in source markets. Nonetheless, it is now generally recognized that tourism can make a vital contribution to employment, export receipts and national income in most countries and regions. Furthermore, tourism is often identified as the most promising driving force for the economic development of less developed countries and regions endowed with areas of natural beauty – including small island developing States – because it offers them a valuable opportunity for economic diversification.

3. **Environmental impacts of tourism**

While tourism provides considerable economic benefits for many countries, regions and communities, its rapid expansion can also be responsible for adverse environmental (and socio-cultural) impacts. Natural resource depletion and environmental degradation associated with tourism activities are sometimes serious problems in tourism-rich regions. The management of natural resources to reverse this trend is thus one of the most difficult challenges for governments at different levels. The fact that most tourists chose to maintain their relatively high patterns of consumption (and waste generation) when they reach their destinations can be a particularly serious problem for developing countries and regions without the appropriate means for protecting their natural resources and local ecosystems from the pressures of mass tourism.

The main environmental impacts of tourism are (a) pressure on natural resources, (b) pollution and waste generation and (c) damage to ecosystems. Furthermore, it is now widely recognized that not only uncontrolled tourism expansion is likely to lead to environmental degradation, but also that environmental degradation, in turn, poses a serious threat to tourism.

---


20 *Ibid.* The high proportion of unpaid employment in many developed and developing countries – in many cases almost or more than half of the total number of employees in this sub-sector – reflects a large number of non-remunerated family members of small entrepreneurs.

3.1 Pressure on natural resources

In addition to pressure on the availability and prices of resources consumed by local residents — such as energy, food and basic raw materials — the main natural resources at risk from tourism development are land, freshwater and marine resources. Without careful land-use planning, for instance, rapid tourism development can intensify competition for land resources with other uses and lead to rising land prices and increased pressure to build on agricultural land. Intensive tourism development can also threaten natural landscapes, notably though deforestation, loss of wetlands and soil erosion. Tourism development in coastal areas — including hotel, airport and road construction — is a matter for increasing concern worldwide as it can lead to sand mining, beach erosion and land degradation.

Freshwater availability for competing agricultural, industrial, household and other uses is rapidly becoming one of the most critical natural resource issues in many countries and regions. Rapid expansion of the tourism industry, which tends to be extremely water-intensive, can exacerbate this problem by placing considerable pressure on scarce water supply in many destinations. Water scarcity can pose a serious limitation to future tourism development in many low-lying coastal areas and small islands that have limited possibility for surface water use and storage, and whose groundwater may be contaminated by saltwater intrusion. Over-consumption by many tourist facilities — notably large hotel resorts and golf courses — can limit current supplies available to farmers and local populations in water-scarce regions and thus lead to serious shortages and price rises. In addition, pollution of available freshwater sources, some of which may be associated with tourism-related activities, can exacerbate local shortages.

Rapid expansion of coastal and ocean tourism activities, such as snorkelling, scuba diving and sport fishing, can threaten coral reefs and other marine resources. Disturbance to marine aquatic life can also be caused by the intensive use of thrill craft, such as jet skis, frequent boat tours and boat anchors. Anchor damage is now regarded as one of the most serious threats to coral reefs in the Caribbean Sea, in view of the growing number of both small boats and large cruise ships sailing in the region. Severe damage to coral reefs and other marine resources may, in turn, not only discourage further tourism and threaten the future of local tourist industries, but also damage local fisheries.

3.2 Pollution and waste generation

Besides the consumption of large amounts of natural and other local resources, the tourism industry also generates considerable waste and pollution. Improper disposal of liquid and solid waste generated by the tourism industry has become a particular problem for many developing countries and regions that lack the capacity to treat these waste materials properly. Disposal of such untreated waste has, in turn, contributed to reducing availability of the above-mentioned resources at the local level.

Apart from the contamination of freshwater from pollution by untreated sewage, tourist activities can also lead to land contamination from solid waste and the contamination of marine waters and coastal areas from pollution generated by hotels and marinas, as well as cruise ships. It is

---

In the mid-1990s, 23 the cruise sector in the Caribbean Sea alone produced more than 70,000 tons of liquid and solid waste per year. The fast growth of the cruise sector in the region may have exacerbated this problem in recent years. Furthermore, illegal disposal of sewage, solid waste and cargo residues by merchant ships, which cause marine and beach pollution.

In addition, relatively high levels of energy consumption in hotels – including energy for air-conditioning, heating and cooking – as well as fuel used by tourism-related transportation can also contribute significantly to local air pollution in many host countries and regions. Local air and noise pollution linked to exhaustive tourism development or urban congestion can sometimes even discourage tourists from visiting some destinations.

3.3 Damage to ecosystems

Intensive tourism activity in natural areas can interfere with fragile vegetation and wildlife and cause irreversible damage to ecosystems, particularly if the infrastructure in those areas is not adequately prepared to absorb mass tourism.

Uncontrolled tourism activities can lead to the severe disruption of wildlife habitats and increased pressure on endangered species. As it has been widely documented, it can also disrupt wildlife behaviour, such as, tourist vehicles in Africa’s national parks that approach wild cats and thus distract them from hunting and breeding; tour boat operators in the Caribbean Sea that feed sharks to ensure that they remain in tourist areas; and whale-watching boat crews around the world that pursue whales and dolphins and even encourage petting, which tends to alter the animals’ feeding and behaviour. 24

Tourism can also lead to the indiscriminate clearance of native vegetation for the development of new facilities, increased demand for fuelwood and even forest fires. Ecologically fragile areas, such as rain forests, wetlands and mangroves, are also threatened by intensive or irresponsible tourist activity. Moreover, as will be discussed below, it is increasingly recognized that, the rapid expansion of nature tourism (or ‘ecotourism’) may also pose a threat to ecologically fragile areas, including natural world heritage sites, if not properly managed and monitored.

In many countries, coastlines are becoming overbuilt due to tourism development until the damage caused by environmental degradation – and the eventual loss of revenues arising from a collapse in tourism arrivals – becomes irreversible. As mentioned above, intensive tourism development and recreational activities in coastal areas can not only lead to beach destruction and coastal degradation, but can also threaten coral reefs and other marine ecosystems. The delicate ecosystems of most small islands, together with their increasing reliance on tourism as a main tool of socio-economic development, means that these environmental impacts can be particularly damaging since the success of the sector in these islands often depends on the quality of their

23 Report of the Secretary-General, document E/CN.17/1999/5, op. cit.
natural environment. In addition, pollution of coastal waters – in particular by sewage, solid waste, sediments and untreated chemicals – often leads to the deterioration of coastal ecosystems, notably coral reefs, and thus harms their value for tourism.

The equally fragile ecosystems of mountain regions are also threatened by increasing popular tourist activities such as skiing, snowboarding and trekking. One of the most serious environmental problems in mountainous developing countries without appropriate energy supply is deforestation arising from increasing consumption of fuelwood by the tourism industry. This often results not only in the destruction of local habitats and ecosystems, but also in accelerating processes of erosion and landslides. Other major problems arising from tourist activities in mountain regions include disruption of animal migration by road and tourist facilities, sewage pollution of rivers, excessive water withdrawals from streams to supply resorts and accumulation of solid waste on trails.

3.4 Environmental threats to tourism

In many mountain regions, small islands, coastal areas and other ecologically fragile places visited by tourists, there is an increasing concern that the negative impacts of tourism on the natural environment can ultimately hurt the tourism industry itself. There is now plenty of evidence of the ‘life-cycle’ of a tourist destination, that is, ”its evolution from discovery, to development, to eventual decline, … attributed to a site's overuse and the subsequent deterioration of key attractions or facilities.” In other words, the negative impacts of intensive tourism activities on the environmental quality of beaches, mountains, rivers, forests and other ecosystems also compromise the viability of the tourism industry in these places.

In addition, tourism in many destinations could be particularly threatened by global environmental problems, notably the potential threat of ‘global warming’. There is increasing scientific evidence that human activity has begun to change the average temperature on the Earth’s surface. According to the authoritative United Nations Intergovernmental Panel on Climate Change (IPCC), this process of global warming has been caused by several factors associated with the intensification of economic activities, including the emissions of ‘greenhouse gases’, such as carbon dioxide produced by burning fossil fuels and forests.

According to the Third Assessment Report of IPCC, it is expected that the globally averaged surface air temperature will have warmed between 1.4 and 5.8 degrees Celsius by 2100 relative to 1990. One of the main consequences of global warming will be sea-level rise: according to IPCC, it is projected that the globally averaged sea level will have risen between 9 and almost 90 centimetres by 2100. Global warming is also expected to increase climate variability and to provoke...

---

27 See Tourism and Sustainable Mountain Development, Swiss Centre for Development and Environment (CDE) and the Swiss Agency for Development of Cooperation (SDC), Berne, 1999. Sustainable mountain development issues will be prominent in various activities in celebration of the International Year of Mountains throughout 2002.
changes in the frequency and intensity of extreme climate events, such as tropical windstorms and associated storm surges and coastal flooding.\textsuperscript{30}

Significant rises in sea level could cause serious problems to tourism activities, particularly in low-lying coastal areas and small islands. According to IPCC, because of their high degree of environmental vulnerability, small island States are likely to be among the countries most seriously affected by global warming. The likely impacts of sea-level rise and coastal flooding on small islands and in some coastal areas would include: (a) increased coastal erosion, (b) loss of land and property, including tourist facilities, (c) dislocation of people, (d) increased risk from storm surges, (d) saltwater intrusion into scarce freshwater resources and (e) high financial costs associated with attempts to respond and adapt to these changes. Severe negative impacts on coastal ecosystems, such as bleaching of coral reefs and deterioration of mangroves, are also expected to threaten tourism in many destinations around the world. In fact, global warming is expected to severely disrupt tourism activities not only in coastal areas and small islands, but also in mountain regions because snow conditions in ski resorts are likely to become less reliable.

4. Sustainable Tourism: The way forward

Countries and regions where the economy is driven by the tourism industry are becoming increasingly concerned with the environmental, as well as the socio-cultural problems associated with unsustainable tourism. As a result, there is now increasing agreement on the need to promote sustainable tourism development to minimize its environmental impacts and to ensure more sustainable management of natural resources. The concept of sustainable tourism, as developed in the United Nations sustainable development process, refers to tourist activities “leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems.”\textsuperscript{31}

These sustainability concerns are, therefore, beginning to be addressed by governments at national, regional and local, as well as international, levels. In addition, given the leading role of the private sector in the tourism industry in most countries, many initiatives have also been taken by this sector. Broadly speaking, the main policy areas regarding sustainable tourism are: (a) the promotion of national strategies for sustainable tourism development, including the decentralization of environmental management to regional and local levels, (b) the use of both regulatory mechanisms and economic instruments, (c) the support for voluntary initiatives by the industry itself, and (d) the promotion of sustainable tourism at the international level.

4.1 National and regional strategies for sustainable tourism development

Generally speaking, the main priority for national and regional governments is to incorporate tourism planning and development effectively into overall sustainable development strategies. For example, regional development strategies for areas containing water resources that

\textsuperscript{30} See, for example, \textit{World Economic and Social Survey 2001} (Sales No. E.01.II.A.4), chapter VII, United Nations, New York, 2001.

are potentially attractive to tourism, should carefully consider the availability of those resources in an integrated manner that considers all potential water users. Government policies to promote the domestic tourism industry and to attract foreign direct investment should also ensure that tourism is properly planned and managed so as to minimize adverse environmental impacts and its use of natural resources.

Since the environmental impacts of tourism development are primarily felt at the local and regional levels, national Governments need to promote decentralization of public environment management to the regional and municipal levels. Given that in many countries, local and regional governments already have important responsibilities for tourism development, central Governments should also support capacity building programmes at lower levels in order to enable local and regional authorities to better respond to the challenges of sustainable tourism development in the areas under their jurisdiction. National and local governments also need to develop clear strategies to monitor progress towards sustainable tourism.

Last but far from least, governments at all levels can greatly benefit from working in partnership with all major stakeholders, including local communities, to ensure their active participation in tourism planning, development and management, as well as in the sharing of benefits. Participation of local communities in decision-making and sharing of benefits also helps to generate better awareness of the environmental costs of tourism and thus provides strong incentives to conserve natural resources and protect local environmental assets. Governments, together with the tourism industry and other stakeholders, should also promote or support various efforts to raise public awareness about the impact of tourists on destinations, to promote respect for local communities and their cultures and to protect the environment. Such public awareness campaigns often succeed in promoting positive behavioural changes not only in tourists, but also in tourism workers and host communities as a whole.

4.2 Regulatory mechanisms and economic instruments

Sustainable tourism can also be promoted by a careful mix of government policies comprising both direct regulation and market-based instruments, although financial incentives that encourage environmentally damaging activities, such as energy subsidies, should be reduced or removed. The major challenge for governments is, therefore, to formulate and effectively apply an appropriate mix of regulatory and economic instruments for both sustainable natural resources management and environmental protection.

The most direct tool for promoting sustainable tourism involves the use of regulatory mechanisms, such as, integrated land-use planning and coastal zone management. In many cases, it may be necessary to protect coastlines through rigid building restrictions, such as, existing

---

32 Conflicts of interest within local communities may, however, make it difficult to fully incorporate such sustainability principles in regional tourism planning and development. For example, a recent survey of regional attitudes to tourism development shows that communities differed widely in their approaches and responses to such development. See B.Y. Ahn et al., “Operationalizing sustainability in regional tourism planning: An application of the limits of acceptable change framework,” *Tourism Management*, vol. 23, no. 1, pp. 1-15.

33 An interesting empirical analysis of economic incentives for ecotourism in a developing country shows, however, that local income generation depends primarily on the level of local organization, as well as on the importance of the tourist attraction and the degree of tourism specialization available. See S. Wunder, "Ecotourism and economic incentives - An empirical approach," *Ecological Economics*, vol. 32, no. 3, pp. 465-79.
legislation in several Mediterranean countries that bans any buildings within a defined distance from the coast. It is also essential that environmental regulations be applied transparently throughout the tourism sector, regardless of business size, type of tourism activity concerned or location.

Mass tourism, in particular, should be carefully monitored, regulated and sometimes even prohibited in ecologically fragile areas. In protected areas, such as national parks and natural world heritage sites, tourism activities should be strictly subject to the preservation of biological diversity and ecosystems, not stressing their limited capacity to absorb human presence without becoming damaged or degraded.

In addition to regulation, governments should also consider the use of economic instruments to promote sustainable tourism, including in remote regions where institutional capacity for environmental regulation may be limited. In fact, it can be argued that market-based mechanisms, which apply monetary values to environmental assets, are more efficient for environmental management than government regulation, even at the global level. Since the tourism industry consumes significant amounts of natural resources, economic pricing of scarce local resources – together with the phasing-out of existing subsidies that encourage wasteful consumption – will help to ensure that the true costs of these resources are adequately incorporated into tourist activities.

Prices that reflect the economic value of water and energy, for example, will promote their efficient use and conservation, and provide additional revenue that can be used to improve the management of those resources. Pollution taxes can also be applied on the amounts of liquid and solid waste generated, as a means to reduce discharges and to generate funds for proper treatment and disposal. Similarly, market-based instruments can also be used effectively for the sustainable use of marine natural resources.

Economic instruments, such as user fees and tourist taxes, can actually be used to better internalise environmental costs and thus to promote broader environmental protection objectives. As it is well known, one of the main reasons why markets fail is that important environmental costs, such as pollution, are not reflected in the prices of goods and services. In a free-market economy, individual economic agents will only attempt to maximize their own utility or profit; external costs will thus not be reflected in prices. If total production costs do not incorporate full environmental costs, resources will be allocated inefficiently, both within countries and globally. One way to deal

---

34 See, for example, F. Neto, “Market-based mechanisms for controlling global emissions of greenhouse gases,” *Natural Resources Forum*, vol. 19, no. 3, pp. 179-91.
35 Economic pricing of relatively scarce resources, such as water, is also important because they encourage more efficient allocation among different uses. It can be argued that efficient pricing of water should basically be determined in relation to its opportunity cost – that is, its value in the best alternative use. However, political and social considerations allow only a gradual move towards the adoption of a water price that equals its opportunity cost. For a detailed examination of these issues, see *World Economic and Social Survey 1996*, chapter XI (Sales No. E.96.II.C.1), United Nations, New York, 1996.
37 See, for example, D. Davis and D.F. Gartside, “Challenges for economic policy in sustainable management of marine natural resources,” *Ecological Economics*, vol. 36, no. 2, pp. 223-36.
with externalities is thus to internalize them through taxes so that the full costs of production are reflected in prices.\textsuperscript{38}

One well-known example of charging user fees to support environmental conservation is the Bonaire protected marine areas in the Netherlands Antilles.\textsuperscript{39} This was one of the first protected marine parks in the Caribbean to become entirely self-financing through the levying of admission fees on scuba divers. The (private) diving industry in Bonaire was initially opposed to the levy because of its potential negative impacts on future demand and revenues, against the background of intense competition offered by many Caribbean diving destinations. The system, however, has been an unqualified success since it was introduced in January 1992 because many divers (and an increasing number of tourists in general) are willing and able to pay higher prices to support environmental protection. Fees from this scheme also support the active management of the park’s coral reef and mangrove ecosystems, as well as educational activities and orientation sessions for divers.

\textbf{4.3 Voluntary industry initiatives}

As noted above, tourism services in most countries are provided primarily by the private sector, which tends to oppose greater government regulation and taxation of the industry on the grounds that they are ultimately detrimental to efficiency, competitiveness and profits. The predominantly private tourism industry has thus developed several self-regulation and voluntary initiatives to promote greater environmental sustainability. These include waste and pollution reduction schemes, voluntary codes of conduct, industry awards and eco-labels for sustainable tourism. In addition, environmental management schemes to encourage responsible practices have been promoted in various sub-sectors, including hotel and catering, recreation and entertainment, transportation, travel agencies and tour operators.

For example, the World Travel and Tourism Council (WTTC), the main international industry association, has developed an environmental management programme (Green Globe), for both travel and tourism companies and tourism destinations, aimed to raise the level of environmental awareness and to provide a low-cost practical means for improving the environmental performance of the industry. It is also responsible for ECOnETT, an internet-based tool that provides an extensive information resource on all tourism and environmental issues.

Another innovative global programme is the International Hotel Environment Initiative (IHEI), led by a council of leading international hotel chains, aimed to promote environmental management in the hotel industry, which is one of the main consumers of resources and sources of waste. Such initiatives are particularly important not only because they can lead to significant reductions of water and energy consumption, as well as liquid and solid waste, but also because they promote positive behavioural changes in both tourists and employees. In addition, they can lead to improved economic efficiency and increased profitability.

\textsuperscript{38} Another way is to restrict the production of environmentally harmful activities, which can also be applied at the global level, as the Montreal Protocol on phasing-out the production of ozone-damaging CFCs has shown.

\textsuperscript{39} See “Tourism and environmental protection,” \textit{Addendum to the Report of the Secretary-General} (document E/CN.17/1999/5/Add.3), op. cit.
At the regional level, it is worth noting the successful implementation of the Blue Flag Programme, which now extends to 18 countries in Europe, in providing an incentive to protect and improve the quality of beaches and coasts.\textsuperscript{40} Under this programme, environmental standards at individual beaches in Europe are assessed by measuring compliance with acceptable concentrations of a range of pollutants to ensure clean bathing water. Beaches are also judged by their compliance with guidelines dealing with litter management, the availability of sanitary and beach safety facilities, and environmental education. Beaches that meet these stringent criteria receive Blue Flag awards, which also serve as a marketing tool to attract tourists.\textsuperscript{41}

Despite these helpful initiatives of the tourism industry to improve its standards of environmental management and protection, the very proliferation of such voluntary codes of conduct and eco-label awards at global, regional and local levels – which are not, in any case, adopted or recognized by all industry enterprises – can sometimes lead to confusion and difficulty to evaluate and compare them. While national and regional governments should fully support these voluntary initiatives and encourage the dissemination of the best practices in the private tourism industry, there is also a role for independent supervision, monitoring and comparative assessment by relevant government agencies. In addition, trustworthy codes of conduct, transparent eco-label awards and internationally agreed programmes of action for sustainable tourism are required at the international level. The international community has a particularly crucial role to play in developing a set of internationally recognized accreditation and monitoring systems for assessing the sustainability of tourism services around the world.

\section*{4.4 International activities in support of sustainable tourism}

Although tourism was not specifically addressed in Agenda 21 – the international programme of action on sustainable development agreed on at the 1992 Earth Summit in Rio de Janeiro (Brazil)\textsuperscript{42} – its growing economic importance, significant use of natural resources and environmental impact all contributed to its gradual introduction into the international sustainable development agenda over the past ten years.

One of the first concrete sectoral programmes of action arising from the increasing cooperation between the tourism industry and inter-governmental agencies was ‘Agenda 21 for the Travel and Tourism Industry,’ an action plan for sustainable tourism development jointly launched by the World Tourism Organization, the above-mentioned WTTC and the Earth Council in 1996. Among its innovative key objectives are the estimation of the economic value for resources, such as wildlife, natural areas and cultural heritage, "whose conservation would otherwise be seen as having no financial value," and the establishment of "essential infrastructure, such as water treatment plants, for residents as well as visitors … (in order to) stimulate other economic activities."\textsuperscript{43} Many

\textsuperscript{40} See “Tourism and sustainable development,” \textit{Report of the Secretary-General} (document E/CN.17/1999/5), op. cit.
\textsuperscript{41} There are also plans to extend the award to selected non-European countries, in cooperation with the United Nations Environment Programme (UNEP) and the World Tourism Organization.
\textsuperscript{42} \textit{Earth Summit - Agenda 21: The United Nations Programme of Action from Rio} (Sales document No. E.93.I.11), United Nations, New York, 1993. Agenda 21, however, addresses tourist-related issues, such as, sustainable mountain development and the protection of coastal ecosystems.
\textsuperscript{43} See \textit{Actions in assisting developing countries to implement Agenda 21 undertaken by the World Tourism Organization since 1992}, background paper no. 3, submitted to the second session of the preparatory committee for the World Summit for Sustainable Development, held in New York from 28 to 8 February 2002.
tourism-based communities and regions have also formulated their own ‘Agenda 21s’ at the local and regional levels.

In 1997, the United Nations General Assembly, at its special session to review the five-year implementation of Agenda 21, decided that there was a need to consider the importance of tourism in the context of Agenda 21 and to “develop an action-oriented international programme of work on sustainable tourism.”\textsuperscript{44} This request was followed up during the seventh annual session of the United Nations Commission for Sustainable Development (CSD), held in New York in 1999, which discussed tourism as an economic sector and held a multi-stakeholder dialogue on the topic.

The Commission adopted an international work programme on sustainable tourism development, which is due to be reviewed during the forthcoming World Summit for Sustainable Development in Johannesburg (South Africa) later this year, as part of the ten-year review of progress achieved since the Earth Summit.\textsuperscript{45} The CSD also invited the World Tourism Organization to seek further input from the private sector, non-governmental organizations and other stakeholders in the further development of its proposed global code of ethics that had been drafted in consultation with the industry over the previous two years.

The final ‘Global Code of Ethics for Tourism,’ introduced by the World Tourism Organization in late 1999, sets a frame of reference for the responsible and sustainable development of international tourism.\textsuperscript{46} It includes nine articles outlining the basic rules for governments, tour operators, developers, travel agents, workers, as well as host communities and the tourists themselves. The tenth article deals with implementation and includes a proposed mechanism for conciliation, through the creation of a World Committee on Tourism Ethics made up of representatives of each region of the world and representatives of each group of stakeholders in the tourism sector, governments, the private sector, and labour and non-governmental organizations. The United Nations General Assembly adopted the Global Code of Ethics for Tourism at the end of 2001.\textsuperscript{47}

Although progress has been achieved over the past ten years, one of the key remaining challenges for the international community is to devise ways and means to assist developing countries to ensure that their tourism industries become more internationally competitive without damaging their natural resources and environmental assets base. This will require, amongst other things, greater technical and financial assistance, including human resources development, institutional capacity building and the transfer of environmentally sound technologies to many developing countries. The international community could also support the wider use of ‘debt-for-nature swaps’, through which a portion of the foreign debt of developing countries is purchased at a discount by various international partners in exchange for the debtor's country investment of an agreed sum of local currency in environmental protection projects.\textsuperscript{48}

\textsuperscript{44} Earth Summit +5 - Programme for the Further Implementation of Agenda 21, United Nations, New York, 1998.
\textsuperscript{46} See Actions in assisting developing countries to implement Agenda 21 undertaken by the World Tourism Organization since 1992, op. cit. Appendix 1.
\textsuperscript{47} Adopted on 21 December 2001 without a vote (see GA resolution A/RES/56/212).
5. Conclusion

As stressed above, tourism is expected to resume its rapid growth in the future because of improved living standards, rising incomes and amounts of free time, the falling real cost of travel, and improved transportation around the world. This growth can be harnessed not only for the enjoyment of tourists themselves but, more importantly, for maximizing economic benefits and thus increasing the living standards of host communities and countries. At the same time, it is bound to have negative environmental and socio-cultural impact on those communities, whose involvement in tourism planning, development and management can be crucial to minimizing the impact. The major challenge for the international community is, therefore, not only to minimize the negative impact of tourism but also to ensure that the economic benefits of tourism can contribute to environmental protection and the sustainable use of natural resources.

The International Year of Ecotourism – officially launched at the United Nations headquarters in New York on 28 January 2002 – offers an ideal opportunity not only to review ecotourism experiences around the world, but also to promote worldwide recognition of the important role of sustainable tourism in the broader international sustainable development agenda.

Ecotourism is one of the fastest growing segments of the tourism sector and further rapid growth is expected in the future. There is, however, little agreement about its exact meaning because of the wide variety of so-called ecotourism activities provided by many different tour operators and enjoyed by an equally broad range of diverse tourists. Its main features include (a) all forms of nature tourism aimed at the appreciation of both the natural world and the traditional cultures existent in natural areas, (b) deliberate efforts to minimize the harmful human impacts on the natural and socio-cultural environment and (c) support for the protection of natural and cultural assets and the well-being of host communities.

In other words, if carried out responsibly, ecotourism can be a valuable means for promoting the socio-economic development of host communities while generating resources for the preservation of natural and cultural assets. In this way, ecologically fragile areas can be protected with the financial returns of ecotourism activities made by both the public and private sectors. In many developing countries, ecotourism has been particularly successful in attracting private investments for the establishment of privately owned natural parks and nature reserves. Many of such reserves are well-managed, self-financed and environmentally responsible, even when profit remains the main motivation behind the operation of a private reserve. In this way, the tourism industry can help to protect and even rehabilitate natural assets, and thus contribute to the preservation of biological diversity and ecological balance.

However, if not properly planned, managed and monitored, the concept of ecotourism can be distorted for purely commercial purposes and even for promoting ecologically-damaging activities by large numbers of tourists in natural areas. Given their inadequate physical infrastructure and limited capacity to absorb mass tourism, the fragile land and ocean ecosystems of

---

49 The 2002 United Nations International Year of Ecotourism was officially proclaimed by the General Assembly resolution 53/200 of 15 December 1998. The World Tourism Organization and the United Nations Environment Programme have taken the lead in organizing activities at the international level, the highlight of which will be the World Ecotourism Summit, to be held in Quebec City (Canada) in May 2002.

50 See, for example, J. A. Langholz et al., “Economic considerations of privately owned parks,” *Ecological Economics*, vol. 33, no. 2, pp. 173-83.
many developing countries can be literally overwhelmed by large numbers of tourists. It is increasingly recognized, therefore, that unsustainable ecotourism activities may threaten the very natural environment upon which they depend. There is, in fact, a crucial distinction between ecotourism and sustainable tourism: while the former can be broadly defined as an alternative, nature-based type of tourism, the above-mentioned sustainability principles must be applied to all types of tourism activities and all segments of the tourism industry.

At a campsite on the long trekking route to Concordia and K-2 base camp in northern Pakistan, there is a presumably 'politically correct' sign that says: "Take nothing but photos; Leave nothing but footprints." If tourists follow those instructions, but do so insensitively or in mass numbers, those seemingly inoffensive acts can disturb local cultural values and ecological balance, respectively. It should be clear by now that even ecotourism activities can cause adverse ecological impacts, particularly if they are not properly managed or if they involve tourist numbers beyond the local carrying capacity. After all, there is no paradise on Earth.