

ECONOMIC IMPACTS OF TOURISM

The tourism industry generates substantial economic benefits to both host countries and tourists' home countries. Especially in developing countries, one of the primary motivations for a region to promote itself as a tourism destination is the expected economic improvement.

As with other impacts, this massive economic development brings along both positive and negative consequences.

According to the World Tourism Organization, 698 million people traveled to a foreign country in 2000, spending more US\$ 478 billion. International tourism receipts combined with passenger transport currently total more than US\$ 575 billion - making tourism the world's number one export earner, ahead of automotive products, chemicals, petroleum and food.

Source: [WTTC](#)

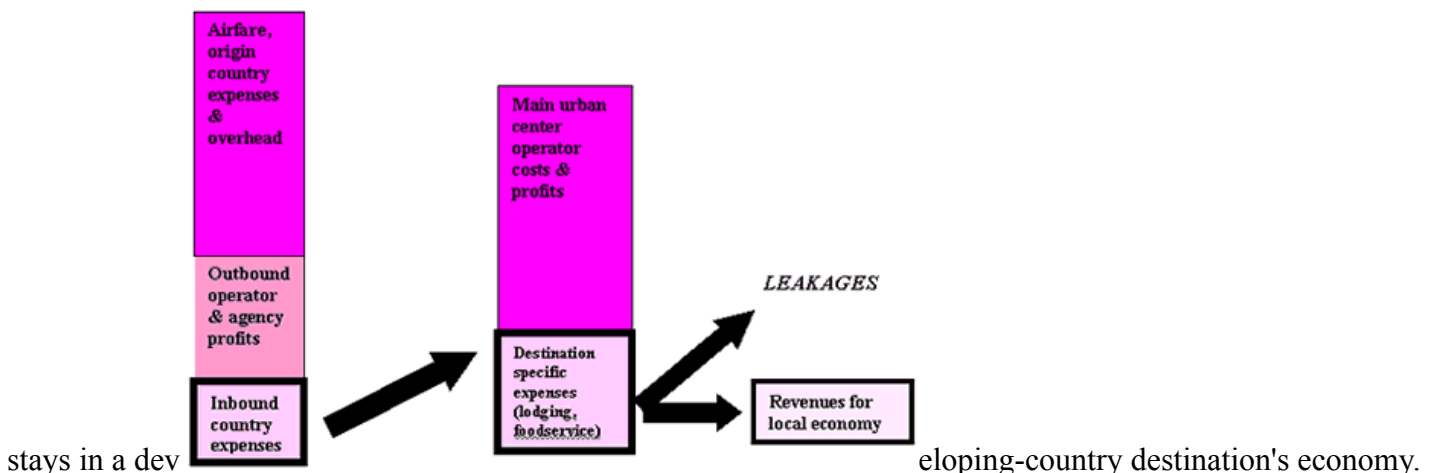
NEGATIVE ECONOMIC IMPACTS OF TOURISM

There are many hidden costs to tourism, which can have unfavorable economic effects on the host community. Often rich countries are better able to profit from tourism than poor ones. Whereas the least developed countries have the most urgent need for income, employment and general rise of the standard of living by means of tourism, they are least able to realize these benefits. Among the reasons for this are large-scale transfer of tourism revenues out of the host country and exclusion of local businesses and products.

Leakage

The direct income for an area is the amount of tourist expenditure that remains locally after taxes, profits, and wages are paid outside the area and after imports are purchased; these subtracted amounts are called leakage. In most all-inclusive package tours, about 80% of travelers' expenditures go to the airlines, hotels and other international companies (who often have their headquarters in the travelers' home countries), and not to local businesses or workers. In addition, significant amounts of income actually retained at destination level can leave again through leakage.

Of each US\$ 100 spent on a vacation tour by a tourist from a developed country, only around US\$ 5 actually



The figure below shows how the leakage happens.

There are two main ways that leakage occurs:

Import leakage This commonly occurs when tourists demand standards of equipment, food, and other products that the host country cannot supply. Especially in less-developed countries, food and drinks must often be imported, since local products are not up to the hotel's (i.e. tourist's) standards or the country simply doesn't

have a supplying industry. Much of the income from tourism expenditures leaves the country again to pay for these imports.

The average import-related leakage for most developing countries today is between 40% and 50% of gross tourism earnings for small economies and between 10% and 20% for most advanced and diversified economies, according to [UNCTAD](#).

Even in developed regions, local producers are often unable to supply the tourism industry appropriately even if good will is present: the 64-room hotel "Kaiser im Tirol" in Austria, an award-winning leader in sustainable practices, cannot find organic food suppliers in the local farming networks in the appropriate quantity, quality and reliability, as production cycles and processes are not compatible with its needs.

Source: Austrian Preparatory Conference for the International Year of Ecotourism, September 2001

Export leakage Multinational corporations and large foreign businesses have a substantial share in the import leakage. Often, especially in poor developing destinations, they are the only ones that possess the necessary capital to invest in the construction of tourism infrastructure and facilities. As a consequence of this, an export leakage arises when overseas investors who finance the resorts and hotels take their profits back to their country of origin.

A 1996 UN report evaluating the contribution of tourism to national income, gross levels of incomes or gross foreign exchange, found that net earnings of tourism, after deductions were made for all necessary foreign exchange expenditures, were much more significant for the industry. This report found significant leakage associated with: (a) imports of materials and equipment for construction; (b) imports of consumer goods, particularly food and drinks; (c) repatriation of profits earned by foreign investors; (d) overseas promotional expenditures and (e) amortization of external debt incurred in the development of hotels and resorts. The impact of the leakage varied greatly across countries, depending on the structure of the economy and the tourism industry. From the data presented in this study on the Caribbean, St. Lucia had a foreign exchange leakage rate of 56% from its gross tourism receipts, Aruba had 41%, Antigua and Barbuda 25% and Jamaica 40%.

Source: [Caribbean Voice](#)

Enclave tourism

Local businesses often see their chances to earn income from tourists severely reduced by the creation of "all-inclusive" vacation packages. When tourists remain for their entire stay at the same cruise ship or resort, which provides everything they need and where they will make all their expenditures, not much opportunity is left for local people to profit from tourism.

The Organization of American States (OAS) carried out a survey of Jamaica's tourist industry that looked at the role of the all-inclusives compared to other types of accommodation. It found that 'All-inclusive hotels generate the largest amount of revenue but their impact on the economy is smaller per dollar of revenue than other accommodation subsectors.'

It also concluded that all-inclusives imported more, and employed fewer people per dollar of revenue than other hotels. This information confirms the concern of those who have argued that all-inclusives have a smaller trickle-down effect on local economies. (Source: [Tourism Concern](#))

The cruise ship industry provides another example of economic enclave tourism. Non-river cruises carried some 8.7 million international passengers in 1999. On many ships, especially in the Caribbean (the world's most popular cruise destination with 44.5% of cruise passengers), guests are encouraged to spend most of their time and money on board, and opportunities to spend in some ports are closely managed and restricted.

Other negative impacts

Infrastructure cost

Tourism development can cost the local government and local taxpayers a great deal of money. Developers may want the government to improve the airport, roads and other infrastructure, and possibly to provide tax breaks and other financial advantages, which are costly activities for the government. Public resources spent on subsidized infrastructure or tax breaks may reduce government investment in other critical areas such as education and health.

Increase in prices

Increasing demand for basic services and goods from tourists will often cause price hikes that negatively affect local residents whose income does not increase proportionately. A [San Francisco State University study of Belize](#) found that, as a consequence of tourism development, the prices for locals increased by 8%.

Tourism development and the related rise in real estate demand may dramatically increase building costs and land values. Not only does this make it more difficult for local people, especially in developing countries, to meet their basic daily needs, it can also result in a dominance by outsiders in land markets and in-migration that erodes economic opportunities for the locals, eventually disempowering residents. In Costa Rica, close to 65% of the hotels belong to foreigners. Long-term tourists living in second homes, and the so-called amenity migrants (wealthy or retired people and liberal professionals moving to attractive destinations in order to enjoy the atmosphere and peaceful rhythms of life) cause price hikes in their new homes if their numbers attain a certain critical mass.

Economic dependence of the local community on tourism

Diversification in an economy is a sign of health, however if a country or region becomes dependent for its economic survival upon one industry, it can put major stress upon this industry as well as the people involved to perform well. Many countries, especially developing countries with little ability to explore other resources, have embraced tourism as a way to boost the economy.

In The Gambia, for instance, 30% of the workforce depends directly or indirectly on tourism. In small island developing states, percentages can range from 83% in the Maldives to 21% in the Seychelles and 34% in Jamaica, according to the WTO. Over-reliance on tourism, especially mass tourism, carries significant risks to tourism-dependent economies. Economic recession and the impacts of natural disasters such as tropical storms and cyclones as well as changing tourism patterns can have a devastating effect on the local tourism sector.

Malta has only 380,000 residents, but received 1.2 million tourists in 1999. As 25% of GDP (and indirectly 40%), tourism generated more than \$650 million in foreign exchange earnings. Malta's high dependence on tourism and a limited number of export products makes its trade performance vulnerable to shifts in international demand.

Source: [Washington Times](#)

Seasonal character of jobs

The seasonal character of the tourism industry creates economic problems for destinations that are heavily dependent on it. Problems that seasonal workers face include job (and therefore income) insecurity, usually with no guarantee of employment from one season to the next, difficulties in getting training, employment-related medical benefits, and recognition of their experience, and unsatisfactory housing and working conditions.

Other industry impacts affecting tourism

Economic crises, like the Asian crisis that hit Thailand, Malaysia and Indonesia a few years ago, can be devastating to inbound tourism flows. The financial turmoil triggered a sharp fall in tourism flows to affected countries during 1997 and 1998. In the Philippines, the crisis and the temporary closure of Philippine Airlines affected inbound arrivals significantly as there was a decline of almost 3.3% in 1998.

Source: [Hotel-online](#)

ENVIRONMENTAL IMPACTS OF TOURISM

The quality of the environment, both natural and man-made, is essential to tourism. However, tourism's relationship with the environment is complex. It involves many activities that can have adverse environmental effects. Many of these impacts are linked with the construction of general infrastructure such as roads and airports, and of tourism facilities, including resorts, hotels, restaurants, shops, golf courses and marinas. The negative impacts of tourism development can gradually destroy the environmental resources on which it depends.

On the other hand, tourism has the potential to create beneficial effects on the environment by contributing to environmental protection and conservation. It is a way to raise awareness of environmental values and it can serve as a tool to finance protection of natural areas and increase their economic importance.

TOURISM'S THREE MAIN IMPACT AREAS

- Three main impact areas: [natural resources](#), [pollution](#), [physical impacts](#)

Negative impacts from tourism occur when the level of visitor use is greater than the environment's ability to cope with this use within the acceptable limits of change. Uncontrolled conventional tourism poses potential threats to many natural areas around the world. It can put enormous pressure on an area and lead to impacts such as soil erosion, increased pollution, discharges into the sea, natural habitat loss, increased pressure on endangered species and heightened vulnerability to forest fires. It often puts a strain on water resources, and it can force local populations to compete for the use of critical resources.

DEPLETION OF NATURAL RESOURCES

Tourism development can put pressure on natural resources when it increases consumption in areas where resources are already scarce.

Water resources

Water, and especially fresh water, is one of the most critical natural resources. The tourism industry generally overuses water resources for hotels, swimming pools, golf courses and personal use of water by tourists. This can result in water shortages and degradation of water supplies, as well as generating a greater volume of waste water..

In dryer regions like the Mediterranean, the issue of water scarcity is of particular concern. Because of the hot climate and the tendency of tourists to consume more water when on holiday than they do at home, the amount used can run up to 440 liters a day. This is almost double what the inhabitants of an average Spanish city use.

Golf course maintenance can also deplete fresh water resources. In recent years golf tourism has increased in popularity and the number of golf courses has grown rapidly. Golf courses require an enormous amount of water every day and, as with other causes of excessive extraction of water, this can result in water scarcity. If the water comes from wells, overpumping can cause saline intrusion into groundwater. Golf resorts are more and more often situated in or near protected areas or areas where resources are limited, exacerbating their impacts.

An average golf course in a tropical country such as Thailand needs 1500kg of chemical fertilizers, pesticides and herbicides per year and uses as much water as 60,000 rural villagers.

Source: [Tourism Concern](#)

Local resources

Tourism can create great pressure on local resources like energy, food, and other raw materials that may already be in short supply. Greater extraction and transport of these resources exacerbates the physical impacts associated with their exploitation. Because of the seasonal character of the industry, many destinations have ten times more inhabitants in the high season as in the low season. A high demand is placed upon these resources to meet the high expectations tourists often have (proper heating, hot water, etc.).

Land degradation

Important land resources include minerals, fossil fuels, fertile soil, forests, wetland and wildlife. Increased construction of tourism and recreational facilities has increased the pressure on these resources and on scenic landscapes. Direct impact on natural resources, both renewable and nonrenewable, in the provision of tourist facilities can be caused by the use of land for accommodation and other infrastructure provision, and the use of building materials.

Forests often suffer negative impacts of tourism in the form of deforestation caused by fuel wood collection and land clearing. For example, one trekking tourist in Nepal - and area already suffering the effects of deforestation - can use four to five kilograms of wood a day.

POLLUTION

Tourism can cause the same forms of pollution as any other industry: air emissions, noise, solid waste and littering, releases of sewage, oil and chemicals, even architectural/visual pollution.

Air pollution and noise

Transport by air, road, and rail is continuously increasing in response to the rising number of tourists and their greater mobility. To give an indication, the [ICAO](#) reported that the number of international air passengers worldwide rose from 88 million in 1972 to 344 million in 1994. One consequence of this increase in air transport is that tourism now accounts for more than 60% of air travel and is therefore responsible for an important share of air emissions. One study estimated that a single transatlantic return flight emits almost half the CO₂ emissions produced by all other sources (lighting, heating, car use, etc.) consumed by an average person yearly. (Mayer Hillman, Town & Country Planning magazine, September 1996. Source: [MFOE](#)).

Transport emissions and emissions from energy production and use are linked to acid rain, global warming and photochemical pollution. Air pollution from tourist transportation has impacts on the global level, especially from carbon dioxide (CO₂) emissions related to transportation energy use. And it can contribute to severe local air pollution. Some of these impacts are quite specific to tourist activities. For example, especially in very hot or cold countries, tour buses often leave their motors running for hours while the tourists go out for an excursion because they want to return to a comfortably air-conditioned bus.

Noise pollution from airplanes, cars, and buses, as well as recreational vehicles such as snowmobiles and jet skis, is an ever-growing problem of modern life. In addition to causing annoyance, stress, and even hearing loss for it humans, it causes distress to wildlife, especially in sensitive areas. For instance, noise generated by snowmobiles can cause animals to alter their natural activity patterns.

In winter 2000, 76,271 people entered Yellowstone National Park on snowmobiles, outnumbering the 40,727 visitors who came in cars, 10,779 in snowcoaches and 512 on skis. A survey of snowmobile impacts on natural sounds at Yellowstone found that snowmobile noise could be heard 70% of the time at 11 of 13 sample sites, and 90% of the time at 8 sites. At the Old Faithful geyser, snowmobiles could be heard 100% of the time during the daytime period studied. Snowmobile noise drowned out even the sound of the geyser erupting. (Source: [Idahonews](#) and [Yahoo](#))

Solid waste and littering

In areas with high concentrations of tourist activities and appealing natural attractions, waste disposal is a serious problem and improper disposal can be a major despoiler of the natural environment - rivers, scenic areas, and roadsides. For example, cruise ships in the Caribbean are estimated to produce more than 70,000 tons of waste each year. Today [some cruise lines are actively working to reduce waste-related impacts](#). Solid waste and littering can degrade the physical appearance of the water and shoreline and cause the death of marine animals.

In mountain areas, trekking tourists generate a great deal of waste. Tourists on expedition leave behind their garbage, oxygen cylinders and even camping equipment. Such practices degrade the environment with all the detritus typical of the developed world, in remote areas that have few garbage collection or disposal facilities. Some trails in the Peruvian Andes and in Nepal frequently visited by tourists have been nicknamed "Coca-Cola trail" and "Toilet paper trail".

The Wider Caribbean Region, stretching from Florida to French Guiana, receives 63,000 port calls from ships each year, and they generate 82,000 tons of garbage. About 77% of all ship waste comes from cruise vessels. The average cruise ship carries 600 crew members and 1,400 passengers. On average, passengers on a cruise ship each account for 3.5 kilograms of garbage daily - compared with the 0.8 kilograms each generated by the less well-endowed folk on shore.

Source: [Our Planet](#), UNEP magazine for environmentally sustainable development, volume 10, no. 3, 1999

Sewage

Construction of hotels, recreation and other facilities often leads to increased sewage pollution. Wastewater has polluted seas and lakes surrounding tourist attractions, damaging the flora and fauna. Sewage runoff causes serious damage to coral reefs because it stimulates the growth of algae, which cover the filter-feeding corals, hindering their ability to survive. Changes in salinity and siltation can have wide-ranging impacts on coastal environments. And sewage pollution can threaten the health of humans and animals.

Aesthetic Pollution

Often tourism fails to integrate its structures with the natural features and indigenous architectural of the destination. Large, dominating resorts of disparate design can look out of place in any natural environment and may clash with the indigenous structural design.

A lack of land-use planning and building regulations in many destinations has facilitated sprawling developments along coastlines, valleys and scenic routes. The sprawl includes tourism facilities themselves and supporting infrastructure such as roads, employee housing, parking, service areas, and waste disposal.

PHYSICAL IMPACTS

Attractive landscape sites, such as sandy beaches, lakes, riversides, and mountain tops and slopes, are often transitional zones, characterized by species-rich ecosystems. Typical physical impacts include the degradation of such ecosystems.

An ecosystem is a geographic area including all the living organisms (people, plants, animals, and microorganisms), their physical surroundings (such as soil, water, and air), and the natural cycles that sustain them. The ecosystems most threatened with degradation are ecologically fragile areas such as alpine regions, rain forests, wetlands, mangroves, coral reefs and sea grass beds. The threats to and pressures on these ecosystems are often severe because such places are very attractive to both tourists and developers.

In industrial countries, mass tourism and recreation are now fast overtaking the extractive industries as the largest threat to mountain communities and environments. Since 1945, visits to the 10 most popular mountainous national parks in the United States have increased twelve-fold. In the European Alps, tourism now exceeds 100 million visitor-days. Every year in the Indian Himalaya, more than 250,000 Hindu pilgrims, 25,000 trekkers, and 75 mountaineering expeditions climb to the sacred source of the Ganges River, the Gangotri Glacier. They deplete local forests for firewood, trample riparian vegetation, and strew litter. Even worse, this tourism frequently induces poorly planned, land-intensive development.

(Source: [People & the Planet](#))

Physical impacts are caused not only by tourism-related land clearing and construction, but by continuing tourist activities and long-term changes in local economies and ecologies.

Physical impacts of tourism development

- **Construction activities and infrastructure development**

The development of tourism facilities such as accommodation, water supplies, restaurants and recreation facilities can involve sand mining, beach and sand dune erosion, soil erosion and extensive paving. In addition, road and airport construction can lead to land degradation and loss of wildlife habitats and deterioration of scenery.

In Yosemite National Park (US), for instance, the number of roads and facilities have been increased to keep pace with the growing visitor numbers and to supply amenities, infrastructure and parking lots for all these tourists. These actions have caused habitat loss in the park and are accompanied by various forms of pollution including air pollution from automobile emissions; the Sierra Club has reported "smog so thick that Yosemite Valley could not be seen from airplanes". This occasional smog is harmful to all species and vegetation inside the Park.

(Source: [Trade and Environment Database](#))

- **Deforestation and intensified or unsustainable use of land**

Construction of ski resort accommodation and facilities frequently requires clearing forested land. Coastal wetlands are often drained and filled due to lack of more suitable sites for construction of tourism facilities and infrastructure. These activities can cause severe disturbance and erosion of the local ecosystem, even destruction in the long term.

- **Marina development** Development of marinas and breakwaters can cause changes in currents and coastlines. Furthermore, extraction of building materials such as sand affects coral reefs, mangroves, and hinterland forests, leading to erosion and destruction of habitats. In the Philippines and the Maldives, dynamiting and mining of coral for resort building materials has damaged fragile coral reefs and depleted the fisheries that sustain local people and attract tourists.

Overbuilding and extensive paving of shorelines can result in destruction of habitats and disruption of land-sea connections (such as sea-turtle nesting spots). [Coral reefs](#) are especially fragile marine ecosystems and are suffering worldwide from reef-based tourism developments. Evidence suggests a variety of impacts to coral result from shoreline development, increased sediments in the water, trampling by tourists and divers, ship groundings, pollution from sewage, overfishing, and fishing with poisons and explosives that destroy coral habitat.

Physical impacts from tourist activities

- **Trampling** Tourists using the same trail over and over again trample the vegetation and soil, eventually causing damage that can lead to loss of biodiversity and other impacts. Such damage can be even more extensive when visitors frequently stray off established trails.

Trampling impacts on vegetation	Trampling impacts on soil
Breakage and bruising of stems	Loss of organic matter
Reduced plant vigor	Reduction in soil macro porosity
Reduced regeneration	Decrease in air and water permeability
Loss of ground cover	Increase in run off
Change in species composition	Accelerated erosion

Source: [University of Idaho](#)

- **Anchoring and other marine activities** In marine areas (around coastal waters, reefs, beach and shoreline, offshore waters, uplands and lagoons) many tourist activities occur in or around fragile ecosystems. Anchoring, snorkeling, sport fishing and scuba diving, yachting, and cruising are some of the activities that can cause direct degradation of marine ecosystems such as coral reefs, and subsequent impacts on coastal protection and fisheries.

There are 109 countries with coral reefs. In 90 of them reefs are being damaged by cruise ship anchors and sewage, by tourists breaking off chunks of coral, and by commercial harvesting for sale to tourists. One study of a cruise ship anchor dropped in a coral reef for one day found an area about half the size of a football field completely destroyed, and half again as much covered by rubble that died later. It was estimated that coral recovery would take fifty years.

Source: [Ocean Planet](#)

- **Alteration of ecosystems by tourist activities** Habitat can be degraded by tourism leisure activities. For example, wildlife viewing can bring about stress for the animals and alter their natural behavior when tourists come too close. Safaris and wildlife watching activities have a degrading effect on habitat as they often are accompanied by the noise and commotion created by tourists as they chase wild animals in their trucks and aircraft. This puts high pressure on animal habits and behaviors and tends to bring about behavioral changes. In some cases, as in Kenya, it has led to animals becoming so disturbed that at times they neglect their young or fail to mate.

LOSS OF BIOLOGICAL DIVERSITY

Biological diversity is the term given to the variety of life on Earth and the natural patterns it forms.

The effects of loss of biodiversity:

- It threatens our food supplies, opportunities for recreation and tourism, and sources of wood, medicines and energy.

- It interferes with essential ecological functions such as species balance, soil formation, and greenhouse gas absorption.
- It reduces the productivity of ecosystems, thereby shrinking nature's basket of goods and services, from which we constantly draw.
- It destabilizes ecosystems and weakens their ability to deal with natural disasters such as floods, droughts, and hurricanes, and with human-caused stresses, such as pollution and climate change.

Tourism, especially nature tourism, is closely linked to biodiversity and the attractions created by a rich and varied environment. It can also cause loss of biodiversity when land and resources are strained by excessive use, and when impacts on vegetation, wildlife, mountain, marine and coastal environments and water resources exceed the carrying capacity. This loss of biodiversity in fact means loss of tourism potential.

Introduction of exotic species

Tourists and suppliers - often unwittingly - can bring in species (insects, wild and cultivated plants and diseases) that are not native to the local environment and that can cause enormous disruption and even destruction of ecosystems.

DEPLETION OF THE OZONE LAYER

The ozone layer, which is situated in the upper atmosphere (or stratosphere) at an altitude of 12-50 kilometers, protects life on earth by absorbing the harmful wavelengths of the sun's ultraviolet (UV) radiation, which in high doses is dangerous to humans and animals. For instance, one of the reasons scientists have put forward for the global decrease of amphibian populations is increased exposure to UV radiation.

Ozone depleting substances (ODSs) such as CFCs (chlorofluorocarbon) and halons have contributed to the destruction of this layer. The tourism industry may be part of the problem; direct impacts start with the construction of new developments and continue during daily management and operations. Refrigerators, air conditioners and propellants in aerosol spray cans, amongst others, contain ODSs and are widely used in the hotel and tourism industry. Emissions from jet aircraft are also a significant source of ODSs. According to [Tourism Concern](#), scientists predict that by 2015 half of the annual destruction of the ozone layer will be caused by air travel.

UNEP's [OzonAction Programme](#) works with governments and industries, including the tourism industry, to phase out ODSs and find safer alternatives. UNEP has developed extensive information and guidance on how many types of businesses can eliminate ODSs and contribute to preservation of the ozone layer. For further reading see the publication [How the Hotel and Tourism Industry can Protect the Ozone Layer](#).

CLIMATE CHANGE

Climate scientists now generally agree that [the Earth's surface temperatures have risen steadily in recent years because of an increase in the so-called greenhouse gases in the atmosphere](#), which trap heat from the sun. One of the most significant of these gases is carbon dioxide (CO₂), which is generated when fossil fuels, such as coal, oil and natural gas are burned (e.g. in industry, electricity generation, and automobiles) and when there are changes in land use, such as deforestation. In the long run, the accumulation of CO₂ and other greenhouse gases in the atmosphere can cause global climate change - a process that may already be occurring.

Global tourism is closely linked to climate change. Tourism involves the movement of people from their homes to other destinations and accounts for about 50% of traffic movements; rapidly expanding air traffic contributes about 2.5% of the production of CO₂. Tourism is thus a significant contributor to the increasing concentrations of greenhouse gases in the atmosphere. (Source: [Mountain Forum](#))

Air travel itself is a major contributor to the greenhouse effect. Passenger jets are the fastest growing source of greenhouse gas emissions. The number of international travelers is expected to increase from 594 million in 1996 to 1.6 billion by 2020, adding greatly to the problem unless steps are taken to reduce emissions. (Source: [WWF](#))

For more information on the relationship between energy and the environment, see UNEP's [Energy Programme](#), which provides information and publications on energy efficiency and alternative energy sources to reduce the environmental impacts of energy use and of transportation.

HOW GLOBAL ENVIRONMENTAL IMPACTS AFFECT TOURISM

Natural disasters

Catastrophes like floods, earthquakes, wildfires, volcanoes, avalanches, drought and diseases can have a serious effect on inbound and domestic tourism and thus on local tourism industries. The outbreak of the foot and mouth disease epidemic in England earlier this year (2001), for instance, has severely affected Great Britain's inbound tourism market. A BHA/Barclays Hospitality Business Trends Survey found that 75% of hotels in England, 81% in Scotland and 85% in Wales continued to be affected by the foot and mouth outbreak, and over 60% forecast a decline in business in the June-September 2001 period.

Climate change

Tourism not only contributes to climate change, but is affected by it as well. Climate change is likely to increase the severity and frequency of storms and severe weather events, which can have disastrous effects on tourism in the affected regions. Some of the other impacts that the world risks as a result of global warming are drought, diseases and heat waves.

Malaria, the world's largest killer, has resurfaced in Spain, and it is estimated that changes in climate will result in parts of the country becoming a suitable habitat for malaria-carrying species of mosquito by the 2020s.

Source: [WWE](#) [PDF]

These negative impacts can keep tourists away from the holiday destinations. Global warming may cause:

- Less snowfall at ski resorts, meaning a shorter skiing seasons in the Alpine region. In already hot areas like Asia and the Mediterranean, tourists will stay away because of immense heat, and out of fear of diseases and water shortages.
- Harm to vulnerable ecosystems such as rainforests and coral reefs because of rising temperatures and less rainfall. A major risk to coral reefs is bleaching, which occurs when coral is stressed by temperature increases, high or low levels of salinity, lower water quality, and an increase in suspended sediments. These conditions cause the zooxanthellae (the single-celled algae which forms the colors within the coral) to leave the coral. Without the algae, the coral appears white, or "bleached" - and rapidly dies. The Great Barrier Reef, which supports a US\$ 640 million tourism industry, has been experiencing coral bleaching events for the last 20 years. (Source: [EXN](#))
- Rising sea levels, the result of melting glaciers and polar ice. Higher sea levels will threaten coastal and marine areas with widespread floods in low-lying countries and island states, increasing the loss of coastal land. Beaches and islands that are major tourism attractions may be the first areas to be affected.
- Increased events of extreme weather, such as tornadoes, hurricanes and typhoons. These are already becoming more prevalent in tourist areas in the Caribbean and South East Asia. Hurricane Mitch in

1998, for instance, heavily affected tourism in the Caribbean. Wind damage, storm waves, heavy rains and flooding caused major losses in the local tourism sector.

EFFECTS OF OTHER INDUSTRIES ON TOURISM

Impacts from other industries often have a more dramatic effect on the environment and can seriously affect tourism.

- Oil spills, like the oil tanker disaster that occurred off the Galapagos Islands (Ecuador) in January 2001, can cause severe short-term damage to tourist attractions. In that case, a freight ship loaded with 160,000 gallons of diesel fuel and 80,000 gallons of other petroleum products ran aground on the coast of San Cristóbal and spilled nearly all of its load. Unique local marine and land species and the tourism potential of the area were badly affected.
- Agricultural runoff or industrial discharges can cause water pollution and may cause algae blooms like those that occurred in the Adriatic Sea in the early 1990s. In spite of improved control of sewage from tourism developments, the Mediterranean sea floor is increasingly carpeted with these quick-growing invaders, many rising 30 inches or more above anchoring runners. They appear equally adept at colonizing rock, mud, and sand in a virtually continuous swath that can extend from the beach out to a depth of about 150 feet, smothering coral reefs, fish and other sea flora and fauna in the process.
- Destructive practices such as blast fishing, fishing with poisonous chemicals like cyanide, and muro-ami netting (pounding reefs with weighted bags to scare fish out of crevices) directly destroy corals. They can also destroy a major draw for tourists.

<http://www.uneptie.org/pc/tourism/home.htm>

Questions for your travel agent

A trip to a foreign country can result in far more than a tan and some photographs. A little thought can highlight some concerns. A little consideration can go a long way to reducing your impact.

Here are some questions for you and your travel agent when you go on holiday.

Why am I taking this trip?

Tour/tourism derives from a Hebrew word, Tora, which means to study, learn or search.

What environmental impact will I have on the country I visit?

Several areas of the world are already experiencing difficulties coping with the additional influx of visitors.

What natural resources will I consume getting to and from the country?

The number of international air passengers worldwide rose from 88 million in 1972 to 344 million in 1994. Source: International Civil Aviation Organisation.

Will I be supporting a repressive regime by travelling to this country?

Is my tour operator committed to strong ethical and environmental standards?

Who owns the hotel where I will stay?

A study of tourism 'leakage' in Thailand estimated that 70% of all money spent by tourists ended up leaving Thailand (via foreign-owned tour operators, airlines, hotels, imported drinks and food, etc). Source: Thai Institute for Development and Administration, Bangkok, 1990. Estimates for other Third World countries range from 80% in the Caribbean to 40% in India.

Will my tastes increase the demand for goods and services from my country?

What will I leave behind?

Will my purchases support the local economy?

30% of the workforce of The Gambia depend directly or indirectly on tourism.

Were local people forced out to make room for tourist development?

An average golf course in a tropical country such as Thailand needs 1500kg of chemical fertilisers, pesticides and herbicides per year and uses as much water as 60,000 rural villagers.