



# Impact of Tourism Development on Environmental Sustainability

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**Abstract:** *At present, environmental problems are one of the most important challenges human society is facing. In the present study an attempt has been made to study the Impacts of Tourism development on environment sustainability. This paper discussed how tourism affects the physical environment, environmental pollution, and natural resources. Tourism occupies important places in the world economy. Over the past few decades, the tourism industry has grown significantly. The relationship between tourism and the environment is complex. Tourism and the environment engage in a two-way relationship. Many of the activities it entails have a negative impact on the environment. Many of these effects are related to the development of tourist facilities, including resorts, hotels, restaurants, shops, and golf courses, as well as general infrastructure like highways and airports. The negative impacts of tourism growth might gradually degrade the environment's resources. However, by aiding in environmental preservation and protection, tourism has the ability to have positive effects on the environment. It serves as a means of promoting environmental values and can be used to help pay for the preservation of natural places and boost their economic significance.*

**Key words:** *Environment, Impacts, Tourism, Sustainability.*

## 1. INTRODUCTION:

Tourism is one of the fastest growing world's largest industries (Hall, 2001). Tourism is the real global economic activity and it contributes trillions of dollars annually to the global economy. It has been recognized that the tourism sector can be an important driver of economic growth by contributing foreign exchange earnings, increasing wealth and provides employment and business opportunities for the communities. Tourism remains a critical sector for development and economic growth for advanced and developing economies alike. Developing a strong Travel & Tourism sector supports job creation, raises national income, and also benefits the general competitiveness of economies through improvements in hard and soft infrastructure (TTCI, 2013). Travel & Tourism is an important economic activity in most countries around the world. As well as its direct economic impact, the industry has significant indirect and induced impacts (Scowsill, 2017). With the continuous development of tourism, the impact on the environment is constantly increasing, including both negative and positive aspects. Tourism transportation, tourist attraction and tourist hotel have negative effects on the environment, such as tourism traffic pollution, tourists' uncivilized behaviour and high energy consumption of hotels. At the same time, tourism also has improved infrastructure construction and enhanced



environmental awareness positive effect on the environment. To ensure the coordinated development of environment and tourism is of great significance for the realization of sustainable development. To promote the coordinated development of environment and tourism through measures such as strengthen legislation and law enforcement to reduce energy consumption, enhanced environmental protection, increase financial input, strengthen environmental protection education and constituting scientific and reasonable ecotourism programming (Zhao & Li, 2018). Tourism is considered an export industry in which foreign tourists who travel abroad purchase goods and services with money from their home countries. International tourism receipts are the earnings generated in destination countries from expenditure on accommodation, food and drink, local transport, entertainment, shopping and other services and goods. Although we recognized the great benefits of the tourism sector to the world economy, the tourism activities has also been connected to the negative impact on the economy in particular to the environment. One crucial aspect of the negative impact as a result of increased tourism activities is on the loss of biodiversity. Thus, the tourism sector and tourism-related activities has been recognize to assert the negative impact on the environment and threatened species. The tourism-related activities that lead to loss of biodiversity can be due to: (i) habitat disruption due to the total landscape transformation for tourism development (infrastructure and facilities) in a rapid and unplanned manner that led to deforestation and drainage of wetlands; (ii) depletion of scarce resources for the indigenous and local people (e.g. water and electricity consumption); (iii) problems associated with littering and water pollution; (iv) sewage pollution from hotels, recreation and other tourism-related facilities; and (v) damage to coral reefs by the activities of careless tourists (Christ et al. 2003). Today tourism in developing world is growing at much faster rate than the developed world. The market share of emerging economies increased from 30% in 1980 to 47% in 2012 and is estimated to reach 57% by the year 2030 (Malik, 2015). As a result, it is obvious that as tourism grows, there will also inevitably be a rise in adverse environmental effects (Pickering and Hill, 2007).

## 2. REVIEW OF LITERATURE:

Sewage pollution is one of the major problems which the tourist places are facing nowadays. Construction of large number of hotels to accommodate maximum number of people visiting the tourist areas results in water pollution as in most of the cases sewage is disposed off in the nearby water bodies. Eutrophication is the major problem associated with sewage dispose in water bodies. Due to sewage dispose in the water bodies the nutrient level of the water increases which stimulates the growth of algae on the expense of corals (Holden, 2016). The loss of forests, wetlands, or coral reefs, as well as the rising number of species that are either extinct or facing extinction, are indicators of the loss of biodiversity brought about by human use of the environment. There is a growing perception that tourism poses a risk to the environment and biodiversity (Croall, 1995). According to McAllister et al., (2001) dam drastically alters hydrological processes that reduces the amount of water available downstream, thus blocking the migratory routed and impair reproduction. Cuttelod et al., (2009) concluded that growing number of Mediterranean marine fish species are at significant risk of extinction due to human activities such as tourism, which cause habitat loss, fragmentation, and degradation. Smith and Darwall (2006) suggested that the building of dam in the Mediterranean basin threatened 32 per cent of the freshwater fishes. In his investigation on how tourism affects biodiversity in Germany, Munch (2011) reported that he was unable to identify any appreciable impact on the quantity of birds, butterflies, grasshoppers, plants, or orchids. The detrimental effects of tourism on wildlife have been the subject of several studies. For instance, tourists observing animals may produce disturbances that impact threatened species of mammals. Pickering and Hill (2007) concluded that the vegetation found in Australia's protected regions faces numerous risks from tourism. Protected area managers should give this more consideration. There is still little data on the direct and indirect effects of tourism on many Australian plant communities, despite the fact that the flora is internationally significant and protected area tourism is quite popular. According to Green and Higginbottom (2001), there are three primary categories in which wildlife is negatively impacted by wildlife tourism and associated human activities. First, disturbances to the natural order, such as spotlighting, loud activities, and visitors approaching animals when they are feeding them, might cause a fall in population if many animals are impacted on a regular basis. Second, purposeful killing for safety reasons can result in wildlife death; intentional killing for hunting, fishing, collecting, or stomping of wildlife can also cause direct killing or injury. Lastly, habitat alteration occurs when land is cleared or altered to create the infrastructure (roads, parking lots, picnic areas, accommodations, etc.) required for tourism activities. This can result in notable declines in population sizes, a reduction in the amount of protection from predators and the elements, or a reduction in the variety of prey species. Pickering and Hill (2007) evaluated research on how recreation and tourism affect plant species and vegetation in Australia's protected areas and discovered that nature-based tourism activities are causing vegetation to be crushed, sheared off, and uprooted. Furthermore, Pickering and Hill assert that those influences cause changes in the vegetation, such as a reduction in height, biomass, and reproductive structures (flowers, fruit, etc.), an increase in litter, a reduction



in cover, harm to seedlings, and a shift in the species composition. In addition, these operations will cause changes to the site's hydrology, soil conditions, including erosion and nitrogen levels. By putting more stress on plants in places where the pathogen is already present, tourism can further exacerbate the severity of the disease's effects (Buckley et al., 2004). This paper provides a review of some tourism literature, which focuses, in particular on environmental impacts of tourism. Negative impacts from tourism occur when the level of visitor use is greater than the environment's ability to cope with this use within 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.

### 3. OBJECTIVES:

The specific objective of the present study is to highlight the positive and negative impact of tourism on environmental sustainability.

### 4. IMPACTS OF TOURISM ON ENVIRONMENT:

The ecology and tourism have a complicated relationship. It entails a number of actions that could harm the environment. Many of these effects are related to the development of tourism facilities, such as resorts, hotels, restaurants, shops, and golf courses, as well as general infrastructure like highways and airports. The environmental resources that tourism depends on may be gradually destroyed by its harmful effects. However, by promoting environmental conservation and protection, tourism has the potential to have a positive impact on the environment. It can be used as a mechanism to finance the preservation of natural places and boost their economic significance, as well as to spread awareness of environmental values. In the present investigation negative as well as positive impacts of tourism development on the environment has been discussed.

### 5. NEGATIVE IMPACTS OF TOURISM ON THE ENVIRONMENT:

While tourism can bring economic benefits and cultural exchange, it can also have significant negative impacts on the environment. The main detrimental effects of tourism on the environment include plastic waste, sewage disposal, biodiversity loss, and pollution of the natural resources (land, air, and water). Various Tourism development activities can put pressure on natural resources when it increases consumption in areas where resources are already scarce. Here are some of the common environmental concerns associated with tourism:

- **Habitat Destruction:** The development of tourism infrastructure, such as hotels, resorts, and roads, can lead to the destruction of natural habitats. This can disrupt ecosystems and contribute to the loss of biodiversity.
- **Overcrowding:** Popular tourist destinations often experience overcrowding, leading to increased pressure on the local environment. Foot traffic, pollution, and noise can negatively impact ecosystems, particularly in fragile and sensitive areas.
- **Pollution:** Tourism activities can result in various forms of pollution, including air pollution from transportation, water pollution from waste discharge, and noise pollution. 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 global level, especially from carbon dioxide emissions related to transportation energy use. Noise pollution from airplanes, cars, and buses, as well as recreational vehicles is a problem of modern life. In addition to causing annoyance, stress, and even hearing loss for humans, it causes distress to wildlife, especially in sensitive areas.
- **Resource Depletion:** The demand for resources such as water, energy, and raw materials increases with tourism. Over-extraction of water for hotels and resorts, increased energy consumption, and resource exploitation can strain local ecosystems. These resources are put under a lot of pressure to meet the high standards that visitors frequently have (adequate heating, hot water, etc.).
- **Climate Change Impact:** Tourism is a significant contributor to carbon emissions, primarily due to transportation and energy use. This can contribute to climate change, affecting local weather patterns and leading to the deterioration of natural environments. Most climate scientists now agree that an increase in the atmosphere's "greenhouse gases," which trap heat from the sun, is to blame for the Earth's surface temperatures rising steadily in



recent years. Carbon dioxide is one of the most important of these gases. It is produced when fossil fuels like coal, oil, and natural gas are consumed (for example, in industry, the production of electricity, and automobiles) and when there are changes in land use, like deforestation. Long-term atmospheric build-up of CO and other greenhouse gases can contribute to the process of global climate change, which may already be underway.

- **Damage to Coral Reefs and Marine Ecosystems:** Activities such as snorkelling, diving, and boat anchoring can cause physical damage to coral reefs and marine ecosystems. The use of harmful chemicals in sunscreens can also contribute to coral bleaching.
- **Deforestation:** In some cases, tourism development may lead to deforestation as land is cleared for hotels, resorts, and infrastructure. This can result in the loss of critical habitats and disrupt local ecosystems.
- **Loss of Cultural Heritage:** Cultural heritage places may become commodities and deteriorate as a result of uncontrolled tourism. The deterioration of ancient buildings and antiques could be exacerbated by an increase in visitors.
- **Water Scarcity:** Water resources are typically overused by the tourism sector for the use of hotels, swimming pools, golf courses, and visitor personal use. Tourism can exacerbate water scarcity issues in certain destinations, especially those located in arid regions. High water demand for hotels, golf courses, and other tourist activities can strain local water resources.
- **Disruption of Wildlife:** Wildlife can be negatively impacted by tourism through disturbance, habitat encroachment, and increased vulnerability to poaching. Wildlife tourism activities, if not properly managed, can disrupt natural behaviours and ecosystems.
- **Solid Waste and Littering:** Waste disposal is a huge issue in places with a lot of tourism activities and attractive natural features. Improper disposal can seriously harm the environment, waterways, scenic landscapes, and roadside vegetation. Marine animal deaths can result from solid waste and littering, which can also deteriorate the physical beauty of the sea and shoreline. Travellers that go trekking produce a lot of rubbish in mountainous locations. Along with their trash, oxygen cylinders, and even camping gear, tourists on expedition leave behind. Such behaviours, especially isolated places with little rubbish collection or disposal facilities, deteriorate the environment with all the debris typical of the developed world.
- **Sewage:** Sewage contamination is frequently enhanced when hotels, recreational centres, and other facilities are built. Wastewater contaminates lakes and oceans around popular tourist destinations, harming the local flora and animals. Because sewage runoff is high in nutrients and encourages the growth of algae, which covers filter-feeding corals and reduces their survival chances, it seriously damages coral reefs.
- **Aesthetic Pollution:** Tourism frequently fails to incorporate its buildings with the local architecture and natural aspects of the site. Huge resorts with wildly divergent designs could clash with the native structural style and seem out of place in a natural setting. Expansive developments along valleys, picturesque routes and coasts have been made possible by the absence of building laws and land-use planning in many popular destinations.
- **Loss of biological diversity:** Tourism threatens our food supplies, opportunities for recreation, sources of wood, medicines and energy. It obstructs vital ecological processes such soil formation, species balance, and greenhouse gas absorption. It lowers ecosystem production. It upsets ecosystems and makes them less resilient to stresses brought on by humans, such pollution and climate change, as well as natural disasters like hurricanes, droughts, and floods. The attractions produced by a rich and varied environment and biodiversity are intimately related to tourism, particularly nature tourism. Additionally, it can result in a loss of biodiversity when overuse of land and resources strains them beyond what is sustainable and has an adverse effect on wildlife, plants, mountains, and water resources. Indeed, a decline in tourism results from this loss of biodiversity.

## 6. POSITIVE IMPACTS OF TOURISM ON THE ENVIRONMENT:

Tourism can significantly contribute to environmental protection, conservation and restoration of biological diversity and sustainable use of natural resources. Tourism has had a positive effect on wildlife preservation and protection efforts. Here are some ways in which tourism can have positive effects on the environment:

- **Conservation Funding:** Tourism revenue can be directed towards funding conservation projects, supporting the preservation of natural habitats, and contributing to the overall protection of biodiversity.
- **Environmental Awareness:** Tourism can raise awareness among visitors about the importance of environmental conservation. Exposure to natural wonders, wildlife, and ecosystems can instill a sense of responsibility and environmental stewardship.



- **Community Involvement:** Sustainable tourism practices can involve local communities in the management and conservation of their natural resources. This can lead to better protection of the environment and a shared commitment to sustainable practices.
- **Cultural and Natural Heritage Preservation:** Tourism can provide economic incentives for the preservation of cultural and natural heritage sites. This can lead to the protection of historical landmarks, traditional practices, and ecosystems.
- **Economic Diversification:** By promoting eco-tourism and sustainable tourism practices, destinations can diversify their economies. This diversification can reduce dependence on environmentally harmful industries and encourage the development of sustainable alternatives.
- **Investment in Green Infrastructure:** Tourism development can stimulate investment in green infrastructure, such as renewable energy projects, waste management systems, and sustainable transportation options, contributing to environmental sustainability.
- **Wildlife Conservation:** Well-managed wildlife tourism can contribute to the conservation of endangered species by providing funding for research, anti-poaching efforts, and habitat protection.
- **Carbon Offsetting Initiatives:** Some tourism operators engage in carbon offsetting initiatives, investing in projects that reduce greenhouse gas emissions, such as reforestation and renewable energy projects, to counterbalance the carbon footprint of travel.
- **Educational Awareness:** Tourism can raise awareness about environmental issues and foster a sense of responsibility among visitors. Educational programs, guided tours, and interpretive centers at natural sites can help inform tourists about the importance of protecting the environment.
- **Wildlife Protection:** Well-managed tourism can support the conservation of wildlife by providing economic incentives for protecting habitats and preventing poaching. This is particularly important in areas where wildlife tourism is a major attraction.
- **Encouraging Sustainable Practices:** Tourism operators and businesses can adopt and promote sustainable practices, such as eco-friendly accommodations, responsible wildlife viewing, and waste reduction measures. This can set an example for other industries and communities.
- **Funding for Infrastructure:** The development of eco-friendly tourism infrastructure can contribute to the overall improvement of infrastructure in a region. Improved infrastructure, such as waste management systems and renewable energy projects, can have positive environmental impacts.
- **Promotion of Conservation Initiatives:** Tourism can serve as a platform to promote and showcase successful conservation initiatives. Visitors who witness positive examples of environmental protection may be inspired to support similar efforts in their own communities.
- **Protection and Preservation of Environment:** Sustainable resource use, biological variety preservation and restoration, and environmental protection are all significantly aided by tourism. Primitive locations and natural regions are valued because of their appeal, and the desire to preserve their allure may inspire the establishment of national parks and animal parks. To protect native species and conserve the forest, new rules and regulations have been passed in India. Additionally safe are the coral reefs that surround coastal locations and the marine life that depends on them.
- **Contributions to government revenues:** Government revenue collection methods are more extensive and indirect, and they are not connected to particular parks or conservation zones. Governments can get the money they need to manage natural resources through user fees, income taxes, sales taxes, rental fees for recreational equipment, and license fees for sports like fishing and hunting. These monies can be applied to general conservation initiatives and projects, such as paying park rangers and maintaining parks.

## 7. CONCLUSION:

The main purpose of this research paper is to look into the environmental impacts of tourism. The environmental impacts on tourism can be positive and negative; the positive impacts are direct financial contributions, contributions to government revenues, improved environmental management and planning, raising environmental awareness, and protection and preservation of environment. The negative impacts are depletion of natural resources, pollution and destruction and alteration of the ecosystem. To address these negative impacts, sustainable tourism practices, responsible planning, and community involvement are essential. Governments, local communities, and the tourism industry should work together to implement and enforce regulations that prioritize environmental conservation and minimize the



ecological footprint of tourism activities. Therefore, a balance must be struck between promoting tourism and protecting the environment, with an emphasis on sustainable development and responsible tourism practices. This has been understood that the tourism industry has contributed in enhancing the social, cultural and economic domains of the world economy. Therefore, it's crucial for the tourism industry, local communities, and governments to work together to implement and enforce sustainable practices that benefit both the environment and the people involved in tourism.

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