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## The Environmental Impacts of Tourism on Local Communities in Pakistan



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## **Abstract**

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The tourism industry in Pakistan is a vital factor of economic growth, with the visiting numbers growing substantially; however, the rising problems with the environmental and socio-economic impact on local communities are becoming rapidly emerging issues. Researching the environmental consequences of tourism in the Hunza and Diamer districts in Pakistan, this study tackles issues and opportunities that revolve around improving the sustainability of the tourism industry. The environmental, socio-economic, and cultural aspects of tourism are evaluated in detail in this study. Thus, the report explores how local communities can be resilient and thrive even when tourist activities are present.

The study uses secondary qualitative research based on a thematic analysis of available literature. Recognizing theoretical concepts like sustainable tourism, environmental impact assessment, and community-based tourism, the study probes into the multifaceted effects of tourism on the environment, cultural heritage, and socio-economic structures in the area under examination.

Most research results imply the negative impact of tourism-related activities such as deforestation, biodiversity loss, pollution, and disparities in socio-economic aspects. Nevertheless, the studies outline the potential of lasting sustainable tourism practices in the form of community empowerment, stakeholder teaming, and policymaking. By blending theoretical knowledge with practical application, the research leads to pragmatic proposals for decision-makers, service providers, and residents to improve the dimensionality and resilience of tourism in the worlds of Hunza and Diamer.

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## 1 Introduction

This study embarks on an extensive assessment of tourism's environmental impacts on Pakistan's local communities and its benefits and challenges. Considering the dual character of tourism, which is, on the one hand, a technique of economic growth and, on the other hand, a cause of environmental disruption, this study analyses the complex interactions that influence community resilience and sustainability. The tourism industry is rapidly expanding and accounts for over 10% of the world's gross domestic product (UNWTO 2017), a claim made by the World Tourism Organization (UNWTO). The number of foreign visitors has increased significantly, from 25 million in 1950 to 166 million in 1970, 1.442 billion in 2018, and an estimated 1.8 billion by 2030. In addition to the good impacts on employment, wealth development, and the economy, the mobilization of such a large human tourist mass is likely to cause environmental damage. (Shaheen et al., 2019, pp. 1–2)

Additionally, the quality of the environment is significantly diminished by tourism. It leads to a dramatic rise in waste and pollution, a decline in service quality, and an excessive use of natural resources. In addition, overcrowding due to tourism causes more harm than good, including soil erosion, natural habitat loss, waste buildup, air pollution, endangered species, and spoiled land and water. (GhulamRabbany et al., 2013, pp. 117–118)

Tourism growth and environmental pollution have been observed worldwide in various regions. ASEAN (Association of Southeast Asian Nations) countries often described as hotbeds for air pollution, climate change and global warming are coping with environmental degradation. In China, over fifty-eight major tourist destinations are seeking urgent policy intervention to reduce air pollution and enhance environmental sustainability. Similarly, Singapore, a highly popular tourist destination, is dealing with significant ecological impacts and is advocating for a balance between tourism development and environmental preservation. Previous studies have shown that international tourism and tourism-driven growth led to increased tourist arrivals, energy consumption, Carbon dioxide (CO<sub>2</sub>) emissions, and air pollution, all of which contribute to climate change. Moreover, South Asian countries like Sri Lanka and Pakistan are expecting significant tourism growth and environmental pollution similar to other nations. (Baloch et al., 2023, p. 5918)

Pakistan is famous among tourists for its breathtaking landscapes, historical sites, and cultural attractions. The country is home to some of the world's highest mountain ranges, such as the Great Himalayas, Karakoram Hindukush, and Pamir. The best natural scenes regarding tourism in

the country are found in the majestic Neelum, Murree, Chitral, and Swat Valleys; sacred Sikh shrines; and archaeological artifacts from the Gandhara and Indus Valley civilizations, including Taxila, Mohenjo-Daro, and the pre-Islamic Kalasha community (A. U. Khan et al., 2020, pp. 408–410). Furthermore, visitors to Pakistan may immerse themselves in the country's welcoming mixed community and experience its vibrant festivals, customs, and traditions. Pakistan is seeking to use its socio-cultural and geographical environment as a potential source of foreign currency to offset its growing trade deficit (A. U. Khan et al., 2020, p. 407).

The study investigates the multi-dimensional impacts of tourism activities on the local environment, cultural heritage, and socio-economic structures, bearing in mind the environmental consequences. This research synthesizes theoretical frameworks to give valuable insights into the complicated interrelationship between tourism development and community well-being in Pakistan. By a complex analysis of the environmental dimension of tourism, this study attempts to contribute to the discussion of sustainable tourism policies and practices. In the end, through a localized lens, this study aims to use the consequences of tourism on the environment to inform the decision-making methods regarding the enhancement of Pakistan's tourism development plans, ensuring the long-term resilience of the local communities.

### 1.1 Background and Justification

Pakistan is no different from other places where tourism is an important business that can bring many economic benefits. However, the fast rise of tourism can hurt nature in two different ways. Firstly, it is involved in the rise of infrastructure development, such as hotels, resorts and roads, damaging the local natural habitat. Secondly, it is involved in the rise of carbon dioxide emissions due to an increase in energy consumption for various tourism activities such as transportation and accommodation. (Mikayilov et al., 2019, p. 19390) To ensure that tourism in Pakistan continues to thrive in the future, it is important to understand and lessen these effects. People worldwide come to Pakistan to see its beautiful natural and cultural sites, ranging from the high mountains in the north to the sunny beaches in the south. Moreover, diverse cultures and its ancient civilizations like Mohenjo-Daro, Harappa and Taxila make the country a good spot for tourism. (Jalil et al., 2013, p. 186). It helps the economy grow but also puts a huge strain on the environment and the health of the people who live nearby. Pakistan's tourism has a lot of effects on the

environment. Many bad things happen because of it, like more buildings for housing and utilities, cutting down trees, pollution, and an increase in traffic loads. Also, local communities often have problems, such as their cultural identity being in danger (Jehan et al., 2023, pp. 183–185).

This study is very important because it examines the problems associated with tourism from different angles. Its goal is to look into the many ways that how tourism affects Pakistan and the people who live in Pakistan and come up with ways to lessen these effects. Sustainable development combines social and environmental issues with economic growth. The study's results will affect legislators, tourism officials, local communities, and guests in many ways. Sustainable tourism practices must be found and used to protect the environment, honor local cultures, and ensure that tourism's benefits are shared fairly among communities. This study shows how important it is to quickly understand and lessen the negative effects of tourists on the Pakistani community. The study also wants to give valuable suggestions to help tourism in this culturally and environmentally diverse country by stressing the importance of sustainable growth.

## 1.2 Statement of the Problem

Pakistan's fast-growing tourism sector has posed serious environmental, socio-cultural, and economic issues for these local communities. Though tourism presents the opportunity for the economy to grow and develop, its uncontrolled growth results in problems that are not desirable for the communities' well-being and stability. One of the main problems arises from environmental damage due to tourism activities. Tourists, en masse, have a very high impact on the environment and contribute to the disappearance of trees and water and air pollution. It is vital to highlight the fragile ecosystems of regions such as Hunza and Diamer, which are highly vulnerable to any unplanned or unscientific construction of infrastructures and recreational activities. Moreover, the addition of solid waste and the deficit of natural resources worsen the situation with the environment, which can cause ecological deviation and imbalance and finally threaten biodiversity and ecosystem stability in the long run.

In addition, tourism is one of the most potent socio-cultural factors that local communities face. The capitalism of culture and heritage ends the old ones by putting them aside for what is new. Local communities may engage in cultural homogenization, loss of identity, and social disintegration as their lifestyle is progressively motivated by tourists' habits and values. Further-

more, the unfair distribution of the benefits across tourism markets may trigger more social inequalities and conscience issues among the indigenous communities, causing conflicts over resources and access to opportunities.

Economically, though tourism can create revenue and job opportunities, the benefits often fail to reach the members of the local communities. Most locals are still left out of the tourism economy and do insecure jobs, which may disappear if the visitors come in fewer numbers. Moreover, the seasonal character of the tourism industry is a key factor in income instability and economic dependence on foreign markets among local people. Consequently, it becomes a problem for the most vulnerable members of society.

### 1.3 Aims and Objectives

The study seeks to cover the environmental impacts of tourism on local communities in Pakistan. The research aims to identify the significant difficulty these communities face due to tourism-related activities, thus shedding light on issues like depletion of resources, cultural erosion, and socioeconomic inequality. Besides this, the research will investigate the indirect impact of tourism on the communities living in the Gilgit-Baltistan region, considering both positive contributions and negative effects. Finally, the study will examine and evaluate the environmental implications of tourism activities in some selected villages in the Hunza and Diamer regions. The environmental problems that this assessment will consider are deforestation, the loss of biodiversity, waste creation, water, air, and noise pollution. The study aims to draw essential conclusions on such complex interactions in the form of environmental sustainability in tourism of local communities of Pakistan through proposed objectives.

Based on these aims and objectives, the following Research Question is formulated:

- **Q1:** What environmental challenges are faced by local communities in tourist destination Pakistan Gilgit-Baltistan with a specific focus on Hunza and Diamer?

#### 1.4 Significance of the Study

The main focus of the study is to examine the wide range of environmental, socio-cultural, and financial influences of travel on local communities in Pakistan. Through these multidimensional analyses, the research aims to fill the crucial vacuum in the knowledge and provide a holistic view of the country's tourism development issues and improvements. This research is significant for numerous stakeholders, including policymakers, tourism officials, indigenous communities, and researchers, since it offers sights that can be utilized in the formation of sustainable tourism policies and practices. Lastly, the study also aims to expose the intricate interactions between tourism activities and community well-being by underlining the importance of incorporating holistic approaches in tourism management that prioritization of environment conservation, cultural preservation, and socio-economic equity. The results of the research on tourism management in Pakistan could contribute to the improvement of the general frameworks, the development of community resilience, and the promotion of inclusive and sustainable tourism development in the country.

#### 1.5 Scope and Limitations

The scope of this research covers carrying out an in-depth assessment of the environmental effects of tourism on local communities of Pakistan. The research aims to study various tourism activities' impacts on natural resources, cultural heritage, and socio-economic breakdown. Besides, the research will examine the meaning of the relationship between local community residents and their attitude towards further development of tourism and its consequences.

Nevertheless, it should be noted that these studies have some drawbacks associated with them. Firstly, since the study will only look at some selected villages in the Hunza and Diamer regions, the results could apply to other areas of Pakistan. Second, the research has secondary sources that could limit the data accessibility and the quality of the information. Also, the qualitative approach of the study might have the possibility of being subject to interpretation bias, and it may not be able to capture the full complexity of the phenomenon under study. Eventually, logistical issues, such as limited time and resources, come up, which might make me limit the

research analysis length and breadth. Nevertheless, the study strives to outline the environmental impacts of tourism on the inhabitants of local communities of Pakistan.

## 2 Theoretical Background/Framework

Understanding the theoretical underpinnings of a research study is crucial as it provides the intellectual foundation for the investigation. This part talks about the main ideas and theories that will be used to study how tourism affects the world and the people who live in Hunza and Diamer, Pakistan.

### 2.1 Sustainable Tourism

The focus of this research is the sphere of sustainable tourism, which is the idea of combining economic growth, environmental protection, and the welfare of affected local communities (UNWTO, 2022). According to UNWTO, sustainable tourism is a collection of principles and actions aiming at creating tourism activities that are responsible and fair to all involved while generating positive results with minimal social and environmental impacts. Some of the most important ideas behind sustainable tourism are lowering carbon emissions, protecting natural resources, and promoting fair economic sharing.

### 2.2 Environmental Impact Assessment

Environmental Impact Assessment is a systematic process for identifying, predicting, evaluating, and mitigating the environmental effects of proposed projects, policies, and programs. EIA is crucial for understanding tourist activities' direct and indirect ecological consequences in tourism. It offers a structured approach to assess the impact on natural resources, ecosystems, and lands (Alshuwaikhat, 2005, p. 309). In this study, EIA serves as the basis for identifying critical environmental impacts associated with tourism in Hunza and Diamer. These include deforestation, loss of species, and impacts on culture and communities, with a specific focus on Community-Based Tourism (CBT). By exploring these impacts, the research aims to provide insights into the environmental challenges posed by tourism in Pakistan's Hunza and Diamer regions and contribute to developing sustainable tourism practices. It provides a structured approach to assess the impact

on natural resources, ecosystems, and landscapes. EIA serves as the basis for the literature research, guiding the selection of topics such as deforestation, loss of species, and impacts on culture and communities. By focusing on these critical areas, the research aims to address the study area's specific environmental challenges and contribute to developing sustainable tourism practices.

### 2.3 Community-Based Tourism

Community-Based Tourism (CBT) represents an approach that places significant emphasis on active community involvement in tourism endeavors and decision-making processes. It endeavors to empower local communities to effectively manage and derive benefits from tourism activities while concurrently safeguarding their cultural heritage and natural environment. In the context of Pakistan, CBT emerges as a pertinent framework for scrutinizing the impact of tourism on local communities. This is particularly valuable due to its emphasis on fostering community participation and ownership in sustainable development initiatives. By incorporating CBT principles, the Pakistani tourism sector can prioritize the well-being and aspirations of local communities while promoting sustainable tourism practices that resonate with the cultural and environmental ethos of the region. (Giampiccoli & Saayman, 2017, pp. 8–10)

### 3 Research Methods

This research methodology uses a systematic literature review to analyze the environmental effects of tourism on local societies in Pakistan, especially Hunza and Diamer. The study adopts qualitative research as a secondary research methodology by reviewing existing literature from peer-reviewed journals, articles, Reports, conference proceedings, and relevant books.

#### 3.1 Literature Search Strategy

The systematic method was employed during the literature review, involving identifying, evaluating, and synthesizing relevant studies. This research has a systematic review of the literature, composed of a step-by-step, clear, and transparent technique for selecting and combining the studies that have already been conducted. Among the keywords employed were "environmental effects of tourism," "sustainable tourism," "Gilgit-Baltistan," "deforestation," "biodiversity," "water pollution," and "air pollution" to ensure the search specificity. The search results were optimized through Boolean operators (AND, OR), enabling numerous keywords and search strings to be combined. These operators contributed to reducing search results by adding limits among different terms. Databases such as EBSCOHost, Google Scholar, and other university-provided resources were used to find suitable articles. The choice of Google Scholar is justified by the significant database of Pakistani academic journals it encompasses. The search criteria limited the results to peer-reviewed journals, articles, conference papers, case studies and books published from 2000 to 2023. The study included only research carried out in the tourism and environment studies of Pakistan or other similar contexts to ensure there is no bias and the review is current.

#### 3.2 Inclusion criteria

The inclusion criteria for selecting bibliographic items in this literature review were defined based on relevance to the research topic, methodological rigor, and currency of information. Only scholarly articles, reports, and publications that provided substantial insights into the envi-

ronmental challenges local communities face in tourist destinations within Pakistan were included. Exclusion criteria comprised non-peer-reviewed sources, studies unrelated to the research topic, and publications lacking empirical evidence or theoretical frameworks.

### 3.3 Thematic Analysis

The generalization process is to be performed with the objective of getting a set of profound issues/themes in the sources in a wider perspective. While they can reveal subtleties of the environmental issues tourism may cause. The analysis process involved several key steps to ensure thoroughness and rigor:

- Coding: Relevant data, which were extracted from the reviewed articles, were systematically coded, bases on pre- determined themes, that were aligned with the research objectives. The themes revolved around the multiple issues of deforestation, biodiversity loss, overwater pollution, air pollution, and the expected socio-economic effects, among others, of tourism activities. The data was very meticulously categorized to be used in the further analysis.
- Collapsing Codes into Themes: After that, this coded data was compiled into more generalized themes and further analyzed in a more organized way and from a more comprehensive standpoint. Throughout our thematic analysis, the main feature was inductive reasoning, where patterns and themes emerged organically from the data, making our analysis as close to empirical as possible.
- Validation: In order to strengthen the credibility and reliability of the analysis, there was a thorough process of validating the coding scheme and the themes emerging from it. The process about a close and wide review and revision of the coding frame so that it fits, is accurate, consistent and relevant to the research objectives. The precision and accuracy of the information used in the analysis was ensured by addressing any discrepancy and any ambiguity consistent with its strictness.

## 4 Literature Review

A comprehensive assessment of the literature, which brings together different studies and points of view on how tourism affects the environment. This study looks at many ideas and models about sustainable tourism, environmental management, and community development, giving the topic a comprehensive appearance.

The study aims to give a complete picture of the problem by leveraging established theories in sustainable tourism, environmental impact assessment, and community-based tourism. Numerous studies have examined the impact of tourism on the environment in Pakistan, particularly in Gilgit-Baltistan's ecosystems. The visit of a large number of tourists in the Gilgit-Baltistan area has many effects, which can be both good and bad with respect to local communities and the environment. While it brings in money and jobs, it also hurts the environment. (Saqib et al., 2019, p. 24) The main environmental issue associated with tourism in Hunza is the generation of solid waste, whereas, in Diamer, it is biodiversity loss and the removal of forests. (Saqib et al., 2019, p. 33)

### 4.1 Environmental Impacts of Tourism

Tourism is recognized globally for its economic benefits, but it can have grave consequences on fragile environments such as those in Pakistan. The point of this section is to discuss the wide-ranging environmental effects of tourism on the local communities of Hunza and Diamer, including but not limited to the negative aspects and ways of minimizing the problems caused and managing them.

#### 4.1.1 Deforestation and Loss of Biodiversity

The vast deforestation area of Hunza and Diamer region of Gilgit Baltistan of Pakistan is critical due to tourism activities, which magnifies the problem. Although the literature on deforestation might not specifically address these particular regions, the impacts of forest destruction on biodiversity loss and ecosystem degradation are universal. Tourism-induced development, such as

the construction of roads, hotels, and tourist facilities, dispossess essential wildlife habitats and destroys the area's ecological balance (Shujahi & Hussain, 2016, pp. 12, 15).

According to Saqib et al. (2019, p. 32), deforestation causes the stunning forests of Hunza and Diamer to lose their integrity, which results in a decrease in biodiversity and the elimination of invaluable environmental services. The degradation of forests is not only responsible for the stability of local temperatures and the quality of water supplies but also causes a decline in the habitat availability of wildlife species (Bodo et al., 2021, pp. 26–27). Degradation of the ecosystem is a great threat to the health and living of the local people as they are especially dependent on the ecosystem services provided (Saqib et al., 2019, p. 33).

Combating deforestation in these areas requires a multi-tier strategy comprising both habitat preservation and sustainable land management techniques. This practice also involves enforcing appropriate regulations to stop illegal logging and land use changes, enhancing tree-planting campaigns, and engaging local communities in conservation activities (Gardener, 2024). Focusing on deforestation through the Hunza Valley or the Diamer region, the study aims to unveil the severe environmental problems facing the latter regions and propose well-grounded solutions.

#### 4.1.2 Generation of Solid Waste and Pollution of Air and Water

There are major environmental and public health worries about the fast growth of tourism in Hunza and Diamer. This has caused a significant rise in organic garbage and other types of pollution. As the number of tourists increases, so does the demand for goods and services. This leads to more spending and more trash. Moreover, tourists are not aware of the solid waste management system, so they use single-use products in the hotels. As the number of tourists increases seasonally and due to inefficient solid waste management systems in tourist spots, it makes a significant impact on the environment. The environmental impact includes contamination of soil, ground, and surface water and emission of air pollutants, disease dissemination and loss of biodiversity (Muñoz & Navia, 2015, p. 593). Air, water, and noise pollution are also caused by things connected to tourists, like transportation, lodging, and leisure areas. Pollutants like carbon dioxide, nitrogen oxides, and sulfur dioxide are released into the air by heavy traffic, open burning of waste and forest fires in Hunza and Diamer, Pakistan (Saqib et al., 2019, p. 32).

The Growth in the tourist industry does not only provide benefits such as economic growth but also linked to more pollution and solid waste, which is terrible for the environment (Andereck et al., 2005, p. 1057)The rapid growth of tourism in any region sometimes leads to unsanctioned construction projects, depleting local resources like wood, water, and soil and harming the ecosystem. These environmental changes impact both local ecology and human livelihoods (Alshuwaikhat, 2005, pp. 311–312). Tourists, locals, and governments all exploit the area's natural riches. Using these resources to enhance tourism strains them, hastening their depletion. No one disputes that tourism contributes significantly to environmental degradation and greenhouse gas emissions. For instance, according to statistics from the European Union (EU), tourism ranks high among Europe's primary carbon dioxide producers, and lodging establishments are responsible for more than 20% of harmful emissions (Gaval, 2016). In addition, research in 2001 found that the quantity of carbon monoxide emissions created on a single transatlantic return journey is equivalent to half of the CO emissions produced from a person's daily activities and the food consumed in a year. Vehicle use, energy use for heating and lighting, etc., fall within this category (Sunlu, 2003, p. 264). The tourist industry is a significant source of both air pollution and land degradation. At around 14,000 PJ of the world's total energy usage in 2001, tourism comprised about 0.34 percent of the planet's territory (Gössling, 2002, p. 287).

Research shows significant environmental issues resulting from tourism activities. This includes deforestation, loss of biodiversity, solid waste generation, water, air, noise pollution and damage to cultural and heritage sites. In Diamer, 42% of the respondents indicated a high rate of deforestation and biodiversity, while in Hunza, 39% of the respondents pointed to a high level of solid waste generation (Saqib et al., 2019, p. 24). Tourism exerts immense pressure on natural resources, which are utilized by visitors, residents and government bodies alike. This increased demand accelerates resource depletion. Tourism is a significant contributor to pollution and carbon dioxide production. In addition to that, tourism contributes to the degradation of terrestrial land. In 2001, tourism consumed approximately 0.34% of the world's land and utilized around 14,000PJ of the world's total energy. This extensive resource consumption highlights the urgent need for sustainable tourism practices to mitigate environmental damage and preserve natural resources. (Saqib et al., 2019, p. 26)

#### 4.1.3 Cultural and Heritage Asset Damage

There are pros and cons to Pakistan's growing tourism business, such as protecting culture and heritage places. Tourism can help the economy grow and bring people from different cultures together, but it can also damage cultural and heritage assets that must be protected. Because of too many people and bad management, these places are under more stress than they used to be, which has caused damage and decline in many ways. (Hayat et al., 2021, p. 2797)

One of the main problems is that unsupervised tourist activities, like mischief, graffiti, and building without permission, can damage culture and historical places. Not only do these things damage the structural integrity and validity of historical buildings, but they also damage the buildings' appearance (Shafiee et al., 2023, pp. 6–7). Not only can culture and historical places be damaged physically, but they can also be affected by changes in local customs, ideals, and ways of life. This happens due to a lack of tourist's knowledge about the norms and values practiced in a culture (Jehan et al., 2023, p. 192). Cultural practices may become more commercialized and lose their identity due to globalization, and thus traditional knowledge systems may be lost when culture becomes a product for tourists (Kalhoro & Abbas, 2022, p. 670).

To protect cultural resources from damage and make sure they can be used for a long time, it is important to strengthen governing systems, enforce heritage protection laws, educational and monetary support, and put tourist management plans into action (Huibin et al., 2012, p. 41). Promoting cultural understanding and getting support from local people can also help tourists respect and value local history, leading to more sustainable tourism development in Pakistan (Kalhoro & Abbas, 2022, pp. 679–680).

#### 4.1.4 Mitigation and Sustainable Management

In Pakistan, Hunza and Diamer need a diverse method to deal with tourism's environmental effects, including protection, control, and community involvement. Implementing eco-friendly building design, trash management systems, and low-impact tourist rules are examples of sustainable tourism practices that can help reduce environmental damage to tourism activities

(Baloch et al., 2023, pp. 5927–5928). By letting locals have a say in decisions, supporting environmental education and knowledge programs, and giving people incentives to find sustainable ways to make a living, we can give communities the power to take an active role in conservation efforts and get long-term benefits from tourism (Kalhor & Abbas, 2022, pp. 679–680). Pakistan's tourism has many different and complicated effects on the environment, such as cutting down trees, destroying wildlife, making much trash, polluting the air, and damaging cultural heritage places. Therefore, it is suggested that there is a dire need for additional research in the development of economies relevant to tourism activities such as the hotel industry, tourist behavior at the destination, and green initiatives in the tourism sector. This will help in seeking valuable information for sustainable tourism policy guidelines. (A. Khan et al., 2020, p. 19)

## 4.2 Socio-Economic Impacts of Tourism

The positive impact of tourism on the nation's economy is evident as the influx of foreign tourists also brings numerous benefits. The development of tourism on the local potential presents several benefits for the surrounding community. Prior research has shown that tourism activities have positively influenced the economic aspects of the local communities by including business opportunities followed by increased income and improved living standards. One significant advantage is the creation of Job opportunities for young people. Tourism also brings a wide range of services, including public and private transportation, lodging, leisure activities, and shopping opportunities, particularly for locally produced goods and food. Additionally, tourism also impacts social aspects such as preservation, social welfare and overall quality of life. (Makmun et al., 2021, p. 2; Qasim, 2022, p. 525)

### 4.2.1 Employment Generation and Livelihoods

Tourism development is positively correlated with economic success. It improves the economy by increasing job opportunities in those areas where the traditional economy fails to do so. It also helps to create jobs for those people who are young and do not have enough skillsets. Tourism is a labor-intensive industry, and it needs employees involved in a wide range of skills. In addition, more jobs are created indirectly as the tourism industry encourages micro-entrepreneurs and

small businesses. As people get their livelihood from this industry so it helps to reduce poverty.(Ganeshamoorthy, 2019, p. 119) Job possibilities in the tourist industry include jobs as tour guides, hotel staff, artists, and people who provide transportation. However, the nature of these jobs is seasonal, and tourism cannot make long-term relationships with the employment creation (Ganeshamoorthy, 2019, p. 126).

Another case is from Utah, which is a famous American state for its vast desert and series of mountains. Most tourists are interested in visiting its central city, Salt Lake. A 1997 Travel Industry Association of America study states that about 93 million Americans plan to see ancient, arts, cultural, or historical places. It is also said that tourists who only want to experience local culture or traditions spend about \$174 more than any other type of tourist (Hartley, 2004, p. 240). Therefore, it's clear that people today want to visit to see more genuine, authentic, historic arts and crafts and to enjoy and see a culture of an exact civic kind. Utah's economy has moved from farming and mining to service industries, and tourism is the main source of job creation in the country (Hartley, 2004, p. 240).

#### 4.2.2 Community Well-being and Quality of Life

Tourism is essential for community growth and improving infrastructure. Still, too many people too quickly can put too much stress on local resources and infrastructure, leading to damage to the environment, traffic, and a loss of leisure value(Saqib et al., 2019, p. 26). To get past these problems, we need to take a more complete approach that focuses on the health and long-term survival of the community. This means including economic, social, and natural issues in the planning and management of tourism. There are a lot of different social and economic effects of tourism on the people who live in Hunza and Diamer, but they mostly favor tourism development due to its positive economic benefits(Bibi, 2020, pp. 57–58). Even though tourism can help the economy grow, create jobs, and protect and show off cultural history, it also comes with problems like unequal income, turning culture into a commodity, and social change. Policymakers, partners, and communities can use tourism in a sustainable way that includes everyone. This will protect moral values and assets for the future, ensuring that the economy grows moderately and that cultural and natural history is kept safe (Uslu et al., 2020, pp. 1–2).

### 4.3 Community Perceptions and Attitudes towards Tourism

To evaluate the social effects of tourism on communities and get locals involved in sustainable tourism activities, it is necessary to know how people in those communities feel about tourism. Many parts make up the communal view, such as how the community thinks about whether tourists are suitable for the area, how locals feel about the benefits of tourism, and how the community develops tourism.

#### 4.3.1 Attitudes towards Tourism

The success of a developmental project related to tourism is determined by the attitude of indigenous people where the project is planned. Therefore, it is important to understand the attitude of the local people before the implementation of the developmental project. Mostly, people have a positive attitude toward tourism development as they see economic benefits such as a rise in employment and therefore, many young and educated people support tourism. However, people who stay longer in a community often have a negative attitude toward tourism. (Blešić et al., 2014, p. 153)

#### 4.3.2 Perceived Benefits and Drawbacks of Tourism

Tourism in Pakistan goes along with a range of imaginary advantages and disadvantages, which subsequently determine the direction of social-economic and ecological dimensions of local communities. Recognizing the multi-dimensional effects of tourism calls for formulating sustainable tourism policies and practices that combine economic growth and environment conservation with all-round community life.

#### Benefits:

1. **Economic Opportunities:** One big way that tourism helps the local economy is by creating jobs and income, especially in isolated and rural areas. The large number of tourists improves many areas of the economy, including tourism, transportation, and arts. These industries create jobs, which helps the local economy grow and raises people's incomes. (Hayat et al., 2021, p. 2796)
2. **Culture Exchange and Preservation:** Tourism is like an international stage for a culture that gets tourists and locals together. This helps them learn more about and respect each other's languages, cultures, and traditions. Again, this is linked to the fact that tourism tends to help protect and promote different parts of cultural history, such as crafts, music, and food, which significantly impacts cultural identity and pride. (Shahzalal, 2016, pp. 30–32)
3. **Infrastructure Development:** The growth of roads, airports, hotels, and other tourist facilities is shown by the development of infrastructure. This infrastructure improves everything in terms of communication, ease, and services, so it helps host towns grow. These infrastructure investments meet tourists' needs, help locals live better lives, and move their communities forward economically and socially. (Jovanoviä & Ivana, 2016, p. 289)

#### Drawbacks:

1. **Damage to the environment:** Tourism activities that aren't controlled can put a lot of stress on natural resources and already weak environments. This can lead to loss of wildlife, destruction, and a drop in species. The natural survival of these areas is in danger because of the pollution caused by vehicles carrying tourists, trash, and resources. This harms the environments and home ranges of wild animals. (Saqib et al., 2019, p. 26)
2. **Social and cultural disruption:** When local culture and history are turned into tourist attractions, they lose their identity. This could mean that old customs, values, and rules are going out. (Shahzalal, 2016, pp. 30–31) Also, tourist movements can break up community harmony and social interactions by causing problems like overcrowding, globalization and destruction of heritage. (Hayat et al., 2021, p. 2798)

Cultural Clashes: During tourism, many different cultures meet, so there is a high chance of cultural clashes due to differences in religion, values, lifestyle, language and ethnicity. (Hayat et al., 2021, p. 2798).

Tourism needs to grow in a way that protects the environment and natural beauty, keeps cultural traditions alive, and gives local communities more power. Finding a balance between the pros and cons of tourism is essential for this to happen. Pakistan can see that tourism is vital for long-term growth, caring for the environment, and bringing back old traditions by handling these problems with policy changes based on research, location management programs, and community-focused approaches.

## 5 Finding and Discussion

This chapter presents the findings of the study, along with an in-depth analysis to address the research questions and objectives outlined in the preceding chapters. The results are organized and presented systematically to facilitate comprehension and interpretation, drawing on the thematic analysis approach adopted in this study. Through a rigorous examination of the data collected, this chapter aims to uncover patterns, themes, and insights relevant to the study's focus on the environmental impacts of tourism on local communities in Pakistan.

### 5.1 Environmental Impacts of Tourism

Tourism exerts significant pressure on the environment, leading to a range of environmental impacts that affect ecosystems, natural resources, and biodiversity. This section examines the various environmental consequences of tourism activities, focusing on their implications for local communities and ecosystems in Hunza and Diamer. By conducting a detailed analysis of each impact, this study aims to deepen understanding and awareness of the environmental challenges associated with tourism development.

#### 5.1.1 Water Pollution

Contaminated water poses health risks and increases healthcare costs (Saqib et al., 2019, p. 31). The contamination is caused by pollutants, which might be organic, inorganic, or radioactive substances. Water pollution lowers water quality, harms aquatic ecosystems, contaminates groundwater used for domestic purposes, and indirectly causes infections and illnesses transmitted by water. Industrial waste discharge and municipal sewage disposal are the two most common sources of water contamination. However, tourism can also be a source of water pollution. For example, when tourists participate in marine sports, including scuba diving, snorkeling, and boating, oils, fuel residues, and chemicals are released into the water. Water quality may decline when these activities add up, which is terrible for aquatic ecosystems. (Pásková et al., 2024, p. 2) Using surface waters is the foundation of water delivery systems in Gilgit-Baltistan's

metropolitan regions. People with low incomes are usually affected by water borne diseases such as typhoid, cholera and Hepatitis. Deaths from water-related causes account for 25% of all fatalities in Hunza and Diamer, according to data from the Health Department(Saqib et al., 2019, p. 31).

### 5.1.2 Air Pollution

Air pollution emerges as a pressing environmental concern linked to tourism activities in the Hunza and Diamer districts of Pakistan. It is caused by pollutants such as carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and particulate matter (PM), which are released into the air by vehicles. The rapid expansion of tourism infrastructure increased vehicular traffic, burning solid waste in open air and forest fires contribute to elevated levels of air pollutants, compromising air quality and public health.(Saqib et al., 2019, p. 32). Additionally, energy-intensive facilities such as hotels, resorts, and restaurants rely on fossil fuel combustion for heating, cooling, and electricity generation, further exacerbating air pollution level (Serrano-Bernardo et al., 2012, pp. 106–107).

Air pollution poses significant risks to public health, exacerbating respiratory illnesses, cardiovascular diseases, and other adverse health outcomes among residents and tourists alike. Exposure to high concentrations of air pollutants, particularly fine particulate matter (PM<sub>2.5</sub>) and airborne toxins, increases the incidence of respiratory infections, asthma attacks, and chronic obstructive pulmonary diseases (COPD) (Ioannis et al., 2020, p. 2). Vulnerable populations such as children in their young age, face heightened health risks from prolonged exposure to polluted air, highlighting the urgent need for mitigation measures (Ioannis et al., 2020, p. 10)

### 5.1.3 Deforestation and Loss of Biodiversity

Tourism-related infrastructure development, including hotels, resorts, and transportation networks, often leads to deforestation and habitat destruction in ecologically sensitive areas. The

clearing of land for construction purposes disrupts natural habitats, displaces wildlife, and contributes to the loss of biodiversity. The degradation of forests and ecosystems not only diminishes the aesthetic and ecological value of the landscape but also undermines the resilience of local communities that depend on natural resources for their livelihoods. (Sunlu, 2003, p. 265)

#### 5.1.4 Implications for Local Communities

These environmental impacts have far-reaching implications for local communities, affecting their health, livelihoods, and quality of life. The depletion of natural resources threatens the sustainability of traditional livelihoods, such as agriculture, fishing, and forestry, leading to economic insecurity and social disruption. Moreover, environmental degradation undermines the resilience of communities to natural hazards and climate change, exacerbating vulnerability and marginalization. (Kalhor & Abbas, 2022, pp. 679–680)

### 5.2 Socio-economic Effects on Local Communities

Tourism brings both benefits and challenges to local communities. The socio-economic impact of tourists on residents who live around tourist sites is investigated in this part, clarifying the possibilities of both positive and negative consequences. While it provides economic opportunities and improves infrastructure, it also leads to socio-economic inequalities and environmental degradation. The findings suggest that local communities are often excluded from the decision-making process, leading to conflicts and unsustainable practices.

#### 5.2.1 Economic Opportunities and Livelihood Diversification

The growing tourism industry can bring about new economic opportunities for the locals through the creation of jobs, an increase in incomes, and the creation of room for more enterprises. Apart from generating employment in different fields, which are recognized as hospitality, transportation, handicrafts and tour-guiding, tourism opens a new way of living to inhabitants. In the same way, tourism-related business contributes to local income generation and poverty alleviation by

buying things from local suppliers, i.e., goods, services, etc. (Ganeshamoorthy, 2019, pp. 119–121)

### 5.2.2 Cultural Preservation and Identity

The balance between tourism and cultural preservation and identity is established by tourism as a double-edged sword. On the one hand, the development of tourism in this field may become the driver of cultural life revitalization, heritage conservation, and intercultural exchange, as well as of the local cultures and customs being well known and very appreciated by the public. In contrast, commodifying the culture and heritage for tourist consumption may result in cultural shaping, erosion of authenticity, and the loss of indigenous knowledge and practices (Shahzalal, 2016, pp. 30–32). Balancing tourism development and cultural heritage, conservation continues to be a challenge for the protection of the culture and identity of the local communities.

### 5.2.3 Social Cohesion and Community Well-being

Tourism can positively contribute to social cohesion and community thriving through promoting interactions, intercultural talks, and collective actions among the locals. Touristic activities being part of the social life of the residents may strengthen the social core, promote mutual understanding, and increase effective resilience when hit by outside attacks. While fast-growing tourism sector can contribute to a high number of visitors, it may reach a point where the social infrastructure is overwhelmed, regional cultural norms start to get disrupted, and social tension may arise in areas with limited resources and infrastructure.

## 5.3 Community Resilience and Adaptation Strategies

The notion of community resilience in tourism involves the ability of local communities to withstand the harmful impacts of tourism and to adapt to the changing socio-economic and environmental environment they are facing. This part focuses on community resilience and presents how residents apply strategies to address any difficulty that may arise from the effects of tourism.

### 5.3.1 Understanding Community Resilience

The concept of community resilience to tourism includes: anticipating, withstanding, answering to and recovering from the hazards, shocks and stresses that come along with tourism activities. Consequently, resilient communities demonstrate good adaptive capacity, strong social cohesion, and innovation in order to be able to curb and manage the negative impacts of tourism development. Community resilience is associated with such factors as reliable social networks, strategic systems of governance, available resources, strong cultural bonds, and adaptability.

### 5.3.2 Adaptation Strategies

Due to tourism, different adaptation strategies are adopted by the locals of a community to deal with the impacts of tourism and have the ability to overcome the changes while being resilient. These strategies, like harnessing multiple sources of income, even becoming sustainable resource managers, and marketing themselves as community-based tourism initiatives, among others, are also done in the planning. Investing in skill development and the capacity of those in the communities, walls, or offloading the pressure on infrastructural development and having them stakeholders in most decisions is the best way to see them better. Diversifying income earnings and decreasing the impacts of tourism on local economic communities can reduce vulnerability to financial crises and the cyclical nature of the tourism sector.

### 5.3.3 Building Social Capital and Collective Action

Establishing social capital and supporting joint actions are essential to community resilience. More social connections are established, greater trust and cooperation among community members are realized, and more inclusive decision-making processes are realized, provoking the platform for communities to be able to attend to common difficulties and optimize the opportunities that come from tourism growth. Collaborative community tourism projects, based on the collective efforts of residents, encourage them to be involved in tourism planning, management, and equitable benefit-sharing structures.

#### 5.3.4 Enhancing Environmental Sustainability

Disaster resistance is closely related because people's survival and general welfare depend on the environment and natural ecosystems' health and stability. Bringing sustainable resource management measures such as ecotourism activities and conservation to the table occurs as the current situation occurs. Protecting natural ecosystem services, stopping environmental damage, and ensuring that current and future generations have access to natural resources positively impact the community's life.

#### 5.4 Comparative Analysis and Discussion

This section of the chapter, which is a comparative analysis and discussion, explores the wide-ranging effects of tourism, including those on the environment, economy, culture, and society of Hunza and Diamer, Pakistan. Such an assessment demonstrates the complex interdependence of tourism development and environmental damage. Deforestation, however, becomes a critical issue due to infrastructure establishments, like roads and hotels, caused by tourism. Deforestation, however, is not singularly detrimental to the local ecosystems but also threatens biodiversity and essential ecological services, which are crucial for community prosperity (Saqib et al., 2019, p. 32; Shujahi & Hussain, 2016, p. 37). In addition, solid waste and pollution rise with the increasing number of tourists, which is considered a side effect of tourism progress and threatens the sustainability of the environment and public health (Arbulú et al., 2015, pp. 1–2). To mitigate these challenges, the literature stresses the timeliness of introducing sustainable waste management techniques and eco-friendly tourism campaigns (Baloch et al., 2023, pp. 5927–5928).

Besides the environmental issues, the literature also talks about the socio-economic impacts of tourism development in the region. Tourism can generate more economic opportunities through job creation and income generation. However, the seasonality of tourism employment, loss of money from tourist spots due to foreign companies, reduction in the traditional jobs such as farmers, increasing the living cost for the indigenous people, and the dependence on private labor arrangements make the local people socio-economically more vulnerable (Kumar et al., 2015, pp. 406–407).

Community perceptions and attitudes towards tourism will also be examined in the analysis, especially addressing the significance of local hospitality and cultural exchange in strengthening destination attractiveness (Ali et al., 2020, p. 2). Despite that, environmental degradation and social disruptions, which bring negative attitudes, are the main problems that must be solved for successful tourism management (Baloch et al., 2023, p. 5920). The positive impacts of tourism include job creation, cultural immersion, and economic development. Besides, the benefits must be balanced with the ecology and social well-being of the local people for their sustainability (Ehsan, 2022, p. 11).

## 6 Conclusion and Recommendations

### 6.1 Conclusion

This study determines that the environment is exposed to problems in the remote Gilgit-Baltistan destinations, particularly in the valley of Hunza and Diamer, mainly because of tourism. The obstacles faced are likewise deforestation, biodiversity loss, and pollution. The destruction of forest cover, which is the product of the construction of facilities in tourism, such as roads and hotels, results in a loss of biodiversity and a decline in flora and fauna. On the other hand, the erosion of ecosystem services leaves communities exposed to natural disasters such as flooding or limited access to resources that support them, like water. As a result of waste pollution and air emissions, the other aspects of the environment, such as soil, water, and vegetation, keep getting worse, which is the key resource in a region that relies on tourism for survival.

The environmental issues displace not only the future of tourism from stability but also the social and economic well-being of the local communities. The deterioration of natural sources and ecological quality makes the area less favorable for tourists, thus leading to a decrease in tourism revenue, which is the primary income source for those local people. Additionally, the detrimental impacts of air and water contamination and environmental decline on neighborhoods' health status and well-being lead to the deepening of injustices and social inequalities.

To resolve the challenges, sustainability in tourism is attainable by combining economic gains with environmental conservation. Our research has generated useful information for policy makers and other stakeholders by recommending the right interventions aimed at reducing tourism's detrimental environmental consequences. Sustainable tourism strategies integrated with effective policies and community engagement are the key factors for developing practices that do not harm the environment and improve communities' life aspirations.

### 6.2 Recommendations

Upon review of the findings from the research and applying our theoretical knowledge, we suggest several recommendations that stakeholders can consider to deal with environmental, social, and economic issues impacting tourism development in the study area. These recommendations

encompass a range of strategies, including these recommendations encompass a range of strategies, including:

- **Strengthening Environmental Conservation Efforts:** Strengthen the existing regulations and establish strong enforcement mechanisms to prevent deforestation, habitat destruction, and pollution in ecologically significant areas. Developing reforestation projects, nature reserves, and eco-friendly land zones to protect species diversity and ecosystem functions.
- **Enhancing Community Participation and Empowerment:** Launch community-based tourism projects, incubation programs for entrepreneurs, and economic empowerment activities to enable residents to develop their socio-economic resilience. Enhance participatory decision-making models, enforce the preservation of cultural heritage, and promote an equitable sharing of tourism benefits that will help enhance social cohesion and reduce disparities.
- **Promoting Sustainable Tourism Practices:** Creating ecotourism guidelines, accommodation of carrying capacity assessment, and destination management schemes to limit visitors' activities, minimize environmental effects, and encourage sustainable travel practices. Encouraging eco-friendly technologies, waste management systems, and energy efficiency enables mitigating carbon emissions and environmental sustainability.
- **Strengthening Policy and Governance Mechanisms:** Develop integrated tourism policies, regulate acts and authority structures to promote tourism, preserve nature sites and cultural heritages, and protect the interests of native communities. Developing standard coordination processes between agencies, public-private cooperation platforms, and contextual engagement that brings together critical stakeholders for a multi-sectoral collaboration on shared decision-making.



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## Appendices

## Appendix 1

<b>Article Title</b>	<b>Author(s)</b>	<b>Publication Date</b>
<i>Factors influencing tourist's satisfaction, loyalty and word of mouth in selection of local foods in Pakistan</i>	Ali, M., Puaah, C.-H., Ayob, N., & Raza, S. A.	2020
<i>Strategic environmental assessment can help solve environmental impact assessment failures in developing countries</i>	Alshuwaikhat, H. M.	2005
<i>Residents' perceptions of community tourism impacts</i>	Andereck, K. L., Valentine, K. M., Knopf, R. C., & Vogt, C. A.	2005
<i>Tourism and solid waste generation in Europe: A panel data assessment of the Environmental Kuznets Curve</i>	Arbulú, I., Lozano, J., & Rey-Maqueiera, J.	2015
<i>Impact of tourism development upon environmental sustainability: A suggested framework for sustainable ecotourism</i>	Baloch, Q. B., Shah, S. N., Iqbal, N., Sheeraz, M., Asadullah, M., Mahar, S., & Khan, A. U.	2023
<i>Local Community Perception towards Socio-Economic Impact of Tourism Development: A Case Study of Hunza Valley</i>	Bibi, R.	2020
<i>Residents' Attitudes and Perception towards Tourism Development: A Case Study of Rural Tourism in Dragacevo, Serbia</i>	Blešić, I., Pivac, T., Besermenji, S., Ivkov- Džigurski, A., & Košić, K.	2014

<i>Deforestation and habitat loss: Human causes, consequences and possible solutions</i>	Bodo, T., Gimah, B. G., & Seomoni, K. J.	2021
<i>THE POTENTIAL OF TOURISM IN PAKISTAN. Barriers and Opportunities to Growth</i>	Ehsan, H.	2022
<i>The employment effect of tourism: A dynamic analysis</i>	Ganeshamoorthy, K.	2019
<i>Solutions to Deforestation: Building a Sustainable Future for Our Fore</i>	Gardener, M.	2024
<i>The economic benefits of Sustainable Tourism</i>	Gaval, I.	2016
<i>Environmental effects of tourism</i>	GhulamRabbany, M., Afrin, S., Rahman, A., Islam, F., & Hoque, F.	2013
<i>Community-based tourism, responsible tourism, and infrastructure development and poverty</i>	Giampiccoli, A., & Saayman, M.	2017
<i>Global environmental consequences of tourism</i>	Gössling, S.	2002
<i>Cultural tourism in Utah</i>	Hartley, J.	2004
<i>Impacts of cultural tourism in Pakistan</i>	Hayat, R., Asif, M., & Riaz, M.	2021
<i>Protective development of cultural heritage tourism: The case of Lijiang, China</i>	Huibin, X., Marzuki, A., & Razak, A. A.	2012
<i>Environmental and health impacts of air pollution: A review</i>	Ioannis, M., Elisavet, S., Agathangelos, S., & Eugenia, B.	2020

<i>Tourism–growth nexus in Pakistan: Evidence from ARDL bounds tests</i>	Jalil, A., Mahmood, T., & Idrees, M.	2013
<i>Socio-Economic and environmental impacts of tourism on local community in Gilgit Baltistan, Pakistan: A local community perspective</i>	Jehan, Y., Batool, M., Hayat, N., & Hussain, D.	2023
<i>Infrastructure as important determinant of tourism development in the countries of Southeast Europe</i>	Jovanoviä, S., & Ivana, I.	2016
<i>Impact of tourism on the lifestyle of local community in the SWAT Valley</i>	Kalhor, Z. A., & Abbas, M.	2022
<i>Revisiting the dynamics of tourism, economic growth, and environmental pollutants in the emerging economies—Sustainable tourism policy implications</i>	Khan, A., Bibi, S., Ardito, L., Lyu, J., Hayat, H., & Arif, A. M.	2020
<i>The Sustainable Marketing Mix of Tourism and Visitors Fulfilment: An Empirical Evidence From Cultural Tourists To Pakistan</i>	Khan, A. U., Baloch, Q. B., & Naseer, R.	2020
<i>Positive vs negative economic impacts of tourism development: A review of economic impact studies</i>	Kumar, J., Hussain, K., & Kannan, S.	2015
<i>The tourism impact on the social economic life of community in Ngargoyoso Sub-district, Karanganyar Regency</i>	Makmun, M. D. M., Muryani, C., & Wijayanti, P.	2021
<i>Re-evaluating the environmental impacts of tourism: Does EKC exist?</i>	Mikayilov, J. I., Mukhtarov, S., Mammadov, J., & Azizov, M.	2019
<i>Waste management in touristic regions</i>	Muñoz, E., & Navia, R.	2015

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*Environmental impacts of tourism*

Sunlu, U.

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*Socio-cultural, economic, and environmental effects of tourism from the point of view of the local community*

Uslu, A., Alagöz, G., &  
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2020

## Appendix 2

Theme	Code	Description
<b>Solid Waste and Water Pollution</b>	Plastic waste	Accumulation of plastic waste in natural areas
	Contamination of water	Contamination of water bodies from tourist activities
	Waste disposal	Improper waste disposal practices
	Sewage discharge	Increased sewage discharge into rivers and lakes
	Solid waste, aquatic	Impact of solid waste on aquatic ecosystems
	Eutrophication	Eutrophication of water bodies due to pollutants
	Poor management	Lack of waste management infrastructure
	Boat	Pollution from boat and water sports activities
	Contaminated	Health risks from contaminated water sources
	Affected water	Reduced water quality affecting local communities
<b>Air Pollution</b>	Polluted Smoke	Increase in vehicle emissions from tourist transportation
	Air quality poverty	Air quality degradation from construction activities
	Road expansions	Dust and particulate matter from road expansions
	Pollution Health Impacts	Health impacts from pollution
	Air Effect, Harmful	Impact of air pollution on human health
	Waste burning	Burning of waste materials
	Noise pollution	Noise pollution from increased tourist traffic
<b>Deforestation and Loss of Biodiversity</b>	Devastation	Habitat destruction for tourism infrastructure
	Development	Logging for construction of hotels and resorts
	Agriculture Growth	Expansion of agricultural land to meet tourism demand
	Wildlife moving	Displacement of wildlife due to habitat loss
	Biodiversity Decline	Decline in biodiversity from ecosystem disruption
	Forest Cutting	Clearing of forests for tourism infrastructure.
	Natural Plant Loss	Loss of native plant species
	Overuse natural resources	Overuse of local natural resources like water and wood.
	Degradation of soil	Degradation of soil quality from construction and tourist foot traffic.
	Reforestation Lack	Lack of reforestation efforts
<b>Implications for Local Communities</b>	Health issues	Health issues from pollution and waste
	Water Access Reduction	Decreased access to clean water
	Economic dependency	Economic dependency on tourism
	Cultural Disruption	Cultural disruption and loss of traditions
	Costly living	Increased cost of living
	Employment Instability	Seasonal employment instability
	Resident Displacement	Displacement of residents for tourism development
	Social tension	Social tensions between locals and tourists

	Crime	Increased crime rates
<b>Economic Opportunities and Livelihood Diversification</b>	Job Creation	Creation of jobs in tourism sector
	New Businesses	Development of new businesses and services
	Increased Income	Increased income from tourism activities
	Income Diversification	Diversification of income sources
	Income Generation	Financial benefits to locals from tourism activities.
	Economic development	Support for local artisans and craftspeople
	Opportunities	Opportunities for youth employment
	Growth, Hospitals	Growth of hospitality and service industries
	Entrepreneurship	Enhanced local skills and entrepreneurship
	Infrastructure Improvements	Infrastructure improvements benefiting locals
<b>Social Cohesion and Community Well-being</b>	Social Interaction Increase	Increased social interactions between locals and tourists
	Community-driven Projects	Community-driven tourism projects
	Local Pride Enhancement	Enhancement of local pride and identity
	Social Conflicts	Social conflicts arising from tourism
	Community Participation	Community participation in tourism planning
	Local Governance Impact	Impact on local governance and leadership
	Health and Safety Improvement	Health and safety improvements
	Community Facility Investment	Investment in community facilities
	Volunteer Tourism Promotion	Promotion of volunteer tourism