

## IMPACT OF POPULATION SURGE ON PAKISTAN'S TOURIST HOTSPOT HUNZA

***Badar Kamal Habib***

*Tourism and Hospitality Management*

*College of Earth and Environmental Sciences, University of the Punjab.*

[badarkamalhabib@gmail.com](mailto:badarkamalhabib@gmail.com)

***Dr. Muhammad Kamran***

*Assistant Professor, College of Earth and Environmental Sciences, University of the Punjab.*

[muhammadkamran.cees@pu.edu.pk](mailto:muhammadkamran.cees@pu.edu.pk)

***Fatima Anis Naqvi***

*Tourism and Hospitality Management*

*College of Earth and Environmental Sciences, University of the Punjab.*

[faanaqvi5@gmail.com](mailto:faanaqvi5@gmail.com)

***Ali Hamza***

*Tourism and Hospitality Management*

*College of Earth and Environmental Sciences, University of the Punjab.*

[dralimehar786@gmail.com](mailto:dralimehar786@gmail.com)

### ***Abstract***

*A tourist surge is a dramatic increase of tourists that arrives during certain periods, during events, and even more so as global interest peaks in a specific destination.*

*Hunza is one of the important tourist destinations in Pakistan and worldwide famous for its huge and diversified tourism potential, scenery, and history. This study focuses on environmental, economic, and cultural impacts of tourism in Hunza. In the recent past, there have been noticeable changes in the number of the local population and the number of tourists who visit the region. About the economic activity, one has local businesses that thrive to create employment. However, in such, it receives less effort due to straining of infrastructure and resource utilities. The sceneries that lead to the beauty of such sceneries diminish due to the growing sector of population leading to more litter, subsequently causing a chaos. From the cultural perspective, it is advisable to accommodate individuals since it expands the horizon of knowledge, thus promoting tourism, which in other instances make it worse by endangering the community whose culture gets threatened. This paper puts emphasis on the need to have sustainable practices of tourism and good managerial strategies aimed at balancing economic growth with environmental conservations and culture preservation in Hunza.*

*In this respect, it will reflect changes in natural resources like water and energy consumption while analyzing the challenges of waste management and levels of pollution that are merely linked to a high population and tourist numbers. The research would examine the establishment of standards for responsible tourism activities responding to challenges in Hunza and policies for intervention to achieve a fair balance between tourism development and conservation of the environment.*

***Keywords:*** *Tourist Surge, Hunza, Sustainable Tourism, Environmental Impact, Economic Growth*

### ***1. Introduction***

Throughout human history, travel has always been a part of every community. However, since the middle of the 20th century, mass tourism has emerged as a major global industry. (Arshad et al.,

2018). With its diverse cultures, enthralling landscapes, stunning beaches, and an abundance of activities and places catering to both local and foreign travellers, Pakistan offers excellent tourism potential. TTCI (Travel and Tourism Competitiveness Index) offer a fast assessment on the strengths, opportunities, weaknesses, and threats to travel and tourism of the country. The current general position of Pakistan is 124 out of 136 countries as per the Report TTCI, 2017, which is very low. (Muhammad Irshad Arshad, 2017).

This study aims to identify the needs of sustainable tourism practices in Hunza, while highlighting the economic, environmental and cultural impacts of mass tourism along with the importance of Hunza as tourism destination. In addition to providing local communities with economic advantages like job creation and business expansion, this influx has also presented serious drawbacks like resource strain, environmental degradation, and cultural dilution.

## 2. Literature review

One of the industries that has been acknowledged as contributing to the expansion and advancement of economies is the tourism industry. Numerous empirical studies have examined how the tourist industry contributes to economic development and growth (Ali et al., 2024).

Issues that are social and issues that are environmental are tied to logistical operations that are extra splendid. Climate change, global warming, carbon emissions, also pollution negatively influence human health as a result. Political actors act without security, and all destroy economic development and environmental sustainability. (Ali et al., 2024).

While it pleases everyone to see so many people, not everyone is pleased to see mountains of trash at campsites, plastic bottle waste outside of hotels, fallen trees, problems with latrines (Moris et al., 2021). If disagreements arise, the code of conduct may be created to resolve them (Buhalis, 2000). (Carrying capacity) CC effectively means establishing a threshold, over which natural processes will counteract, causing famines, floods, landslides, droughts, and other natural disasters to impede the population's rapid expansion and development (Moris et al., 2021).

Among the possible threat is using up the best tourism locations, thereby decreasing the local people's capacity to use it. They may have a highly negative impact on the natural environment around us. They can also affect the working as well as living environments of that designated receptive zone (Butler, Boyd, 2000).

According to the Environment Protection Act of 1986, the environment consists of the land, water, and air as well as the interactions between these elements and people, other living things, plants, microbes, and property (Kumar, 2019). Tangi (1977) contended that different developmental efforts ought to be implemented for the safeguarding and conservation of environmental standards. He also noted that well-established strategic planning and improved international relations are two effective approaches to enhance tourism in upcoming time. As per Cessford and Dingwall (1998), the tourism sector wholly impacts the surroundings. If unplanned and unchecked, its detrimental effects will outweigh any positive impacts (Kumar, 2019).

In this sense, tourism can be a "friend" or more often an "enemy" of the environment.

Though it may also have detrimental implications for society and economy if handled improperly, tourism has historically played a constructive role in society and may continue to do so in the future (Markovic & Klaric, 2015). It's crucial to ensure that actions taken now do not affect future generations. They consider as a result that they must give assessment to long-term economic, environmental, and also community health. (León-Gómez et al., 2021) (as cited in Bell, S. Sustainability Indicators: Measuring the Immeasurable? 2nd ed.).

Since ancient times, people have travelled throughout the world, resulting in the sharing of traditions, customs, and lifestyles. Furthermore, people from many locations trade and exchange technologies and knowledge that are thought to be completely advantageous to humanity. As a dynamic process of exchange, tourism includes a direct and reciprocal relationship between the tourist product's producers, users, and inhabitants (Prashyanusorn et al., 2010).

Sustainable tourism development requires managing the tourist business in accordance with a broader definition of sustainability that includes cultural, educational, ecological, and environmental goals (Arshad et al., 2018).

### 3. Research Objectives

The primary objectives of the research proposal are listed below:

- Conducting an analysis of the economic, environmental, and cultural implications of increased tourism driven by population growth in Hunza.
- To assess how population growth impacts tourism trends, infrastructural setup, and socio-economic conditions in Hunza.

### 4. Research Questions/Hypothesis

- How have the fast-moving population growth and tourist boom impacted on Hunza's infrastructures as well as economy?
- How tourist influx is responsible for environmental degradation in Hunza?
- How can Hunza's cultural heritage be preserved and promoted on the back of tourism?

### 5. Study Area

- **Location:** Hunza Valley, Pakistan.
- **Significance:** Known for its stunning landscapes and rich cultural heritage, Hunza is a vital part of Pakistan's tourism industry.



Figure 2: Map of Hunza (jointthemap publishers, n.d.)

### 6. Theoretical Framework

#### Doxey's Irridex

A theoretical framework that describes the evolving attitudes of local residents toward tourists and tourism development. It identifies following four progressive stages, suggesting that as tourism grows, resident reactions shift from positive to negative.

- According to the hypothesis, visitors generate curiosity among locals as they are welcomed if tourism is low in the area (Euphoria stage).
- Visitor numbers rise, host-visitor relations get more stiff, and locals care less about visitors (Apathy stage).

- when residents start to worry about tourism because of the large increase in visitors and the growing competition for available resources (Irritation stage).
- Many issues in the town, such as social unrest, cultural identity loss, and environmental damage, are attributed by locals to tourists (Antagonism stage). (Doxey, 1975)

#### **Applying four stages to Hunza**

Hunza has seen an increase in both local and international visitors thanks to its greater social media presence, improved infrastructure (Karakoram highway), and picturesque landscapes. Unchecked tourist growth, however, could lead to: Overcrowding, Cultural commodification, Rising living costs, Environmental pressures

Iridex stage	Hunza case study potential	Indicators in Hunza
Euphoria	Initial tourism's economic benefits.	Local welcome tourists, new business emerge, cultural pride.
Apathy	Tourism becomes routine; unfriendly interactions.	Locals treating tourists as normal part of life.
Irritation	Overcrowding, Pollution, Cultural erosion, Resource depletion.	Complaints about traffic, waste, rising prices, loss of traditions.
Antagonism	Proactive opposition to visitors.	Demonstrations (e.g., against waste), demands for visitors limit, hostility.

## **7. Research Methodology and Data Sets**

### **Methodology:**

The study is composed of qualitative approach, using primary data, collecting open-ended responses from a survey regarding the impact of tourist influx in Hunza. In this research, seventy participants including both males and females were selected for collection of the data. The snowball sampling method is used within this research study. Participants are prompted to forward the survey to friends, and family. Thematic analysis was conducted by identifying repeated patterns in responses. The data was categorized into three major themes: **Economic impacts, Environmental Conservation, Cross-cultural Sensitivity.**

### **7.2 Data set**

The socioeconomic and natural landscapes of Hunza have been profoundly altered due to tourism. The increase in international and local tourists has brought about profound changes to businesses, social practices, and the physical world. This research analyzes respondents from a survey and evaluates how people from the Hunza region feel about all the changes that have taken place.

## 8. Results

The results are divided into three sections; Economy, Environment and culture. In general, the results show that increasing rate of tourism in Hunza has led to more job opportunities but on the other hand tourist influx is the major reason behind environmental degradation and overconsumption of resources. It also reflects that more and more tourism is beneficial to promote Hunza's culture, also tourist influx is not any hurdle in preserving culture.

### 7.1. Economic Impact

#### Survey Questions:

- "The increase in population and tourism has positively impacted local businesses in Hunza."
- "The rise in tourism has led to a significant increase in job opportunities in Hunza."
- "The demands of Hunza's growing population and tourism can be managed by the local economy."

#### Key Findings:

##### ○ Response Breakdown:

- **Agree:** 40% (n = 28)
- **Strongly Agree:** 35% (n = 25)
- **Neutral:** 15% (n = 11)
- **Disagree:** 10% (n = 7)

##### • Economic Impact of Tourism in Hunza

The results of the study point out that tourism has been a key contributor to economic development in Hunza, with an overwhelming majority of the respondents (75%) confirming it has benefited local businesses. This is reflected in the emergence of hotels, restaurants, and handicrafts for visitors, which have brought new job prospects.

A large number of participants also emphatically concurred that jobs are more readily available, specifically in the hotel and service industry. Nevertheless, the survey reflected a wide rift in opinions toward the sustainability of this economic upsurge. Though most recognized the short-term advantages, some interviewees (10%) questioned whether the local economy could sustain the long-term stress of increasing tourist numbers, e.g., growing resource demand and pressure on infrastructure. This split indicates that though tourism has unquestionably boosted Hunza's economy, there is a requirement for long-term planning so that growth becomes inclusive and does not burden local systems too heavily.

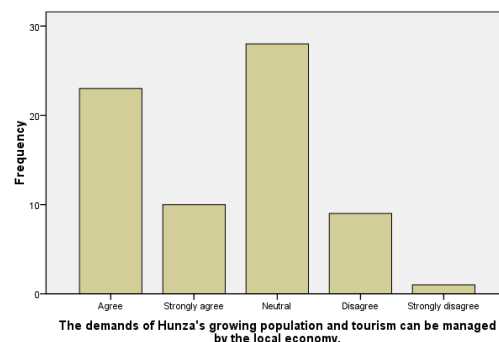
The increase in population and tourism has positively impacted local businesses in Hunza.



The rise in tourism has led to a significant increase in job opportunities in Hunza.



The demands of Hunza's growing population and tourism can be managed by the local economy.





## 7.2. Environmental Impact

### Survey Questions:

- "The influx of tourists has contributed to environmental degradation in Hunza."
- "Tourism in Hunza has negatively impacted natural resources, such as water and energy."
- "Sustainable tourism practices are being implemented effectively to protect Hunza's environment."

### Key Findings:

- **Response Breakdown:**
  - **Agree:** 45% (n = 32)
  - **Strongly Agree:** 20% (n = 14)
  - **Neutral:** 15% (n = 11)
  - **Disagree:** 20% (n = 14)

One of the most urgent issues cited in the study is environmental degradation associated with tourism. Together, 65% of the respondents agreed or strongly agreed that the influx of visitors has caused pollution, littering, and an overburden on natural resources such as water and energy. Several participants highlighted evident problems like plastic litter on tourist spots and deforestation because of irresponsible construction. In spite of all these issues, views were divided regarding the effectiveness of present sustainable tourism strategies.

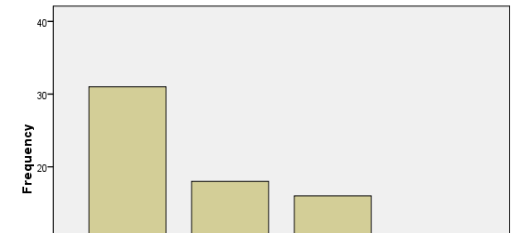
Although a few respondents opined that initiatives such as waste management schemes and green policies were in place, other respondents felt that these actions were inadequate or laxly implemented. This division reflects a difference between policy intention and actual implementation. The research highlights the immediate need for stronger controls, improved waste disposal facilities, and locally initiated conservation projects to offset the environmental impact of tourism and maintain Hunza's natural heritage for generations to come.

## 7.3. Cultural Impact

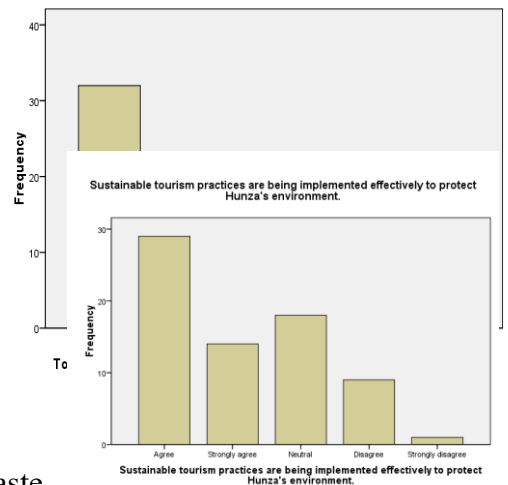
### Survey Questions:

- "Cultural exchange between tourists and locals is beneficial for preserving traditions."
- "Tourism has led to the commercialization of local culture."
- "The cultural identity of Hunza is being preserved despite the influx of tourists."

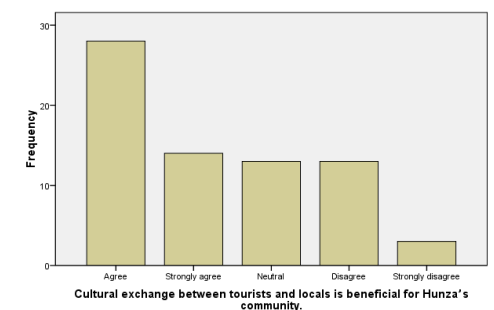
The influx of tourists has contributed to environmental degradation in Hunza.



Tourism in Hunza has negatively impacted natural resources, such as water and energy.



Cultural exchange between tourists and locals is beneficial for Hunza's community.



## Key Findings:

- **Response Breakdown:**
  - **Agree:** 50% (n = 35)
  - **Strongly Agree:** 25% (n = 18)
  - **Neutral:** 15% (n = 11)
  - **Disagree:** 10% (n = 7)

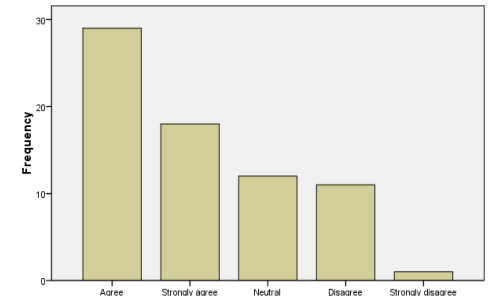
The cultural influence of tourism in Hunza offers a mixed picture, combining prospects for cultural interaction with threats of commercialization and degradation of customs. Most of the respondents (75%) perceived interactions between locals and tourists as positive, creating understanding between them and keeping traditional ways alive.

But a large number of participants also expressed concerns regarding the commodification of local culture, where traditions are modified or simplified to suit tourist demands. Even some respondents (10%) disagreed that Hunza's cultural identity was being preserved well, and that rapid tourism development might be diluting true heritage. This conflict between cultural exposure and preservation requires an even-handed policy—one that advances responsible tourism through educating tourists on local tradition but also empowers communities to exert control over representation of their culture. Cultural festivals, heritage workshops, and tightening regulations for proper tourism could contribute to the preservation of Hunza's distinct character while still earning the social and economic dividends from international interest.

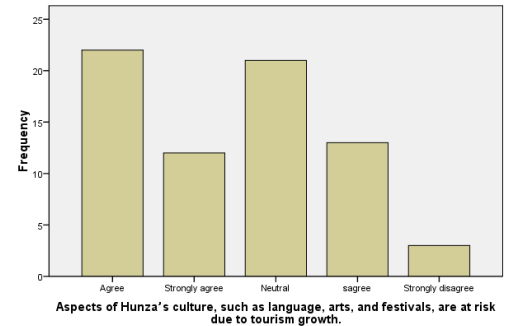
## 8. Discussion

Physical consequences of plastic pollution and deforestation due to uncontrolled development were witnessed in massive numbers, indicative of a mismatch between intention and actual practice of sustainable values. While existing measures, including waste management practices, are in place, their effectiveness is hampered by substandard infrastructure and lackadaisical practices. More regulations, financial investment in waste management infrastructure, and conservation by the people are just a few of many solutions to reverse these issues. Unless proper measures are initiated in due course, Hunza's pristine landscape and natural beauty—tourist attractions—can suffer irreparable loss. Seventy-five percent of the respondents hold the view that cultural exchange enables continuation of traditions, and cultural influences provide another complex layer. Worries about loss of genuine heritage and commercialization of local culture were also common. The distinctive nature of the Hunza villages is threatened by commercialization of local culture to satisfy the needs of the tourists. Policies should facilitate the locals in controlling the presentation of their culture while guiding the visitors in learning to approach traditions with respect, in an effort to minimize the issue to its lowest levels. InY insets. Cultural events and history-based workshops are some of the activities that should balance the promotion of tourism with the preservation of the region's distinctive personality intact The study also revealed that stricter tourist regulations should be put in place, especially on domestic tourists who were less value-conscious. The respondents demanded the need to have rules and measures to encourage environmentally friendly behavior for all tourists. This indicates that increased awareness

Population growth has affected the cultural practices and traditions of Hunza.



Aspects of Hunza's culture, such as language, arts, and festivals, are at risk due to tourism growth.



programs and legislation can go a long way in promoting the cause of responsible tourism. Local participation in decision-making must be ensured so that policies are rendered more sensitive to their needs and values. The community can no longer be passive victims of sustainable tourism impacts and can start actively becoming stakeholders in it by gaining a sense of ownership. The Hunza tourism boom overall is an opportunity and a challenge which needs to be taken up proactively and on an integrated basis. The seemingly economic benefits are balanced by cultural and environmental losses which erode the long-term sustainability of the region. Integrated development with conservation needs community involvement, strong policy frameworks, and environmentally sustainable tourism. The success in being able to execute these steps in the proper manner will decide the destiny of Hunza as a prime tourist destination, with its natural beauty and cultural heritage enduring for some years to come. It will need co-ordination from all, from the government to the industry, tourists, and the locals who will get a balance between the tourist industry's growth and the protection of the region's special character.

Most of the respondents emphasized stricter regulations on local tourists, according to respondents, local tourist should be provided with proper guidelines to ensure responsible and sustainable tourism in Hunza. *"Local tourists should not be allowed in GB."* *"Local tourists should be guided before entering GB to teach them eco-friendly tourism."*

Tourist's impact on environment has always been the major concern, with respondents focusing on the issues such as pollution and resource consumption. Many of the respondents highlights the need for implementation of sustainable tourism policies. *"Tourist flux has badly impacted the environment, there is an increase in plastic pollution."* *"There is a need for serious action to take for sustainable strategies and some SGDs to conserve natural resources."*

Increasing tourist rate in Hunza is a noticeable threat to its cultural diversity and preservation of local culture. Some of the respondents has mentioned that tourists need to be more mindful of local culture. *"Tourists should respect the diversity."* *"Tourists should have to follow the rules of the local people."*

### Conclusion

While the increase in tourists in Hunza has helped the local economy and created new opportunities for residents, it has also brought environmental, cultural, and infrastructure challenges that threaten the region's long-term sustainability. To protect Hunza's natural beauty and cultural heritage, we must adopt responsible tourism practices, enforce regulations, and promote community-based initiatives that support balanced growth. Without quick action, uncontrolled tourism could permanently harm the attractions that bring visitors to this paradise. This highlights the importance of working together for sustainable development. There is a need for balanced policies to ensure **sustainable tourism** that benefits both the economy and the environment while protecting cultural heritage.

### References and Bibliography

- Ali, S., Hamid, A. B. B. A., Ya'akub, N. I. B., & Iqbal, S. (2024). Environmental impacts of international tourism: examining the role of policy uncertainty, renewable energy, and service sector output. *Environmental Science and Pollution Research*, 31(34), 46221–46234. <https://doi.org/10.1007/s11356-023-28377-0>
- Arshad, M. I., Iqbal, M. A., & Shahbaz, M. (2018). Journal of Destination Marketing & Management. *Asia Pacific Journal of Tourism Research*, 23(2), 121–132. <https://doi.org/10.1080/10941665.2017.1410192>
- Kumar, A. A. (2019). Tourism and Tourism Environment-A Study of Kashmir Valley.



- International Journal Of*, 360(01), 285–309.
- León-Gómez, A., Ruiz-Palomo, D., Fernández-Gámez, M. A., & García-Revilla, M. R. (2021). Sustainable tourism development and economic growth: Bibliometric review and analysis. *Sustainability (Switzerland)*, 13(4), 1–20. <https://doi.org/10.3390/su13042270>
- Markovic, I., & Klaric, Z. (2015). Attitudes of local population of tourism impacts on destination sustainability: Case of Croatia. *Turizam*, 19(3), 98–110. <https://doi.org/10.5937/turizam1503098m>
- Moris, R., Bergamini, K., Gilabert, H., Culagovski, R., Zaviezo, D., Medina, J. I., Alarcón, A., & Ángel, P. (2021). Impact of population growth in the central coastal zone of Chile: Factors for estimating tourism carrying capacity based on the case study of one Latin American seaside resort. *Sustainability (Switzerland)*, 13(6). <https://doi.org/10.3390/su13063527>
- Prashyanusorn, V., Kaviya, S., & Yupapin, P. P. (2010). *Surveillance system for sustainable tourism with safety and privacy protection*. 2(1), 74–78. <https://doi.org/10.1016/j.sbspro.2010.01.016>  
<https://www.johnthemap.co.uk/pages/kkh/kkhmap.html>