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EXPLORING TOURISM IN BALTISTAN: IMPACTS ON ECONOMY, ENVIRONMENT, AND SOCIETY

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ABSTRACT

Gilgit Baltistan has become a famous tourist spot for both national and international tourists. The influx of tourists can produce positive impacts such as stimulating economic growth, inflowing investment, and cultural exchange. However, it can also degrade our ecosystem and hybrid indigenous socio-cultural system. Local communities can observe these impacts directly. This descriptive study aims to explore how the local community in the Baltistan division perceives the impacts of the tourism sector on their economy, environment, and socio-cultural setting. Primary data was collected with the help of a survey and disproportionate stratified sampling. After a pilot study, 102 sample sizes were used to analyze the data. The result showed a positive perception of the local community on economic development and a negative on the environment and socio-cultural setting of the region. Several policy measures such as effective pricing mechanisms, awareness campaigns, and public-private partnerships for socio-economic development, are suggested for sustainable tourism development in the region.

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INTRODUCTION

In developing any economy, the tourism sector can play an important role since this sector can enhance economic activities such as revenue generation, employment opportunities, and GDP growth (Nyasha et al., 2021). This sector can increase the economic growth of both developed and developing countries (Gumus et al., 2007). In 2023 this sector contributed 9.1% (USD 9.90 trillion) to global GDP and provided jobs to 330 million people (WTTC, 2024). In OECD countries this sector has shared 14.8% of their exports (OECD, 2024). This sector is multi-faceted, and its impacts are beyond economic impacts. This sector contributes to environmental degradation in the form of different forms of pollution (Zhang et al., 2019). Ahead of this, tourist destinations can also face other negative environmental consequences including solid waste, litter, sewage, oil and chemicals, visual pollution, increased average temperature, and car usage (Duan et al., 2022). Further, overuse of natural resources, lower service quality, and increase in waste create problems such as soil erosion, depletion, and harming biodiversity (Baloch et al., 2023). The tourism sector also has certain socio-cultural advantages, including the increase in social connection via more tourist influx, a strong sense of community identity, and a deep connection with the local environment (Daly et al., 2021). Ahead of this positive impact, there are many negative aspects as well, one of which is the socio-cultural hybridization and deterioration of local culture over time (Amoiradis et al., 2021). The tourism sector is one of the fastest-growing sectors in Pakistan. In 2023 this sector contributed 5.8% to the GDP of Pakistan and is projected to 8.0% in 2034 (WTTC, 2024). In Pakistan, Gilgit Baltistan (GB) has become a famous tourist

destination due to its diversity of culture, languages, and ethnicities (Khurshid, 2023). Because of its breathtaking environment and views, Gilgit Baltistan sees a large influx of both domestic and international tourists each year as described in Figure 1. After 2015 tourist influx increased due to improvements in security conditions and social media where people shared pictures about the beauty of Gilgit Baltistan (Saqib et al., 2019). According to Fahim et al. (2023) in GB there are four types of tourism adventure, cultural, religious, and eco-tourism details are discussed in Appendix A.

Like other tourist destinations, the tourism sector has significantly and remarkably contributed to the development of the local economy of Gilgit Baltistan. In the Gilgit division, the tourism sector has become the main source of income (Armughan, 2023) while according to Fahim et al. (2023) in the Hunza district, more than half of the population depends upon the tourism sector for their living. Along with positive impacts, the increasing trend of tourist influx has negatively impacted the environment, society, and culture of Gilgit Baltistan (Saqib et al., 2019). Tourists are negatively impacting the environment and cultural setting in districts Hunza and Diamer similar result was also obtained by Jehan et al. (2023) for district Skardu. The tourism sector has produced both positive and negative impacts in Gilgit Baltistan (Armughan, 2023; Jehan et al., 2023; Saqib et al., 2019). However, no studies include all four districts of the Baltistan division, and this study will find this gap is one of the main significances of this study. As Baltistan has become the tourism capital of Gilgit Baltistan so inclusion of all districts of Baltistan will help in exploring the real impacts of the tourism sector in Gilgit Baltistan, especially for the Baltistan division.

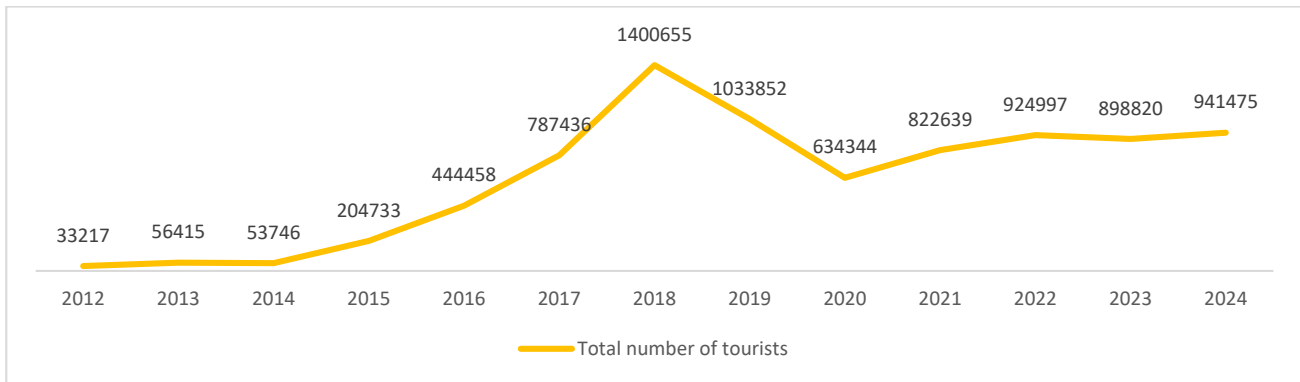


Figure 1. Total number of tourists' influx in Gilgit Baltistan; source: Tourism department GB.

This study is designed to explore the local community's perceptions about tourism's impacts on the region. It will help policymakers and government officials formulate sustainable tourism policies for Gilgit Baltistan.

Literature Review

Generally, the impact of tourism on local communities is classified into four dimensions; economic, socio-cultural, and environmental impacts (García et al., 2016). In literature, researchers have studied both the positive and negative impacts of tourism on the local community (Ko and Stewart, 2002).

Economic Impact of Tourism

The tourism sector plays a vital role in economic growth. According to WTTC (2024), the estimated contribution of this sector to the global GDP is 11.4% and in the labor force 12.2%. The influx of tourists produces positive impacts on economic growth via the creation of new jobs, collection of revenues, and inflow of foreign exchange (Hye et al., 2013), and according to Rasool et al. (2021), this sector has become the third-largest exporting sector in the world.

Gökovali and Bahar (2006) explained that the tourism sector significantly produces positive impacts on the growth of the economy in two possible ways; first, it can produce a positive effect on other sectors, and second, it can increase domestic income. The tourism sector increases investment in infrastructure development and increases market competition and household income levels (Brida et al., 2020). The opportunities to attract regional investment, business opportunities, and support of other sectors of the economy can be improved with increased tourism activities (Lin and Mao, 2015). In case of the developing countries, the flourishing of the tourism sector can be beneficial in the reduction of poverty levels, since the tourism sector is labor-intensive sector (Dillimono and Dickinson, 2015). Along with these positive impacts, the tourism sector has also positive spillover to other sectors such as transportation, hostels, and restaurants (Mayer and Vogt, 2016).

Environmental Impact of Tourism

Besides the positive impacts of tourism, many researchers and scholars (Arbolino et al., 2021; Brida et al., 2020; Hsieh and Kung, 2013; Zhang et al., 2019) also highlighted its negative impacts on the environment and society. The tourism sector can produce more negative impacts on the environment as compared to other sectors like rental, estate, and finance (Hsieh and Kung, 2013). The tourism sector produced negative environmental consequences in two possible ways; by increasing human activities and using various energy-intensive technologies in human activities (Zhang

et al., 2019). The tourism sector also contributes to climate change through an increase in carbon emissions (Arbolino et al., 2021), and according to Chien et al. (2022) and Danish et al. (2018) about 8% of global emissions of Greenhouse Gas (GHG) contributed by the tourism sector. The tourism sector also contributed to GHG emissions indirectly as various other GHG-emitting sectors are closely linked with the tourism sector (Jermittiparsert, 2021). In addition to GHG emissions, this sector degrades the environment in other ways; increasing water pollution, loss of biodiversity, and decreasing air quality (Ren et al., 2019).

Socio-Cultural Impact of Tourism

Like negative impacts on the environment, many researchers (Ghaderi, 2004; Kabote, 2015; Zhuang et al., 2019) have also mentioned the negative impacts of tourism on the socio-cultural setting of tourist destinations. The impacts of tourism on the daily life of local residents of tourist destinations are the transformation of their Indigenous identities and norms (Zhuang et al., 2019). The Indigenous local customs, culture, and religious beliefs of the local community have been negatively impacted by the development of the tourism sector (Saqib et al., 2019). Due to tourism dressing, dieting, drinking, and religious patterns of local residents have been affected negatively (Cañizares et al., 2016). The growth of the tourism sector has hybridized the socio-cultural conditions of host areas (Sánchez Cañizares et al., 2016). The development of the tourism sector would weaken local cultural values and norms that negatively affect the relationships between families and also communities (Kabote, 2015; Sroyetch, 2016). Ghaderi (2004) further mentioned the weakening of social capital and community fabric as negative impacts of tourism on society. However, according to Ramos et al. (2016), increase in tourist influx to tourist destinations would improve the community identity sense that improves the social capital of residents. The impacts of tourism on the society of Indonesia concluded due to tourism activities residents of Indonesia started each other differences and improved their mutual understanding (Pramanik and Ingkadijaya, 2018). Tourism can produce seven impacts on the sociocultural setting of tourist destinations; infrastructure development, increased number of cultural events, conservation of cultural heritage spots, decrease in migration from rural areas to urban and increase in youth exchange programs (Zaei and Zaei, 2013). So, in literature, the impacts of tourism have been documented on the economy, environment, society, and culture setting. These impacts help in shaping the perception of local communities about the tourism sector. The perception may be positive and negative based on the observation of the local people. The conceptual framework of this study is designed based on literature which is illustrated in Figure 2.

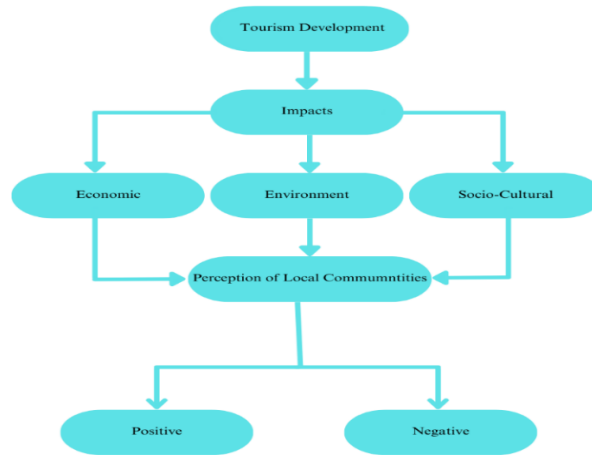


Figure 2. Conceptual framework of the study.

METHODOLOGY

Research Design

This study followed a descriptive research design. Primary data was collected from all (four) districts of the Baltistan division. A structured questionnaire was designed for data collection. Before asking questions, it was made sure that respondents were fully aware of the questions being asked. Initially, 15 questionnaires were distributed for the pilot study. After the pilot study, a revised questionnaire was used for data collection. The questionnaire was divided into two parts, in the first part demographic information of the respondents was collected while in the second part, they were asked about the effects of tourism on the economy, environment, and socio-cultural conditions of Baltistan.

For this study, 130 questionnaires were distributed, among which 102 responses were collected which makes a response rate of 78% which is enough for the study to be carried out. Data was collected with the help of a survey by using disproportionate stratified

sampling. The surveys were conducted from 20th May to 25th August 2024. We used disproportionate stratified sampling so that a larger proportion of educated and young-aged respondents could become part of the survey. Since well-educated youth can observe the impacts of tourism more systematically and also respond unbiasedly the inclusion of more entrepreneurs and old people can lead to a biased response. Entrepreneurs are directly and indirectly linked to tourism their responses could be towards economic impacts while responses of old people towards socio-cultural impacts. So to avoid these biases, the majority chunk in this survey was educated and youth, and the sample size was 102. This survey collected data across all four districts of the Baltistan division. The majority of the respondents were male, young, and well-educated. Table 1 discussed the demographic features of the respondents in detail. After the collection of data, we compiled and analyzed data in MS Excel.

Table 1. Demographic characteristics.

Variable	Sample size	Sample size %
Gender		
Male	82	81%
Female	20	19%
Districts		
Skardu	53	52%
Ghanche	19	19%
Shigar	8	8%
Kharmang	22	21%
Age		
18-22	29	28%
23-32	61	60%
33-42	12	12%
Education		
Matriculation	04	04%
Intermediate	12	12%
Bachelors	54	53%
Masters	30	29%
Doctorate	2	2%
Occupation		
Student	58	57%
Employed	31	30%
Entrepreneur	7	7%
Unemployed	6	6%
Monthly income (PKR)		
00-70,000	48	47%
70,001-110,000	27	26%
110,001-150,000	17	17%
150,001 and above	10	10%

Study Areas

Gilgit-Baltistan comprises three divisions Gilgit, Baltistan, and Diamer. The Baltistan division consists of four districts Skardu, Ghanche, Shigar, and Kharmang. District Skardu is the headquarters of the Baltistan division. Figure 3 shows the map of the study areas.



Figure 3. Map of the study area.

RESULTS AND DISCUSSIONS

Gilgit Baltistan has become a tourist destination for both foreign and domestic tourists. According to this study, 64% of respondents, domestic tourists visit Baltistan more frequently than the foreign tourists in Baltistan. Foreign tourists normally visit for summitting and hiking while domestic tourists for adventure purposes. Since tourist spots for adventure are more in Baltistan that is why domestic tourists visit more frequently. Secondly, the availability of efficient infrastructure is also necessary to increase tourist influx, and the Skardu airport is operating only domestically so it produces negative impacts on the influx of foreign tourists.

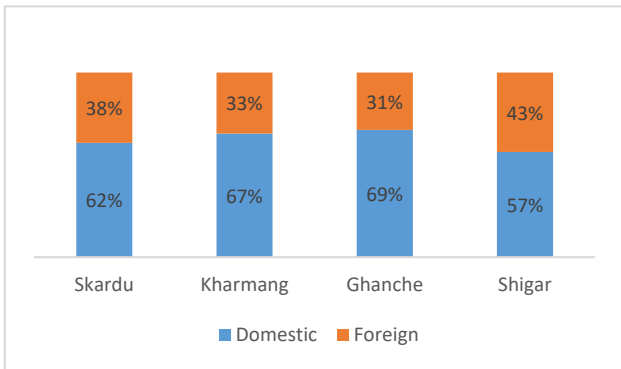


Figure 4. District-wise distribution of tourists who visit Baltistan frequently.

Infrastructure plays an important role in attracting tourists, in Gilgit Baltistan after improvement in road infrastructure influx of domestic tourists increased while the lack of an international airport negatively impacted the influx of foreign tourists.

The above Figure 4 shows the district-wise distribution, the majority of respondents across all districts agreed that domestic tourists visit Baltistan frequently. In this study, it is highlighted that 43% of respondents from the Shigar district, considered foreign tourists to visit frequently. In this district, the world's 2nd highest mountain K2 is located and most of the foreign tourists visit GB to submit mountain ranges.

Economic Impacts

Tourism is directly or indirectly related to financial activity (Shujahi and Hussain, 2016). Foreign tourists are usually considered a high source of earnings due to the difference in exchange rates. In this study, about 60% of the respondents believed foreign tourists as a high source of income while 40% considered domestic tourists.

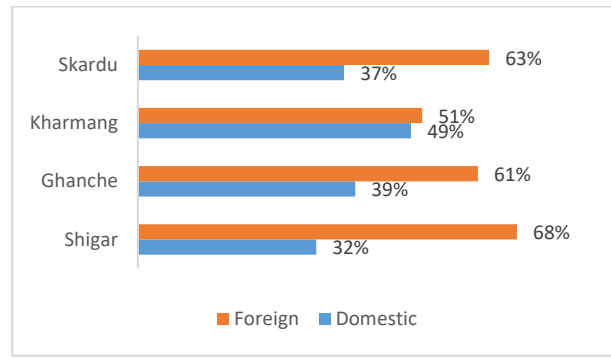


Figure 5. District-wise distribution of high earning sources in Baltistan.

The difference between exchange rates plays a vital role in the earnings of people. Most of the respondents were well-educated and they believed foreign tourists are a high source of earnings which is highlighted in Figure 5. District Shigar has the highest percentage (68%) after that district Skardu has (63%) of earnings source from foreign tourists. As the mighty K2 is located in Shigar most of the foreigners visit there for trekking and summitting. District Skardu is the administrative capital of the Baltistan division and most of the tourists first visit this district for their necessary administrative and non-administrative requirements.

Environmental Impacts

The tourism sector degrades the environment in various ways. Figure 6 shows the perception of respondents about the types of adverse impacts of tourism on the environment. Climate change is the main concern of people which is about 43% of the respondents while 29% and 28% of respondents considered a degradation of resources and traffic congestion respectively. This result is coherent with the results of other studies such as Alshuwaikhat (2005), Andereck et al. (2005), and Wang et al. (2021).

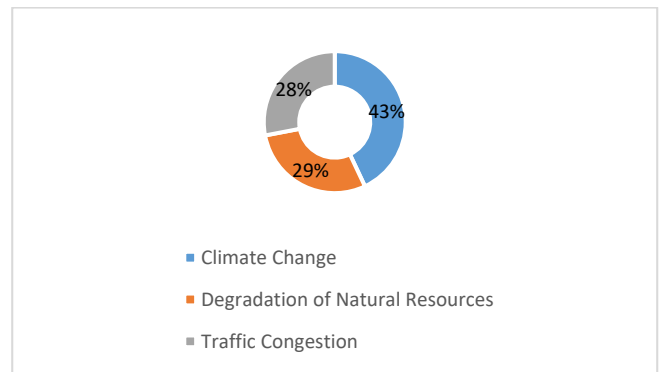


Figure 6. Distribution of the types of environmental adverse impact.

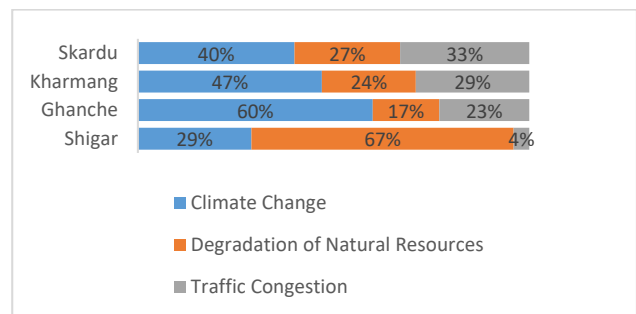


Figure 7. District-wise distribution of the adverse impacts on the environment.

Figure 7 shows the perception of the respondents of the four districts of the Baltistan region regarding the adverse impact of tourism on the environment. About 60% of respondents from district Ghanche considered climate change as the major adverse environmental impact. Climate change was the main adverse impact in this district can be observed as this area was the most flood-affected district of Baltistan during the 2022 flood.

For 67% of respondents from district Shigar degradation of natural resources. About 33% of respondents from district Skardu traffic congestion is the major negative impact of tourism on the environment. All tourists travel either by air or by road first enter this district, then travel to other districts. As most local tourists use their own vehicles and there are no proper parking facilities in Gilgit Baltistan. As a result, traffic congestion has become a problem for the locals.

In Baltistan, it came to be observed that domestic tourists not only come with their own vehicle, but they also deplete the environment in many other ways. They don't dispose of garbage properly. They drive vehicles at very high speeds that cause noise and air pollution. They entered people's gardens and damaged fruits and vegetables. In this study, about 82% of the respondents mentioned domestic tourists are depleting the environment of Baltistan. A study conducted by Armughan (2023) on the Gilgit division also confirmed that most domestic tourists are depleting the environment.

Socio-Cultural Impacts

When tourists visit usually it helps in the exchange of culture and norms. They respect local norms, culture, and values. But in the case of Baltistan, we can observe tourists are involved in the hybridization of local norms, culture, and values. When tourists visit Baltistan, they plunk fruits and vegetables without the permission of local people. In every famous tourist spot, wall chalking has also become a prominent issue. Furthermore, the food and clothing patterns of people are also changing with an increase in tourist influx. In this study, we came to know about 94% of respondents believed in the hybridization of the socio-cultural setting of Baltistan.

Figure 8 depicts the responses to the socio-cultural hybridization among four districts of the Baltistan region. The majority of all districts; 96% of district Skardu, 95% of district Kharmang, 89% of district Ghanche, and 87% of district Shigar. A study conducted by Saqib et al. (2019) revealed in the district Hunza and Daimer of GB the old traditions, culture, and customs of these areas were badly affected due to mass tourism. One of the adverse impacts of tourism is the loss of originality of the local setting and the transformation of culture into a hybridized form (Garau-Vadell et al., 2018). Tourism activities significantly increased drug addiction among local residents (Diedrich and Buades, 2009).

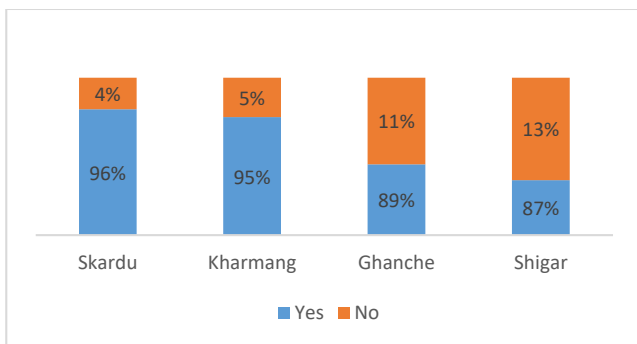


Figure 8. District-wise distribution of socio-cultural hybridization.

In Gilgit Baltistan most of the domestic tourists visit for adventure while foreign tourists visit for adventure, they are also involved in exploring local culture and norms. They interact with local communities to explore historical places, local foods, and cultural settings. In this study when we asked respondents about the type of tourists involved in the depletion of the socio-cultural pattern of Baltistan about 64% of the respondents believed that domestic tourists depleted the socio-cultural pattern of the region and 36% of the respondents believed that foreign tourists depleted the socio-cultural pattern of the region.

Adverse Impacts

In this study, we come to know local communities have negative perceptions of tourism on the environment and socio-cultural condition of Baltistan. Many researchers also highlight the negative impacts of tourism such as Shujahi and Hussain's (2016) tourism activities destroying the balance of the ecosystem while according to Tosun (2002), tourism produced negative impacts on the environment and socio-cultural patterns in the tourist place.

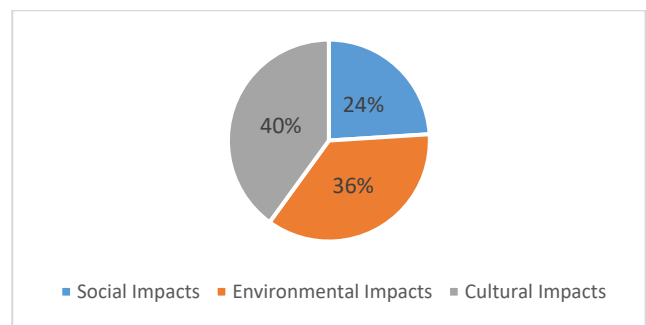


Figure 9. Distribution of types of the adverse impacts.

In this study, we found people indicated the tourism sector has a more adverse impact on culture than on society and the environment. About 40% indicated negative impacts on culture, 36% on the environment, and 24% on the society. In Baltistan adverse impacts on the culture can be observed by changing food and clothing patterns, excess demand for luxury electronic items, less interest in agriculture and livestock activities, and an increasing number of drug-addicted youth.

Off-season snowfall, unpredicted rain patterns, high melting rate of glaciers, increase in diseases specifically cancer and heart disease patients, traffic congestion, and flood can be observed.

With an increasing tourist arrival trend in Baltistan.

Along with the adverse impacts of tourism on culture and the environment, losing the originality of people increases harassment cases, and over-consumption of resources also negatively impacts the society of Baltistan.

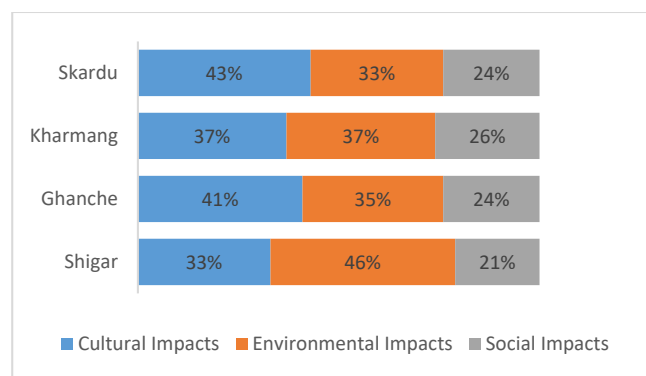


Figure 10. District-wise distribution of the types of adverse impacts.

Figure 10 depicts the district-wise distribution of the adverse effects of tourism. The majority of respondents (43%) from District Skardu believed the tourism sector has changed the cultural setting of Baltistan while the majority of respondents (26%) from District Kharmang considered the social setting has adverse impacts. Environmental degradation is the main adverse impact according to 46% of respondents from district Shigar.

CONCLUSIONS AND RECOMMENDATIONS

This study provides useful insights into the perceptions of the local community in the Baltistan division regarding the tourism sector. In the past, the influx of tourists was limited. However, in recent years the influx of tourists both national and international has increased due to improvements in the law-and-order situation, government policies, and different platforms of social media. This sector has become a major source of income for local residents. International tourists play a vital role in people's earnings. However, local communities also show concerns about the environmental degradation and hybridization of socio-cultural settings. This study also highlights that national tourists are a major contributor to the degradation of the environment and socio-cultural setting. The excessive and unregulated use of private cars, destruction of fruit and vegetable farms, entering houses without permission, and littering at tourist spots are major negative consequences of tourist inflow in the Baltistan division. Furthermore, it has also changed the dietary habits and traditional attire of the local population. To ensure sustainable tourism in the region, the government should introduce a well-regulated and holistic regulatory framework. The introduction of a pricing mechanism and strict imposition of fines and penalties should be part of the framework.

Tourism has huge potential, for economic growth and development of Gilgit Baltistan. To unlock its potential a strategic and sustainable approach is required. Seasonal tourism needs to be diversified into winter, spring, and autumn with the help of proper marketing and advertising strategies. Infrastructure development is essential to attract tourists. The Baltistan Highway (BH) and Karakoram Highways (KKH) and airports should be accessible for all-weather and also climate-resilient for the flow of tourists. Along with this, pricing mechanisms should also be introduced at BH and KKH to control environmental degradation and regulate private vehicle usage. To control the negative consequences monitoring tourist spots is necessary. The local district administration or tourist police should be empowered to impose fines and penalties for businesses that violate environmental and socio-cultural norms. Before entering Gilgit Baltistan, an awareness session should be conducted for all tourists about the climate vulnerability of the region. A holistic, well-regulated policy framework will ensure that tourism in Gilgit-Baltistan remains both economically beneficial and environmentally sustainable.

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Appendix

Appendix A. Famous Tourist destinations in Baltistan division.

Tourist Spots	Districts	Type of tourism
Manthal Buddha rock	Skardu	Religious tourism
Chaqchan mosque	Ghanche	Religious tourism
Amburiq mosque	Shigar	Religious tourism
Astana of Syed Mir Muhammad	Ghanche	Religious tourism
Kharpochto fort	Skardu	Historical tourism
Shigar fort	Shigar	Historical tourism
Khaplou fort	Ghanche	Historical tourism
Kharmang fort	Kharmang	Historical tourism
Deosai Plain	Skardu	Ecological tourism
Chunda Valley	Skardu	Ecological tourism
Shangrilla lake	Skardu	Ecological tourism
Kachura lake	Skardu	Ecological tourism
Manthokha waterfall	Kharmang	Ecological tourism

K2	Shigar	Adventurous tourism
Gashabrum	Ghanche	Adventurous tourism
Cold Desert	Shigar	Adventurous tourism

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