Examining the Impact of Natural Disasters on Tourism in Highland Destinations: Insights from Shovi

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Abstract

The tourism industry is profoundly influenced by various external factors, including pandemics, natural disasters, geopolitical tensions, economic crises, and climate change. Each of these factors presents unique challenges, necessitating tailored risk management strategies. This study investigates the impact of natural hazards on highland destinations, using the Shovi landslide that occurred in August 2023 in Georgia as a case study. Given the vulnerability of highland regions to natural disasters, a comprehensive analysis is essential. This research employs a triangulation methodology that combines a systematic literature review, statistical data analysis, and an online questionnaire to assess tourists' perceptions of safety and their behavioural responses following the landslide. Findings indicate that natural disasters have multidimensional impacts—financial, infrastructural, human, and environmental—significantly affecting the tourism industry. The study highlights the necessity of effective management and mitigation strategies to bolster tourism resilience in the region. By situating the Shovi landslide within the broader context of highland tourism, this research contributes to the academic discourse on disaster impacts and recovery. It identifies critical gaps in the literature and offers empirical evidence for developing crisis management frameworks tailored to highland destinations. This study aims to advance understanding of the interplay between natural disasters and tourism dynamics, providing a foundation for future scholarly inquiry in this field.

Keywords: tourism, natural disasters, crisis management, highland destinations, Shovi landslide, Georgia, Racha.

Introduction

Tourism is widely recognised as one of the most dynamic sectors of the global economy. Yet it remains highly susceptible to various external factors, including pandemics, economic fluctuations, political instability, and natural disasters. Among these, natural disasters present a particularly formidable challenge, especially for highland destinations, where unique geographic and climatic conditions often amplify the risks. The increasing frequency and unpredictability of such hazards highlight the urgent need for a nuanced understanding of their impacts on tourism, particularly in regions that are both environmentally fragile and economically dependent on the sector (Becken, 2017). While much of the existing research on tourism and disaster management focuses on coastal or urban destinations, highland regions face distinctive challenges due to their topography, isolation, and dependence on tourism as a primary economic driver (Prideaux et al., 2003). The Shovi landslide of August 2023 in Georgia's Racha region serves as a timely case study, illustrating the vulnerabilities of highland tourism to natural disasters. It underscores the necessity of developing comprehensive disaster management strategies that not only address immediate recovery but also build long-term resilience.

Georgia, a country renowned for its dramatic mountainous landscapes, is increasingly becoming a popular destination for domestic and international tourists. Approximately 65% to 70% of the country is covered by mountains, offering exceptional opportunities for tourism—ranging from hiking and

mountaineering to skiing and cultural exploration (Kalandadze, 2020). Destinations such as Kazbegi, Mestia, and Gudauri have seen significant growth in recent years, positioning Georgia as an emerging player in the global mountain tourism market. However, these regions are also highly vulnerable to a range of natural disasters, including avalanches, snowstorms, earthquakes, and landslides. The steep slopes, heavy rainfall, and seismic activity of Georgia's highlands create an environment where landslides, in particular, pose a persistent threat to both infrastructure and human lives (Chelidze, 2019). The Shovi landslide is a stark reminder of how such events can disrupt local economies, damage infrastructure, and, most critically, undermine the region's tourism industry.

Highland tourism destinations, such as Shovi, are particularly vulnerable to natural hazards due to their remote location and dependence on tourism for economic stability (McCool et al., 2015). The inherent risks of these regions—ranging from landslides to earthquakes—can have devastating consequences for the tourism infrastructure and the communities that rely on tourism for their livelihoods. A single disaster event can precipitate a rapid decline in tourist arrivals, financial instability for local businesses, and significant damage to essential infrastructure. The cyclical relationship between natural hazards and tourism dynamics underscores the need for destination managers to incorporate Disaster Risk Reduction (DRR) strategies into their planning processes (Faulkner, 2001). Additionally, the economic and social consequences of such disasters extend far beyond physical damage. Psychological factors, including tourists' perceptions of safety, play a crucial role in shaping recovery efforts. Studies have shown that even after the infrastructure is rebuilt, tourists may continue to avoid destinations perceived as unsafe, leading to longer-term declines in visitation (Ritchie, 2008). These behavioural shifts highlight the complexity of post-disaster recovery and the importance of not only rebuilding physical infrastructure but also restoring confidence in the destination.

This research aims to explore the broader implications of natural disasters for highland tourism, with a focus on the Shovi landslide as a case study. By adopting a triangulation methodology that includes a systematic literature review, statistical data analysis, and an online survey of tourists' perceptions, this study seeks to provide a comprehensive analysis of the immediate and long-term effects of the disaster on tourism. This approach allows for an in-depth exploration of the economic, social, and psychological dimensions of disaster impacts on tourism, offering valuable insights into how destinations can better manage risks and recover from such events. The findings will contribute to a deeper understanding of the vulnerabilities of highland tourism and highlight the need for effective risk management strategies that can enhance resilience in these fragile regions.

The literature on natural disasters and tourism has grown extensively over the years, with much research focusing on disaster management and recovery frameworks (Becken & Hughey, 2013; Hall & Page, 2016). However, most of this work has focused on coastal and urban destinations, which present different challenges compared to highland regions (Prideaux et al., 2003). While disaster risk management (DRM) frameworks have been developed for more accessible areas, highland destinations require tailored approaches that address their unique geographic and logistical challenges. Recent studies have emphasized the role of resilience-building in tourism destinations, advocating for the development of disaster risk reduction strategies that integrate local communities and stakeholders into the recovery process (Pennington-Gray, 2018; Ritchie & Jiang, 2019). Yet, there remains a gap in the literature regarding the application of such frameworks to highland regions, where the risks are often compounded by their isolation and dependence on tourism. This study seeks to fill this gap by providing a focused analysis of disaster impacts on highland tourism, using the Shovi landslide as a case study, and offering practical recommendations for destination managers and policymakers.

In the context of global environmental change and the increasing frequency of extreme weather events, this research is especially timely. As climate change exacerbates the occurrence and severity of natural disasters (Pforr, 2009), understanding the interplay between natural hazards and tourism dynamics becomes even more crucial. This study aims to offer empirical evidence from a highland region, contributing to the broader academic discourse on disaster risk management and tourism. Furthermore, by developing a framework for tourism resilience and recovery, this research will provide actionable insights for policymakers and destination managers, helping them create more effective disaster preparedness and recovery strategies. By improving our understanding of the vulnerabilities faced by highland tourism destinations like Shovi, this study not only fills a critical gap in the literature but also provides a foundation for future research on the sustainability of tourism in an increasingly uncertain world.

Methodological Approach

The research design incorporates three interrelated components: a systematic literature review, structured interviews with experts (N=10), and an online survey of tourists (N=412). The systematic literature review provides the theoretical foundation for the study, situating it within existing scholarly debates on the interplay between natural disasters and highland tourism. It examines relevant theoretical and empirical studies, focusing on disaster risk reduction, crisis management, and resilience in tourism contexts, while also drawing on global tourism crisis management frameworks applicable to Georgia's highland destinations.

The primary objective of the online survey with Georgian tourists was to gather insights into their perceptions of destination safety and their behavioural patterns. To ensure a comprehensive perspective, the survey employed both open and closed-ended questions. The questionnaire was administered via Google Forms. To prevent multiple submissions from a single individual and ensure the uniqueness of each response, the survey was linked to Gmail accounts and limited to one response per account. A total of 412 respondents completed the survey.

To gather expert opinions on functional mitigation strategies for Georgia, we conducted structured interviews. These interviews included both open-ended questions and a 5-point Likert scale. Experts were selected through purposive sampling from both the tourism and natural science sectors. The questionnaire was sent to 35 experts, and 10 responded, completing and returning the survey.

 Data analysis was conducted using Excel, MAXQDA, and SPSS.

By integrating these methods, the study addresses the research problem from multiple angles, ensuring a comprehensive assessment of the landslide's implications for the tourism sector in Shovi. This robust methodological approach aims to produce findings that are both academically rigorous and practically applicable, offering valuable insights for disaster management and sustainable tourism development in highland destinations.

Disaster Risk Reduction and Crisis Management in Tourism

The field of Disaster Risk Reduction (DRR) in tourism has evolved significantly over the past two decades, largely driven by the increasing frequency and intensity of natural disasters, a trend exacerbated by climate change. DRR frameworks emphasise proactive risk assessments, infrastructure resilience, and effective emergency communication to mitigate the impacts of disasters on tourism (Becken & Hughey, 2013). These strategies must be integrated into long-term planning by tourism destinations to ensure both visitor safety and the continuity of tourism services post-disaster.

The research agenda on disaster management (DM) in tourism began to take shape in the 1990s, addressing topics such as the role of tourism in disaster planning (Murphy & Bayley, 1989), the intersection of disaster recovery and media response (Milo & Yoder, 1991), and the development of tourism-specific disaster planning strategies (Drabek, 1995), alongside broader crisis management processes (Young & Montgomery, 1997). These pioneering studies provided the foundation for subsequent frameworks and practices in tourism disaster management. Faulkner's (2001) comprehensive disaster management framework underscores the key phases of preparedness, response, recovery, and mitigation. Although initially developed for coastal destinations, this framework has been adapted for various disaster contexts, including those specific to highland regions. Faulkner stresses the importance of pre-disaster strategies that focus on reducing vulnerabilities, such as strengthening infrastructure and raising awareness within local communities. Furthermore, Ritchie (2004) highlights the significance of the recovery phase, which goes beyond physical rebuilding to also include the restoration of tourists' confidence through transparent communication and targeted marketing that focuses on the safety measures taken.

In highland tourism, where infrastructure is often underdeveloped and access is more restricted compared to urban or coastal areas, DRR and crisis management frameworks must be tailored to local conditions (Hall & Page, 2016). Common threats such as landslides, avalanches, and seismic activity pose significant risks to both physical infrastructure and tourists' perceptions of safety. Given these unique challenges, adapting DRR and crisis management strategies to the specific vulnerabilities of highland regions is critical.

Highland regions are increasingly vulnerable to natural disasters, particularly landslides, floods, and earthquakes, as a result of the intensifying effects of climate change. The unique geographical features of these areas—steep slopes, erosion-prone soils, and isolated communities—amplify the impacts of these hazards (Prideaux et al., 2003). Studies from various highland tourism destinations, including

Nepal, the Andes, and the Alps, have documented how natural disasters disrupt local economies, damage critical infrastructure, and alter tourist behaviour (McCool et al., 2015; Chelidze, 2019).

Natural disasters have significant and far-reaching implications for tourism. Firstly, they damage tourism infrastructure, making destinations temporarily inaccessible (Huang & Min, 2002). Secondly, disasters disrupt transportation networks and influence source markets by altering consumer perceptions of safety (Prideaux, Laws, & Faulkner, 2003). The media play a crucial role in amplifying these impacts, creating a "ripple effect" that spreads the negative consequences of disasters both geographically and across sectors (Handmer & Dovers, 2007). This ripple effect can delay recovery by fostering negative perceptions, which hinder the inflow of tourists and foreign exchange, thus prolonging the recovery process (Ritchie, 2004). As a result, the "response" and "recovery" stages of disaster management have been focal points in tourism research (Mair et al., 2016).

Landslides, in particular, are a recurrent risk in mountainous regions and present both immediate and long-term challenges to tourism. Beyond the physical damage they cause, landslides significantly affect tourists' perceptions of safety and the destination's overall appeal. McCool et al. (2015) argue that tourists' risk perceptions are shaped not only by the immediate aftermath of a disaster but also by the effectiveness of the destination's response. In highland areas, where recovery is often slow due to difficult terrain and damaged infrastructure, restoring tourist confidence becomes particularly critical.

Landslides, defined as the downslope movement of soil or rock due to instability, are common natural hazards in mountainous regions. Such events often result from a combination of steep slopes, semi-permeable glide layers beneath the soil, and significant water content, which increases the weight of the soil mass (Sunarta et al 2018). Landslides are most likely to occur in areas with slopes between 15° and 45° and high rainfall intensity. Beyond these natural factors, human activities such as deforestation, agricultural expansion, urbanization, mining, and road construction can exacerbate the risks of landslides, further disrupting the landscape and increasing vulnerability (FAO, 2013).

Resilience in Tourism: Strategies for Disaster Management and Sustainable Recovery

In the tourism industry, the environment—both natural and human-made—is foundational to the success of many destinations. Natural landscapes, such as mountains, forests, and coastlines, are central to tourism products, making their preservation crucial for sustaining tourism. The initial relationship between tourism and the environment can be characterised as one of "coexistence", where both systems support and benefit from each other. However, this delicate balance is often disrupted by natural disasters which pose significant threats to both tourism infrastructure and the local economy.

The concept of resilience, which originated in the fields of ecology and engineering (Berbés-Blázquez & Scott, 2017), refers to the ability of a system to return to its normal state following a disturbance. In the context of tourism, resilience can be understood as the capacity of destinations to recover from the impact of natural disasters and environmental changes. Research has shown that the resilience of tourism destinations depends on the resilience of all subsystems within the destination, including infrastructure, local communities, and economic structures (Hall et al., 2018).

Community-based approaches are integral to effective disaster recovery, particularly in areas where tourism is a key economic driver. Empowering local communities not only accelerates recovery but also ensures that tourism can support livelihoods during the rebuilding phase (Faulkner, 2001; Prideaux et al., 2003). Engaging local communities in the recovery process ensures that their needs are addressed, and that tourism development is aligned with local priorities, enhancing the long-term sustainability of the sector.

Government agencies and tourism boards play pivotal roles in disaster recovery. Effective coordination between local businesses, government entities, and international organizations is often crucial for a successful recovery process. Studies have demonstrated that post-disaster marketing emphasizing resilience and ongoing development efforts can effectively attract tourists back to affected regions (Ritchie, 2008). By focusing on restoring critical infrastructure and enhancing the destination's resilience, government entities, and tourism boards can mitigate the long-term negative impacts of disasters on the tourism industry.

The World Bank's guide on maintaining tourism resilience during disasters outlines five key aspects of disaster management in the tourism industry: (1) Risk Understanding, which involves identifying and assessing potential disaster risks that threaten tourism destinations; (2) Planning and Prioritization, which focuses on strategically planning and prioritizing sustainable tourism development to minimize negative impacts; (3) Mitigation and Preparedness, which includes both structural (infrastructure) and non-structural (communication systems, disaster risk financing)

measures to prepare for disasters; (4) Response and Recovery, which aims to minimize disruptions and maintain competitiveness post-disaster; and (5) Long-Term Resilience, which involves planning for the sustainability of tourism through climate change mitigation and other long-term strategies (World Bank, 2020).

Crisis management in the tourism sector generally follows two primary approaches: reactive and proactive. The reactive approach to crisis management focuses on rehabilitating the consequences of a disaster that has already occurred, whereas the proactive approach envisages the implementation of activities that will contribute to mitigating the consequences of the disaster and facilitating rehabilitation (Nair & Dileep, 2020). According to Kyoo-Man Ha, disaster management in the tourism industry is analyzed from four different perspectives: tourists, the tourism industry, regional governments, and international organizations. The author believes that each party should reorganize its management strategies from a reactive response to a proactive approach (Ha, 2023). Other authors share this opinion, believing that proactively reducing disaster risks and minimizing negative effects is more effective than a passive response to disasters (Becken & Hughey, 2013; Todman-Lewis, 2017; Stoffelen & Loannides, 2022).

Integrating resilience-building strategies into tourism development and disaster management planning is essential for destinations that are increasingly vulnerable to environmental threats. By adopting a proactive approach that includes improving infrastructure, empowering local communities, and developing comprehensive disaster recovery plans, destinations can better withstand the shocks of natural disasters. Ensuring the long-term sustainability of the tourism industry requires a coordinated effort that addresses both immediate and long-term challenges, from disaster preparedness to climate change adaptation.

Shovi Landslide

On August 3, 2023, a devastating landslide struck the Shovi mountain resort in Oni Municipality, located in the Racha region of Georgia. According to a report from the National Environmental Agency, the glacial landslide in the Buba River Valley destroyed large portions of the Shovi resort. The landslide, which involved approximately 4 million cubic meters of solid material—comprising glacier fragments, tree debris, and vegetation—resulted in the accumulation of around 1 million cubic meters within the resort area itself. An additional 0.8-1.0 million cubic meters of debris were spread across the floodplains of the Chanchakha and Rion rivers, while up to 0.5 million cubic meters were recorded in the Buba River transit zone. Moreover, around 1.5 million cubic meters of dynamic material have accumulated at the bottom of the landslide zone, increasing the ongoing risk (National Environmental Agency, 2024).

An evaluation by the Institute of Earth Sciences and the National Seismic Monitoring Center at Ilia State University revealed that if an early warning system had been in place, the landslide could have been detected up to two hours in advance, providing sufficient time to warn the population and facilitate evacuations (Civil Georgia, 2024). This tragic event, which claimed the lives of 33 people, has left a lasting impact on Shovi, once a thriving vacation destination nestled in the Greater Caucasus Mountains at an elevation of 1,600 meters above sea level. The resort, with a history spanning nearly a century, has now been overshadowed by the tragedy, and recovery efforts remain conspicuously absent (RFE/RL, 2023 August 3).

Since the disaster, there has been little to no effort to revitalize the resort or restore tourism in the area. The region remains widely regarded as unsafe, with no significant initiatives to repair its infrastructure, clean up the site, or rebuild facilities. Tourism, which was never on a mass scale, has almost completely ceased. Online information still primarily reflects the tragic event, reinforcing the perception of Shovi as a disaster site rather than a potential destination. As a result, it is unlikely that Shovi will regain its former appeal in the near future. The absence of government or organizational initiatives to address safety concerns and invest in recovery efforts has left the region without the necessary momentum to re-establish itself as a viable tourism destination.

This lack of proactive crisis management, combined with the failure to invest in rehabilitation and marketing, has effectively stalled the resort's recovery. Without efforts to rebuild infrastructure, improve safety, and engage in targeted promotion, Shovi's future as a tourism hub remains uncertain. The ongoing focus on the disaster online has made it difficult to reframe the region's image, leaving little hope for a swift or successful recovery.

Results

Online Survey Results

An online survey was conducted to investigate the attitudes and behaviours of Georgian tourists concerning the safety of their travel destinations. The survey consisted of both open-ended and closed-ended questions. The open-ended questions aimed to elicit detailed, descriptive answers, allowing respondents to express their views freely. In addition to the closed-ended questions, which were designed to measure respondents' clear positions on specific issues, the open-ended questions served to clarify and expand upon the quantitative data, offering deeper insights into the respondents' perceptions.

Data coding and classification techniques were employed to analyse the open-ended responses systematically. This allowed for the organization of the open-ended answers into meaningful categories.

A total of 412 individuals participated in the survey. Of these, 32.8% were male, and 67.2% were female. The age distribution of the respondents was as follows: 37.6% were aged 18-28 years, 50.5% were aged 29-39 years, 8.5% were aged 40-50 years, and 3.2% were aged 51-61 years.

From the answers to the open question about what factors were taken into account in the process of selecting a destination and why the respondents chose a particular destination, the following categories were identified: 1. affordability; 2. diversity and attractiveness of the destination; 3. convenient location; 4. security; 5. destination infrastructure and level of digital development; 6. popularity of the destination; 7. weather/climate; 8. impact of the visa regime; 9. consideration of reviews and recommendations; 10. other (see Figure 1).

"First of all, I specify the purpose of the trip: attending a specific event, gaining new experiences, relaxing, having fun, etc. Accordingly, I choose the location considering the following factors: 1. Budget and affordability; 2. Security and health services; 3. Accessibility of transport; 4. Season and travel period; 5. Recommendations from experienced travellers; 6. Immigration procedures." *(Female, 29-30 years old)*
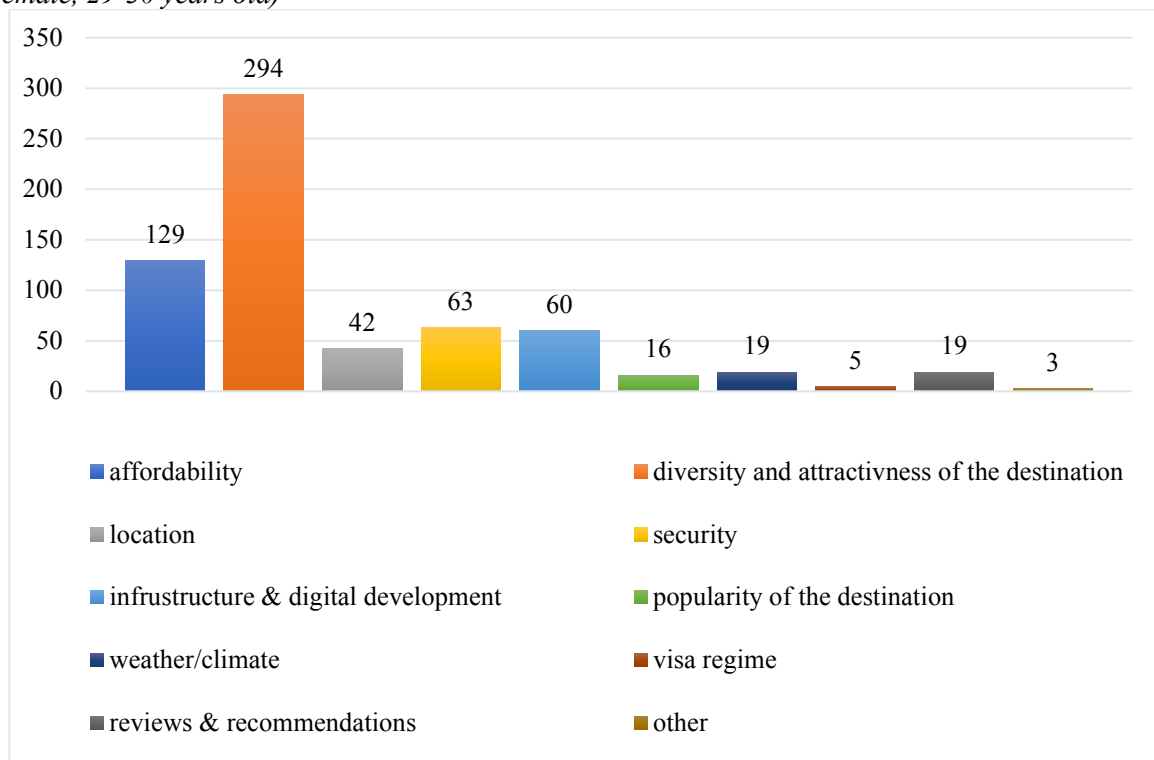

Figure 1. The Main Factors Considered in the Destination Selection Process

The next question addressed the factors considered when selecting accommodations. This was a closed-ended question with multiple response options. The distribution of responses is presented in Figure 2. Price and location emerged as the most important factors for visitors, while services, security policies, and accommodation mechanisms were considered less significant.
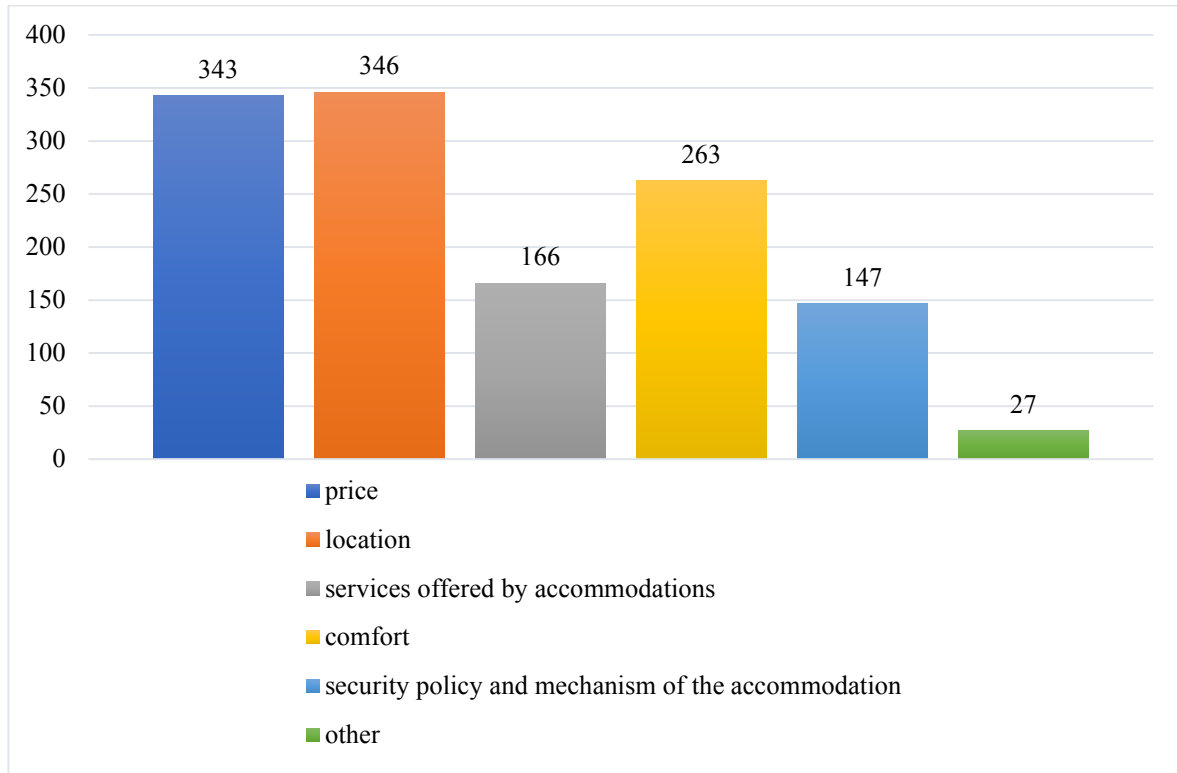
Figure 2. The Main Factors Considered in the Accommodation Selection Process

The respondents were asked to identify the primary factor influencing their accommodation selection. The results indicate that location and price were the most important determinants, followed by convenience, the services provided by the accommodation, and its security policies and mechanisms. Notably, security considerations emerged as the least influential factor in the decision-making process.

In the subsequent open-ended question, respondents were asked to identify the circumstances that made them feel unsafe while travelling for tourism. Upon analyzing the responses, the following key categories were identified: 1. Local population; 2. Favourable location of the destination and accommodation; 3. Low crime levels; 4. Safe transportation and adequate infrastructure; 5. Access to reliable internet and information; 6. Protection against natural disasters; 7. Personal security measures; 8. Travel insurance; 9. Sufficient financial resources; 10. Accompaniment by trusted individuals; 11. Availability of appropriate equipment; 12. Safe accommodation. These responses suggest that travellers' perceptions of safety are shaped by a combination of **personal factors (trusted companions, financial resources)**, **environmental factors (crime, infrastructure)**, and **preparedness (security policies, travel insurance)**. This highlights the multifaceted nature of safety in tourism and suggests that effective destination management should address these various aspects to improve visitor confidence.

The following open-ended question focused on factors contributing to safety during guests' stays at the accommodation. Through a systematic process of coding and classification, several key categories emerged, reflecting the diverse elements that influence perceived safety in these settings. These categories can be grouped into both tangible and intangible aspects of safety.

Reputation and Rating of the Accommodation: Many respondents emphasized the importance of previous guest reviews and ratings as a measure of trustworthiness and safety, suggesting that reputation plays a key role in influencing decisions.

Location: The proximity to potentially hazardous areas, such as disaster-prone zones, was highlighted as a critical factor in ensuring safety. Respondents noted that being situated in a safe, easily accessible location contributed significantly to their sense of security.

Video Monitoring: The presence of video surveillance was frequently mentioned as a visible sign of security, indicating that respondents value measures that enhance physical safety and provide a sense of constant monitoring.

Security Service: The availability of trained security personnel on-site was another priority, with respondents indicating that a visible and accessible security presence reassured them about their safety during their stay.

Security Plans and Systems: Respondents highlighted the importance of clear, well-communicated emergency plans and security systems, such as fire alarms or evacuation routes, that demonstrate preparedness for unforeseen events.

Hygiene: Cleanliness, while traditionally associated with comfort, was also cited as a crucial factor in safety, particularly with regard to preventing health hazards and ensuring that the accommodation meets sanitary standards.

Safe Doors and Windows: The structural integrity of doors and windows, particularly in terms of secure locking mechanisms, was mentioned as an important safeguard for both physical security and peace of mind.

Solid Building Structure and Quality Inventory: Respondents noted that a well-constructed building with durable materials, along with high-quality inventory, significantly contributed to the overall safety and security of the accommodation.

Host/Staff of the Accommodation: The attitude and responsiveness of the host or staff were highlighted as key to ensuring safety. Attentive and proactive staff, especially in emergencies, was seen as an essential part of the safety infrastructure.

Comfort: While comfort was often associated with the overall quality of the stay, many respondents linked it to safety, particularly in terms of providing a stress-free environment where guests felt at ease.

Reliable Communication System: A dependable communication system, including access to local emergency services and a reliable Wi-Fi connection, was emphasized as crucial for both practical and emotional security.

Security Guarantee for Personal Belongings: Many respondents expressed the importance of secure storage options for personal items, such as lockers or safes, to ensure the safety of valuables during their stay.

Other Factors: Several additional considerations were identified, including the presence of a 24-hour reception, the availability of first aid services, the location's distance from disaster-prone areas, quality certifications, and the ability to make reliable bookings—all of which were seen as integral to enhancing the overall safety of the accommodation.

In the eighth question, respondents were asked to rate their perceived safety while travelling to Georgia for tourism purposes using a 5-point Likert scale, where 1 represented "I don't feel safe at all" and 5 indicated "I feel very safe." In the ninth open-ended question, respondents were asked to elaborate on their answers from the eighth question, providing further insights into the factors influencing their sense of safety.

The tenth question, also using a 5-point Likert scale (with 1 meaning "I am not prepared at all" and 5 meaning "I am fully prepared"), evaluated respondents' self-assessed readiness to protect themselves in the event of a natural disaster during their trip to Georgia. This question aimed to measure individual preparedness in response to potential environmental hazards.

Interestingly, while respondents generally expressed a sense of safety while travelling in Georgia, their responses to the tenth question indicated that they largely felt unprepared for natural disasters. This highlights a significant contrast between tourists' perceived safety in the country and their personal readiness to respond to emergencies, suggesting a gap in crisis preparedness and awareness among travellers. (See Table 1 for a detailed comparison of responses.)

Table 1. Perceived Safety and Personal Preparedness for Natural Disasters While Traveling to Georgia for Tourism

	How safe do you feel when travelling to Georgia for tourist purposes?	When travelling to Georgia for tourism purposes, assess your personal preparedness to protect yourself in case of natural disasters
1 score	1.9%	32.3%
2 score	4.1%	22.3%
3 score	23.1%	30.3%
4 score	40.8%	9.2%
5 score	30.1%	5.8%

According to the respondents, a sense of homeliness and familiarity with the local situation were identified as the key factors contributing to feelings of security in Georgia. However, those who

reported a lower sense of security primarily cited issues related to infrastructure, particularly in the mountainous regions, as well as concerns about transportation. Additionally, many respondents expressed worries about the country's lack of preparedness for natural disasters, which further contributed to their perception of insecurity.

"Throughout Georgia, I have visited all parts (Svaneti, Pshavi, Khevsureti, Tusheti, Ajara, Samtskhe-Javakheti, Pankisi Valley, etc.) with no problems. Locals everywhere were friendly and helpful when you had a problem." (Male, 29-39 years old)

One of the primary challenges in mitigating the long-term effects of natural disasters on the tourism industry is the restoration of the destination's "image" as a safe and desirable place to visit. In the context of this research, we sought to understand respondents' attitudes toward Shovi, a post-crisis destination, without directly referencing the 2023 tragedy. To gauge this, two questions were posed: "If you had the opportunity, would you visit Shovi for tourism purposes next season?" and "Please explain the reason for your answer."

The responses revealed a mixed outlook on Shovi's tourism potential. 23.3% of respondents expressed a willingness to visit Shovi in the next season, indicating some level of confidence in the destination's appeal despite its challenges. However, 41% of respondents stated that they would not visit, reflecting concerns that may be related to safety, infrastructure, or lingering perceptions of the area. A significant portion, 35.7%, selected "don't know," suggesting uncertainty or lack of clear information regarding the current state of the destination (see Figure 3).
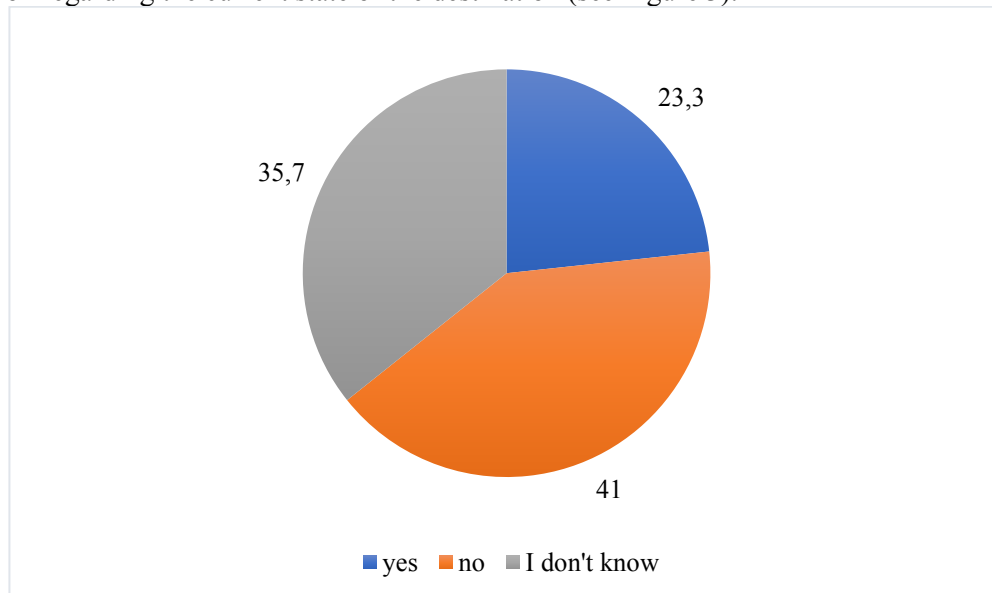

Figure 3. Willingness to Visit Shovi Next Season

The explanations provided by respondents who expressed a willingness to visit Shovi revealed that, for them, a single natural disaster was not seen as a deterrent to travel. On the contrary, they perceived visiting the destination as an opportunity to show solidarity with the local community and to demonstrate their interest in the region's recovery. These respondents emphasized that, in their view, tourism could play a role in the post-crisis revitalization of the area, highlighting a sense of responsibility and support for Shovi's future.

"I have a feeling of solidarity with the victim Racha. However, I think the probability of doing the same thing a second time is low." (Male, 51-61 years old)

The primary reasons for respondents choosing "no" or "I don't know" were negative associations tied to the 2023 tragedy in Shovi. The majority of respondents indicated that they were psychologically unprepared to visit a location that had recently been the site of such a traumatic event. A smaller portion of respondents cited concerns about the lack of physical security guarantees as a deterrent, rather than psychological readiness. Additionally, a few respondents clarified that their decision was not influenced by the tragedy itself, but rather by a general disinterest in mountainous and extreme destinations.

"I think that after the tragedy, proper actions were not taken to prevent a similar incident in the future. If a natural disaster occurs, Georgia does not have the appropriate system/management, transport and equipment for emergency response. I have no confidence in my country in this regard. Despite my great desire, I do not feel safe travelling to Georgia." (Female, 18-28 years old)

"From a moral point of view, it is a bit strange for me to rest in a place where such a tragedy happened. Maybe it will take a little more time to heal this wound."(Male, 18-28 years old)

The next question aimed to identify the stakeholders that respondents believed were responsible for ensuring tourist safety during natural disasters. Participants were allowed to select multiple options, including the government (state), the owner/manager of a tourist business, employees of a tourist business, tourists themselves, and others. The government (state) and the owner/manager of the tourist business were most frequently cited as key responsible parties.

When asked to identify the single most responsible stakeholder for tourist safety during natural disasters, the government (state) emerged as the clear leader. A substantial majority of respondents viewed the government as having the greatest responsibility for ensuring safety in crises. The owner/manager of the tourist business was ranked second though the percentage of respondents selecting this option was significantly lower, indicating that while the owner/manager is seen as important, their role is considered secondary to that of the government.

Structured Interview with Experts

The purpose of the expert survey was to analyse strategic approaches to mitigating the impact of natural disasters on the tourism industry and to identify relevant strategies for Georgia.

Experts identified several preventive strategic approaches to reduce the impact of natural processes on the tourism sector. These included: anti-avalanche systems, anti-landslide measures, continuous monitoring of forest fires, provision of appropriate technical equipment, international cooperation, staff training, the implementation of early warning systems, public awareness campaigns, involvement of geologists in the study of tourist destinations, analysis of long-term meteorological data for these destinations, investigation of anthropogenic impacts, and timely communication with the tourism industry.

Regarding the response phase, the respondents highlighted the following strategies: operational actions by rescue services, prompt and efficient responses from relevant tourism industry agencies (e.g., information distribution), implementation of aerial firefighting measures in the case of forest fires, the use of artificial avalanches when necessary, collaboration with the National Environment Agency, increasing the involvement of local authorities and residents in planning tourist facilities, creating risk maps, identifying hazardous zones, and conducting relevant training programmes.

For the recovery and rehabilitation phase, experts proposed the following strategies: implementing appropriate infrastructure measures, conducting targeted marketing campaigns by tourism industry agencies, reinforcing slopes in landslide-prone areas, performing hazard assessments with regular monitoring, and training qualified personnel.

When asked about the activities tourism-related companies and organizations should undertake to address the risks of potential natural disasters, respondents emphasized the need for tourism industry representatives to stay in contact with agencies responsible for risk monitoring and management. They should be informed about potentially vulnerable destinations and likely natural events and undergo training on related topics.

Discussion

The tourism industry cannot directly control natural hazards, yet effective collaboration among stakeholders can significantly mitigate the impact of such events on the sector. Crisis management in tourism requires the involvement of various actors, including government agencies, tourism businesses, tourists, the local population, the financial sector, and non-governmental organizations. Each of these stakeholders plays a crucial role in reducing the negative effects of natural disasters and ensuring the resilience of the tourism industry.

Research on post-crisis tourism rehabilitation consistently highlights the critical role of marketing in restoring the reputation of disaster-affected destinations. After a natural disaster, destinations are often perceived as unsafe, and their credibility suffers. This loss of trust leads to a decline in tourist demand, which can have long-lasting economic consequences. To restore the destination's image and reassure potential visitors, governments and tourism industry representatives must engage in targeted marketing campaigns that emphasize the safety and recovery efforts undertaken by the region (Aznar-Crespo, Aledo, & Melgarejo-Moreno, 2020; Estevão & Costa, 2021; Ha, 2023; Machado & Almeida, 2019; Todman-Lewis, 2017). In the context of Georgia, where the tourism sector is an essential component of the economy, these strategies become even more vital in rebuilding both the physical infrastructure and the emotional trust of tourists.

The survey conducted for this study offers valuable insights into Georgian tourists' attitudes toward safety and disaster preparedness. While many respondents indicated that safety was a consideration in destination and accommodation choices, it was not their primary criterion. Factors such as affordability, location, and the attractiveness of the destination outweighed security concerns. This finding aligns with broader trends in tourism where, despite the increasing prevalence of natural hazards, tourists tend to prioritize other factors, such as cost and convenience, over safety (Estevão & Costa, 2021).

Interestingly, while respondents rated their trip as generally safe, their self-assessed preparedness for natural disasters was notably low. A significant proportion of respondents reported feeling unprepared to handle a natural disaster should one occur during their visit. For instance, one participant noted:

"I don't feel safe at all because, unfortunately, I have to be an expert on everything myself to travel safely. Be it meteorological knowledge or other specific knowledge required for tourism facilities and entertainment activities. If you can't figure it all out yourself, you won't be able to rely on the hosts. Even if we look at Shovi, I'm sure that the people there, including the directors and owners of the facilities, did not even know that such a thing could theoretically happen. When you start a business, you need to know everything about your facility and the environmental conditions and be prepared." (Male, 18-28 years old)

The importance of restoring the "image" of a destination post-crisis is confirmed by the survey results, particularly in the case of Shovi. Although the 2023 tragedy in Shovi was not explicitly mentioned in the survey, the event's lingering psychological impact was evident. A large portion of respondents indicated they would be reluctant to visit Shovi in the next tourist season, citing concerns over safety and lingering trauma from the disaster. This is consistent with previous research which shows that tourists often associate post-crisis destinations with psychological discomfort, even when safety measures are in place (Machado & Almeida, 2019). However, a smaller group of respondents saw visiting Shovi as an opportunity to show solidarity and support for the local community in its recovery. This sentiment reflects a growing trend where tourists view their travel choices as a form of ethical support for regions recovering from crises.

For Shovi, the challenge lies in overcoming these psychological barriers through effective communication. With the right marketing campaigns—focused not only on physical rehabilitation but also on messaging that emphasizes solidarity and the destination's resilience—tourists may be more inclined to visit and contribute to the area's economic recovery.

The survey also sheds light on the broader issue of tourist safety and preparedness. The disconnect between tourists' perceptions of safety and their actual preparedness for natural disasters highlights a gap in both awareness and infrastructure. While many tourists felt generally secure in Georgia, the survey results indicated a lack of confidence in their ability to respond to potential crises. This discrepancy suggests that there is a need for greater emphasis on crisis education and preparedness for visitors. Tourists should be provided with clear, accessible information about what to do in case of natural disasters, as well as the safety measures in place at their accommodation and throughout the destination.

In terms of stakeholder responsibilities, the survey results confirm that the government (state) is viewed as the most important actor in ensuring tourist safety during natural disasters, with the owner/manager of the tourist business considered second in importance. This finding supports the view that public authorities must take the lead in crisis preparedness, with tourism businesses playing a supporting role in implementing safety measures and providing guests with information. However, it is clear from the survey that tourists also need to take responsibility for their own safety, especially in terms of preparedness. This suggests that tourism policies should not only focus on improving safety infrastructure but also on educating tourists about how to prepare for natural disasters while travelling.

Conclusion

In conclusion, while natural disasters are beyond the control of the tourism industry, a proactive and collaborative approach can significantly mitigate their impact. The findings from this survey highlight the critical role of effective communication, safety measures, and marketing in the post-crisis rehabilitation of tourist destinations. In the case of Georgia, particularly in regions like Shovi, the restoration of the destination's reputation will require a dual effort: physical infrastructure recovery combined with strategic messaging that emphasises solidarity, safety, and recovery.

The survey also reveals a significant gap in tourists' preparedness for natural disasters. While many respondents felt generally safe during their travels in Georgia, their perceived lack of personal

readiness to respond to emergencies points to the need for improved awareness and crisis management education. Efforts to enhance tourist preparedness should be a priority, alongside strengthening safety measures at destinations and accommodations.

The rehabilitation of a destination's "image" after a crisis is critical, as the survey shows that the aftermath of the 2023 tragedy in Shovi has had a lasting impact on potential visitors' perceptions. Many respondents expressed reluctance to visit Shovi in the next tourist season, associating the area with psychological discomfort rather than an opportunity for solidarity. However, with the right marketing campaigns that focus on recovery, resilience, and the positive role of tourism in supporting post-crisis recovery, these perceptions can be shifted.

Ultimately, a comprehensive, multi-stakeholder approach that integrates risk reduction, crisis response, and post-crisis rehabilitation will be essential to ensuring Georgia's tourism sector becomes more resilient to natural disasters. By addressing the gaps in tourist preparedness and rebuilding the image of post-crisis destinations, Georgia can foster long-term sustainability and safety within its tourism industry.

In addition to the findings from the survey, it is essential to consider a comprehensive framework for managing the impact of natural disasters on tourism. These strategies can be categorised into three main approaches: preventive, response, and recovery-rehabilitation. Each of these approaches plays a critical role in enhancing the resilience of tourism destinations and ensuring the long-term sustainability of the sector.

As part of the preventive strategic approach, it is essential to implement the following actions:
Identification of dangers and risks of natural disasters
Creation and distribution of a relevant database to interested parties
Creation of maps depicting natural processes and risks
Constant monitoring of vulnerable areas and updating of information
Implementation of an early warning system
Reasonable artificial intervention with respect to specific natural processes (for example, artificially triggering an avalanche during an avalanche hazard to prevent sudden damage in the future)
Strengthening of areas vulnerable to specific natural processes (for example, strengthening of landslide-prone zones)
Conducting educational and informational campaigns in order to raise awareness and qualification
Provision of rescue services with appropriate equipment and qualified personnel
Formation of insurance culture
Developing a crisis management and mitigation plan
Within the framework of the strategic response approach, it is essential to implement the following actions:
• Effective distribution and management of resources
• Coordinated cooperation between various rescue, administrative services, and stakeholders
• Ensuring rapid exchange of reliable information
• Formation and effective use of qualified volunteer groups
Within the framework of the strategic approach to recovery and rehabilitation, it is essential to implement the following actions:
• Provide support to affected communities
• Restore damaged infrastructure
• Take appropriate steps for the rehabilitation of tourism businesses through insurance and financial institutions.
• Conduct active marketing campaigns to promote the safety of the destination

Competing interests

The authors declare that they have no competing interests.

Authors' contribution

The authors of the article jointly agreed on the topic and methodology of the article. As the systematic review methodology requires, both authors were actively involved in the research process. Abstract, introduction and discussion are provided by Tatiana Sitchinava, and results and conclusion are written by Mariam Sharia.

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