Chapter 16
Fragile Foundation:
Tourism, Culture, and Environmental Stability in Joshimath and Kedarnath

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ABSTRACT

This study aims to explore the ecological and cultural challenges in the delicate ecosystems of Joshimath and Kedarnath. A mixed method approach was adopted. Primary data was collected through semi-structured interviews with 35 tourists to look at the perception of environmental degradation and cultural influences. Content analysis of secondary data, including media reports and academic articles add contextual insights to the issue. The findings suggest that overcrowding and rapid construction works are increasing the environmental instability in both the sites; leading to natural disasters like floods, landslides, avalanches, etc. The tourists are disappointed due to overcrowding, and the threats it brings to the cultural and natural heritage. The study, thus highlights the urgent need for responsible tourism and much stricter developmental control measures. This study highlights that without immediate interventions, these fragile ecosystems are left with the threat of suffering from irreversible damages infringing upon their environmental significance and cultural values.

1. INTRODUCTION

The Himalayas have been a topic of scholarly research since time immemorial. Pradhan (1979) regarded it as a 'massive home of perpetual snow and serenity'. Mountain tourism, especially in the Himalayas, stands at the intersection of adventure, spirituality, and environmental preservation. The Himalayan range, often referred to as the 'roof of the world,' has long captivated travellers, pilgrims, and nature enthusiasts with its towering peaks, spiritual significance, and rich biodiversity. The appeal and attractiveness of the region are under threat due to its fragility, due to the continuous disbalance between human interference and nature. This study deals with two regions that are among the most affected fragile ecosystems: Kedarnath and Joshimath. These are famous pilgrimage destinations in Uttarakhand, whose fragility has resulted in both natural and human induced calamities. The plight of these sites is a consistent plea for promoting sustainable tourism and ensuring environmental management.

Located on the Rishikesh-Badrinath National Highway, Joshimath happens to be a very significant location on pilgrim routes both to the pilgrimage sites of Badrinath and Hemkund Sahib (Bera et al., 2023). As an environmentally stressed town, Joshimath has been sinking (subsiding) lately due to a combination of unplanned constructions, deforestation, and

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other human activities that enhance environmental instability (Bera et al., 2023). Similarly, the holy site of Kedarnath is hardly unknown to environmental challenges (Maikhuri et al., 2017). Ringed by glaciers and steep peaks, the valley of the Mandakini River is a constant threat in the form of flash floods, avalanches, and floods, brought home recently by the 2013 flood. The devastated infrastructure, lost lives, and drastically declined tourism base left behind in the region meant that the region would recover slowly.

The consistent number of avalanches in the area demonstrates how vulnerable Joshimath and Kedarnath are. Avalanches are a recurring feature of the landscape in Uttarakhand—if that could be a word there. They are leading to both loss of lives and damage to property in the region. For example, in the year 2021, 16 people lost their lives when an avalanche destroyed an offbeat camp of the Border Road Organisation in the Girthi Ganga Valley in the Indo-Tibet border. The same year, an avalanche on Mount Trishul led to the deaths of seven mountaineers. A hundred people have lost their lives due to the deadly avalanches in the region of Uttarakhand over the last decade, which is a testament to the fact that extreme weather conditions in those mountainous regions are fatal.

Due to these factors, evaluating the concept of carrying capacity is necessary in these areas. Carrying capacity is a term used to denote the maximum number of people an area can host without causing permanent damage to either a natural or social environment (Fuju et al., 2011). As shown in Figure 2, Kedarnath and Joshimath have seen dramatic rises in tourists over the last two decades, with Kedarnath witnessing a rise of 233 percent in tourists from the year 2000 to 2019. Similarly, in the case of Joshimath, it is found that there had been 297 percent rises in tourist visits between 2000 and 2010. However, this scenario is changing with natural calamities such as the floods and avalanches in 2013 and global crises such as the COVID-19. In the year 2021, Joshimath saw a decline as much as 89 percent and Kedarnath saw a decline as much as 86 percent from its high point year. These fluctuations highlight how volatile the nature of tourism in these regions is: environmental disruption can rather easily lessen visitor number projections and affect livelihoods (Buckley, 2000).

Besides the environmental interest of conserving the environment, management of tourism with respect to the carrying capacity is essential so that tourists and the local community in these destinations can be protected. The imposed rush of human activities, ranging from over-construction of roads and hotels to tunnelling and hydroelectric projects, has stretched the region's capabilities to fight natural disasters. (Kc et al., 2022)

As large hydropower development projects dominate the Central Himalayas, further accelerating slope instability and changing natural river flow conditions, especially at catastrophic events such as those that produced the June 2013 Uttarakhand disaster (Sati and Gahalaut, 2013; Sundriyal et al., 2015). Unless critically assessed, such projects have the potential to inflict major damage by destabilising the terrain and threatening local sustainability (Sati et al. 2019). The Ravi Chopra Committee of 2014 linked these projects with the receding 2013 floods that destroyed more than 24 hydropower plants and caused loss of lives as well (Jain, 2021). Similarly, projects like the Tapovan-Vishnugad Hydroelectric Project, located in the Chamoli district of Uttarakhand, also display the vulnerability of the Himalayas, as tunnelling of stressed, jointed, and fractured rock formations resulted in collapse and water inrush and thus increased environmental instability accompanied by increased susceptibility to another geological upsurge in that fragile area (Kc et al., 2022).

In conclusion, the Himalayas, with their spiritual, cultural, and natural significance, are at a critical juncture. The rapid rise in tourism, coupled with the increasing frequency of natural disasters, highlights the urgent need to adopt sustainable tourism practices that respect the region’s carrying capacity. Joshimath and Kedarnath serve as stark reminders of the fragility of mountain ecosystems and the potential consequences of unchecked development. As more pilgrims and tourists flock to these sacred and scenic sites, the need for careful environmental management, disaster preparedness, and responsible tourism becomes ever more apparent.

Thus, at this point in time, the Himalayas, with their spiritual and cultural importance and also for their natural significance, are at a serious stage. The recurring natural disasters coupled with the tremendous rise in tourist numbers make an urgent plea to shift to sustainable tourism practices that work within the carrying capacity of the region. The present activities in Joshimath and Kedarnath are only adding to the hazards of fragile mountain ecosystems and the real hazards of unchecked development. Additionally, as pilgrims and tourists continue to increase, there is a need to exercise careful environmental management, disaster preparedness, and responsible tourism.