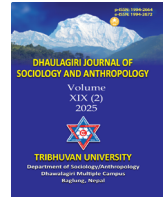


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# Transformation of Sherpa Livelihoods, Resilience, and Sustainability in the Everest Region of Nepal

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## Abstract

This study explores Everest tourism's role in building resilience and reshaping livelihoods of Sherpa households in the two settlements- Namche Bazaar and Thulo Gumela in the Everest (Khumbu) region of the Nepal Himalaya. Employing a comprehensive framework that integrates economic, social, cultural, and environmental facets, this research primarily scrutinizes the primary data gathered through face-to-face interviews, key informant interviews, and focus group discussions, with an equal number of participants from each study site. The findings reveal a significant disparity in terms of economic opportunities. Namche Bazaar, strategically located along the main trail of Khumbu to Everest Base Camp, benefits substantially from Everest tourism. Whereas Thulo Gumela, situated off the main route, faces economic disadvantages and limited access to local tourism initiatives. While both villages share similar social, cultural, and environmental influences of tourism, notable discrepancies emerge between them. These differences are largely driven by the exponential growth of tourism in the region, the establishment of Sagarmatha National Park, and the rapid rise in visitor numbers. They are further shaped by unequal access to tourism opportunities and the broader influences of modernization and technological advancement. These interconnected and underlying forces have reshaped Sherpa livelihoods, stimulating their resilience and adaptive capacities, creating both opportunities and challenges. The study offers policymakers and development practitioners insightful information, advocating strategic tourism planning and management for Khumbu. The study highlights acknowledging and promoting potential tourism products of underrepresented villages like Thulo Gumela. This approach helps promote equitable economic growth across all villages of Khumbu while safeguarding Sherpas' unique sociocultural heritage and rich biodiversity, thereby offering opportunities for all communities within this historic region to benefit from tourism.

*Keywords:* Everest, Namche, Sherpa, Thulo Gumela, tourism

## Introduction

The Everest region, named after the world's highest peak- the Mount Everest (8,848 meters) lies towards the northeastern Himalaya in Solukhumbu District within Koshi Province of the Federal Democratic Republic of Nepal. Known as Sagarmatha in Nepali and Chomolungma in Sherpa, the Mt. Everest is the key attraction of the

Everest or Khumbu region. It attracts a large number of mountaineers and trekkers every year ([Chen et al., 2025](#); Ministry of Culture, Tourism & Civil Aviation [[MoCTCA](#)], [2020](#); [Nepal, 2015](#); [Rai, 2017](#)). This region encompasses the Sagarmatha National Park (SNP), established in 1976. Later, SNP's buffer zone was created in 2002 covering an area of 275 km<sup>2</sup> including the settlements inside the park ([Bhattacharai, 2021](#)). SNP has been designated a UNESCO



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(The United Nations Educational, Scientific and Cultural Organization) World Heritage Site (WHS) since 1979. The Everest region is prominent for its splendid Himalayan landscapes, rich natural resources, and the vibrant Sherpa culture that is distinctive to the area (Jaquemet, 2017; Lama, 2005; Nepal et al., 2020). Additionally, Dingboche village lying at around 4,410 meters above sea level near the Everest Base Camp adds charm to the region.

The Sherpas of Khumbu are believed to be migrated from the Kham region of Tibet around five to six centuries ago (Purandare & Balsavar, 2024; Stevens, 1993; von Fürer-Haimendorf, 1964). In Nepal, Sherpas are identified as Adivasi Janajati, which represents one of the 59 indigenous groups, making up about 0.45% of the country's total population of 29.16 million (National Statistics Office [NSO], 2021). Solukhumbu District, which includes the Khumbu region, is home to 17,878 Sherpas (NSO, 2021). Prior to the first ascent of Mount Everest in 1953 by a local Sherpa, Tenzing Norgay from Thame village and Sir Edmund Hillary, a philanthropist and mountaineer from New Zealand, the affluence about the majestic natural beauty and the unique Sherpa culture remained largely unknown to the outside world (Miller, 2017; Sherpa, 2014; Spoon, 2008). In fact, this historic event marked the beginning of Khumbu's tourism boom (Fisher, 1990; Mu et al., 2019; Sicroff, 2023), leading to greater recognition and appreciation of the region and its culturally rich people. Over time, the expansion of Everest tourism has provided considerable advantages to many Sherpa households (Fisher, 1990; Jacquemet, 2017; Sherpa, 2012). Before tourism, the primary source of Sherpa livelihood was subsistence farming, yak herding, and bartering trade (Spoon, 2008), but with the advancement of tourism the economic characteristics of the region has drastically changed (Sherpa & Wengel, 2023).

Today, tourism is the mainstay of Khumbu, with most households depending on it as their primary source of income (Nepal et al., 2020; Nyaupane et al., 2014). Studies (Fisher, 1990; Miller, 2017; Nepal et al., 2020; Rai, 2017; Sherpa, 2012) have shown that tourism revenue has greatly improved living standards for many Sherpa households. Yet there is a lack of empirical data and research on which villages experience the most positive and negative implications of tourism in the region. What started as mountaineering and later evolved into trekking tourism is now commonly referred to as "Everest tourism" (Nepal, 2015). Notably, the research by Stuart (2024), Singh et al. (2020), Jaquemet (2017), Spoon (2008), Nepal (2002), and Stevens (1996) demonstrate that the rise of tourism in Khumbu has led to a noticeable decrease in the Sherpa community's involvement in practicing agropastoral activities, signaling a major shift in their way of life.

There are a few studies on Khumbu attempting to explore the impacts of tourism on economic, social, cultural, and environmental aspects of tourism on the Sherpa community. However, these are focused on a broader scale and the

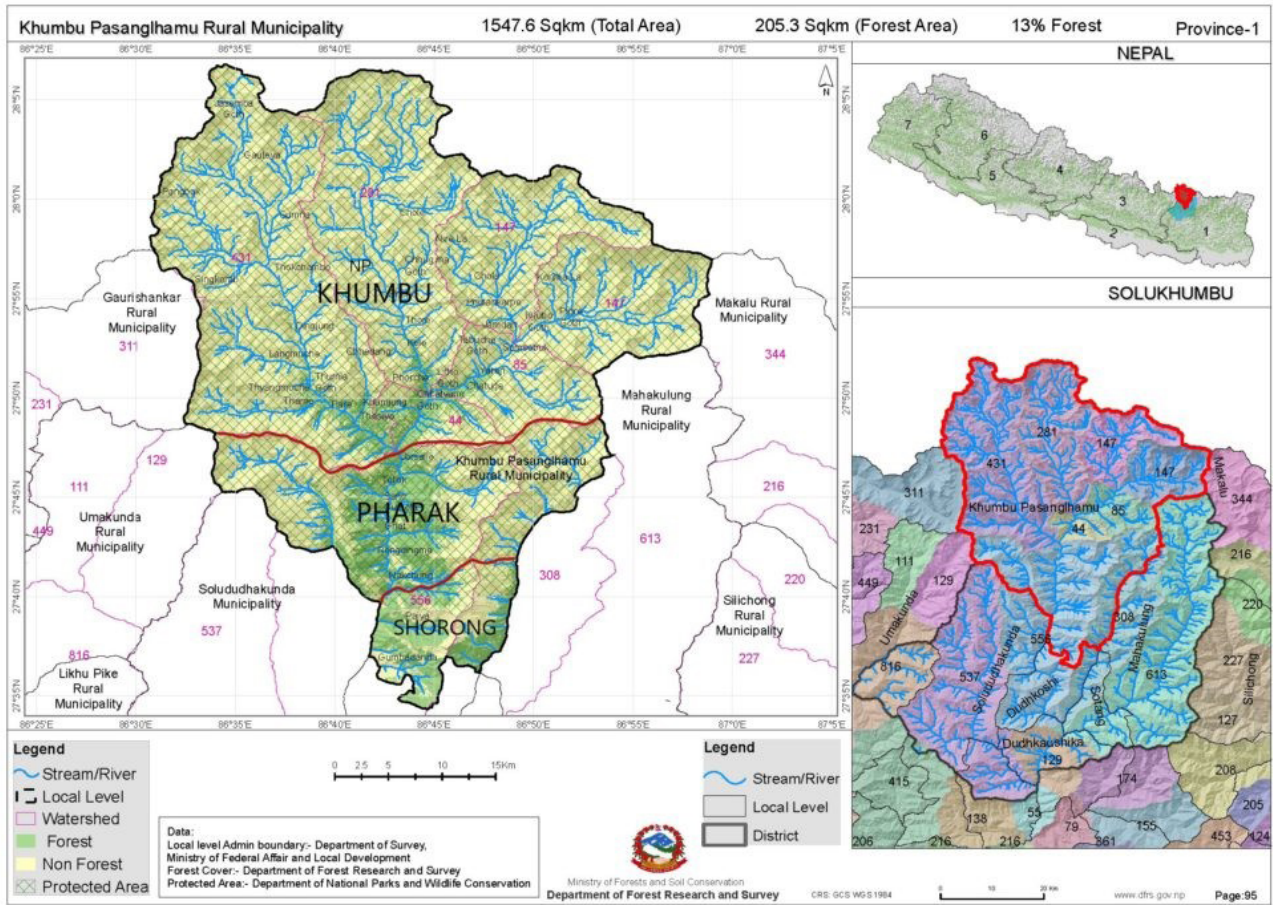
number of studies specific to individual villages is still very small. The studies conducted in individual sites are also centered on popular villages like Lukla, Namche, and Khumjung, located along the Everest trail. Other studies (Faulon & Sacareau, 2020; Nepal, 2011, 2015; Sherpa, 2014) on Khumbu have assessed the impacts of climate change. The findings of these studies document that social and economic disparities in the region may worsen if the people do not adopt sustainable livelihood practices. Other scholars (Adams, 1992; Gioli et al., 2019; Lama et al. 2019; Pandey & Bardsley, 2015; Rayamajhi & Manandhar, 2020; Wyss et al., 2022) have assessed Himalayan social-ecological systems, mountain livelihoods, and adaptation strategies focusing on resilience as a key factor in tackling the various social and ecological impediments.

Against this backdrop, this study aims to explore the transformation of Sherpa livelihoods particularly over the past 70 years focusing on Sherpas' resilience-building capacities while they underwent a range of socioecological complexities. This period includes two pivotal events: the establishment of democracy in Nepal in 1951 which opened the country's frontier for foreigners, and subsequent first ascent of Mount Everest after two years, that led to the advent of Everest tourism. This research contributes to the existing literature by offering a comparative study of Khumbu's two Sherpa settlements: Namche Bazaar and Thulo Gumela. While the residents of these villages share similar cultural backgrounds, geographical settings, and administrative structures, significant difference is in terms of their proximity to the main trekking trail to Everest Base Camp. This difference has a profound impact on their tourism-based income and consequent challenges they face. Additionally, the study examines how individual tourists and current tourism trends affect the resilience-building efforts of households in these villages. The research also integrates the local Sherpa perspectives of "resilient livelihoods" in the context of Khumbu Sherpa society, examining how Everest tourism influences their resilience-building capacities and transformation across economic, social, cultural, and environmental dimensions of livelihoods.

## Study Area and Research Method

### Study Sites

Namche Bazaar and Thulo Gumela are situated in the Khumbu region of Solukhumbu district (see Figure 2.1 & Figure 2.2). Khumbu is geographically defined by the coordinates 86°31' - 86°58' East Longitude and 27°47' - 28°71' North Latitude (SNP, 2020). This region is characterized by its dramatic snow-capped mountains, diverse ecosystems, including temperate forests, sub-alpine forests, and tundra vegetation, barren lands, and several water bodies. Khumbu's elevation ranges from approximately 2,800 meters above sea level at its southern boundary to the summit of Mount Everest (8,848 meters), which marks the country's northern border with



**Figure 1** Map showing the Khumbu Region within Khumbu Pasanglhamu Rural Municipality of Solukhumbu District in Nepal

Source: Adapted from Puig (n.d.)

Tibet (Nepal, 2015; Spoon, 2010). The new constitution of the Federal Democratic Republic of Nepal divides Solukhumbu district into eight municipalities in which only one is urban (Solududhkunda) and others are rural (Dudhkaushika, Nechasalyan, Dudhkoshi, Mahakulung, Sotang, Likhupikhe, and Khumbu Pasanglhamu). Further, each municipality is subdivided into wards, known as the smallest local administrative units. The study villages are located within the Khumbu Pasanglhamu Rural Municipality (KPRM) which comprises five wards: Jubing (Ward Number 1), Chaurikharka (Ward Number 2), Takasindu (Ward Number 3), Khumjung (Ward Number 4), and Namche (Ward Number 5). While Namche Bazaar is incorporated within Ward Number 5, Thulo Gumela exits in Ward Number 3 (see Figure 1 & Figure 2).

**Namche**

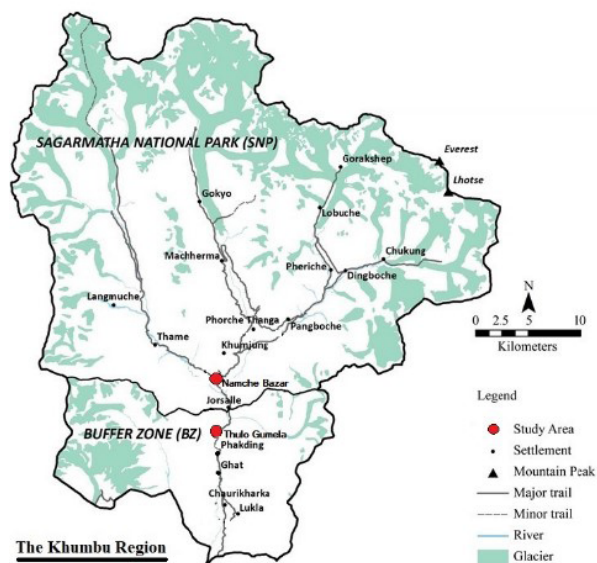
Namche Bazaar lies within the Sagarmatha National Park at an elevation of 3,440 meters above sea level, just below the park headquarters. This bowl-shaped village is popularly known as the gateway to Mount Everest and the cultural heart of the Sherpa community. It is home to approximately 200 households. Namche offers panoramic views of iconic Himalayan peaks such as Mount Everest,

Kongde Ri, Thamserku, Nuptse and Mt Ama Dablam. Namche attracts large numbers of visitors during the peak trekking seasons of autumn and spring. It is also known as the capital of Khumbu and was historically a key trading post. The village has now become a major acclimatization stop for trekkers heading to Everest Base Camp. With the growth of tourism in the region, Namche has transitioned from traditional trade in Tibetan relics to trade in imported goods and trekking gear. This village has now modern infrastructure, including electricity and healthcare services and the cultural landmarks such as monasteries and museums that commemorate Sherpa heritage. These features offer a greater interpretation of local Sherpa traditions as well as enrich the overall visitor experience.

**Thulo Gumela**

Thulo Gumela is a small, beautiful village situated within the SNP’s buffer zone at an altitude of about 2,700 meters. It lies about 800 meters below Namche Bazaar. The nearest villages from Thulo Gumela towards the Everest trekking trail are TokTok and Phakding. Both villages are about one kilometre away from Thulo Gumela. Phakding is another popular acclimatization stop for trekkers, especially those trekking in the lower Khumbu area. The





**Figure 2** Map of the Khumbu region showing study sites: Namche Bazaar and Thulo Gumela

Source: Adapted from Bhattarai (2021)

total population of Thulo Gumela is about 100, spread across 30 households. Alongside Sherpa households, there are five blacksmith families who migrated from Okhaldhunga about three centuries ago. This village is rich in its natural beauty and tranquility, featuring painted mani walls along its trails and surrounded by lush hills and snow-capped mountains. The Pema Choling Monastery, located in this village, is one of the Khumbu's main monasteries. A large number of Sherpa people from Khumbu villages gather in this monastery to perform a range of their ritual and cultural activities. Agriculture is the primary source of livelihood for the residents of this village, supported by a few seasonal jobs in tourism and construction. Access to public services is limited in this village due to remoteness and the villagers are required to travel to nearby locations for education and basic goods.

### Data Collection Tools and Technique

This study utilizes both primary and secondary data sources. Primary data were collected through 18 face-to-face interviews, nine key informant interviews, and two focus group discussions, ensuring equal representation of male and female participants from both study sites. The Sherpa participants for interviews and focus group discussions were roughly categorized into three age groups: 20-30 years, 31-45 years and 46 years and above. The rationale for this categorization was to understand a range of perceptual and experiential differences among young, adult, and older people about the same or similar issues. Likewise, the key informants in Namche were a Ward Chairman, a local schoolteacher, the Chairman of Namche Hotel Association, the Chief Warden of the Sagarmatha National Park (SNP), and the secretary

of Sagarmatha Pollution Control Committee (a local NGO). In Thulo Gumela, the ex-chairman of the Kongde Community Forest User Group, a local schoolteacher, the lama priest of a local *gumba*, and a social activist cum proprietor of Rimijung Nuru Home volunteered as key informants. Key informants were approached through the researcher's personal networks and in coordination with officials from Sagarmatha National Park (SNP). The information obtained from these participants was recorded on a digital voice recorder (Olympus Digital Voice Recorder 4GB with Built-in USB). After the organization of data, they were coded and categorized to generate themes. The thematic analysis built on those themes was instrumental in identifying the factors contributing to Sherpas' livelihood transformation, resilience building, and sustainability. Where relevant, secondary data sources were also employed to support and contextualize the findings, particularly in understanding the characteristics of the local Sherpa population and the research setting. Fieldwork was conducted by using purposive sampling, in close consultation with key informants from both villages. As the study progressed, the snowball sampling technique proved effective in identifying suitable participants for in-depth interviews and group discussions. The data were analyzed using a descriptive research design, organized around four central thematic areas, which provided a structured framework for interpreting findings and understanding their broader implications.

### Results and Discussion

The establishment of Sagarmatha National Park and associated tourism in Khumbu brought several changes and challenges in the economic, social, cultural, and environmental aspects of the Sherpa households in the study villages. These included both positive and negative implications. Insights into positive and negative implications were based on the participants' perceptions of these transformations in their livelihoods and households' situations over time, that is, before and after the advent of tourism in the region, and later following the establishment of SNP. As specified earlier, these are discussed under four key themes in the following sections.

### Economic Implications

The economic landscape of the Khumbu region is influenced by geographical factors, tourist accessibility, seasonality, and ownership of tourism assets. Many Sherpa families operate hospitality businesses such as hotels, lodges, restaurants, and shops along key trekking routes. The diversity in size and quality of these enterprises reflects the owners' financial status and location. Modern amenities like internet access and hot water are now standard in most lodges. The region has seen the emergence of international brands in major settlements like Lukla and Namche, indicating a shift towards modern influences. Local

residents understand that the characteristics of their tourism businesses- specifically their location, size, and quality- are vital for income generation.

Interviews reveal that households operating tourism-based businesses along the Everest trail generally earn higher incomes with comparatively less physical labor than those involved in more demanding roles such as mountaineering or working as trekking guides. Families managing hotels, in particular, reported covering their annual expenses within 6 to 8 months during the peak trekking seasons. However, only ten interviewees from Namche Bazaar acknowledged this economic potential, citing ongoing challenges stemming from the 2015 earthquake and the prolonged impact of the COVID-19 pandemic on the tourism sector. In contrast, residents of Thulo Gumela pointed to their village's remoteness and the lack of promotional support as key obstacles to attracting visitors. Despite these constraints, a few households have successfully launched homestay businesses in the post-earthquake period, aiming to generate income while simultaneously preserving Sherpa cultural traditions. All key informants from Thulo Gumela further corroborated these. As one focus group participant remarked that:

...at the time after Nepal's massive Earthquake of 2015, we sat for a meeting regarding the reconstruction of our damaged houses. We thought about making the houses as well as the income. Later, we decided to make houses of the same design and standard with modern toilets and bathrooms attached... and that was for the purpose of running homestay homes (M 38, Thulo Gumela).

Several participants from Thulo Gumela expressed strong beliefs in the untapped potential of their village's natural and cultural tourism assets. They emphasized that, with proper promotion and infrastructure, these resources could be leveraged to attract visitors and generate income through community-based tourism. A key example cited was the Pema Choling Monastery, regarded as one of the three oldest and largest monasteries in the Khumbu region. Participants identified the monastery as the village's most significant cultural tourism asset, highlighting its historical and spiritual importance as a means to draw both domestic and international tourists. One of the interviewees stated that:

...if the sky is clear, then one can see the peak of Mount Everest by going to the hillside of our village, which is not that far. Isn't it awesome to view the summit of Everest from a lower altitude? Besides the taste of Sherpa culture, dances, songs, and foods there are so many things to delight guests here (M 24, Thulo Gumela).

During the focus group discussion, all participants from Namche Bazaar emphasized that high-altitude climbing has historically been the primary source of income for most Sherpa households in the Khumbu region. They asserted that without earnings from this sector, it would be nearly impossible for Sherpa families to support their livelihoods

and finance their children's education in Kathmandu. Income from mountaineering is often channeled toward accessing better educational opportunities and enhancing overall living standards. As tourism began to surge in the 1970s, many young Sherpa men and their families migrated to Kathmandu in search of employment in the trekking and mountaineering sectors (Robinson & Twynam, 1996). By 1989, Sherpa entrepreneurs had made significant inroads into the industry, with 26 of the 56 larger trekking agencies registered with the Nepal Trekking Agent Association (NTAA) owned by Sherpas, employing 94 permanent staff, 70 part-time workers, and approximately 670 seasonal employees (Fisher, 1990).

According to the chairman of the Namche Hotel Association, there were 60 lodges in Namche Bazaar by 2017/18. Rai (2017) further documented 282 hotels and lodges along the trekking route from Lukla to Everest Base Camp, excluding smaller, informal establishments. Most respondents from local villages confirmed that these tourist accommodations are predominantly owned and operated by Sherpas. They also highlighted remoteness and high transportation costs as major factors contributing to price inflation in the region. Employment terms for porters, climbers, cooks, and *sirdars* are typically negotiated directly between employers and employees (Spoon, 2008). Notably, respondents indicated that porters are generally perceived to hold a lower status within the hierarchical structure of trekking and mountaineering labor. All key informants from both villages also corroborated these facts. Furthermore, 16 interviewees from Namche reported that many Sherpas began to withdraw from high-altitude guiding roles in the late 1970s, citing the profession's increasing physical demands and associated risks. Consequently, many shifted towards owning or working in hotels and lodges. One interviewee remarked that:

... many of the Sherpa people who used to work as porter, guides, mountaineers in the past are now running hotels/lodges, teahouses, restaurants, mixed businesses (grocery shops), bakery cafes and so on. These activities do not require more physical effort, and they are also not risky like high altitude trekking and or climbing professions...you just stay at your home and wait for tourists to come...there is a minimal chance of business failure in this profession as it is doing well until now (M 63, Namche).

However, this perception seemed erroneous given the pandemic, which, since the beginning of 2020, brought world tourism to its knees. Accordingly, climate change and the pandemic together have placed burdens on both the health and economy of Sherpa households in Khumbu, making them weaker and thus less resilient. The majority (eleven) interviewees in Namche opined that about 60% of Khumbu residents' income comes from the hotel-lodge sector. Likewise, these respondents believed that 25 % of their income comes from government or non-government salaries and 15% from foreign remittances.

In Thulo Gumela, the primary livelihood involves selling vegetables to hotels and restaurants along trekking routes. Seasonal employment in tourism and construction also significantly supports the local economy, providing jobs for porters, guides, and trades people. All respondents in Thulo Gumela acknowledged tourism's vital role in household incomes, differentiating between direct income from tourist services and indirect income through local businesses hiring labor or purchasing goods. Recent trends indicate diversification of labor among porters in Khumbu, with various castes, such as Rai and Tamang, participating. However, the economic benefits of tourism are not equitably distributed among Sherpa households; geographical factors influence income opportunities. For instance, Namche's proximity to the Everest route enhances earning potential compared to Thulo Gumela, which relies mainly on porter work and vegetable sales. This disparity has led to social stratification among Sherpas, affecting community relations. In conclusion, while tourism is crucial for Khumbu's economy, its uneven benefits pose economic challenges and social tensions that threaten community cohesion.

### Social Implications

The elements that significantly enhance the social dimensions of resilience building among Sherpa households in Khumbu are fundamentally linked to social implications. Participants consistently identified trust, shared norms, values, reciprocity, and community networks as essential components of social capital within Khumbu's Sherpa society. These elements not only foster creativity and knowledge but also enrich the community's traditions, culture, meaning, and overall vitality. It is important to note that the characteristics of social capital can vary based on individual household needs or societal demands for livelihood resources, as well as the breadth of their social connections.

The majority of participants recognized the importance of social networking not just for practical exchanges, such as borrowing or lending money, household items, farming tools, equipment, and seeds, but also for achieving collective community objectives like constructing gumba (monasteries), bridges, houses, and engaging in agricultural work through labor reciprocity. However, perspectives on the sustainability of these social networks and relationships among Khumbu Sherpa households varied between study villages. Some participants expressed confidence in their maintenance, while others reported a decline. Those who perceived a deterioration attributed it primarily to modernization driven by tourism development in the region and increased interactions with foreign tourists. This group noted that traditional social norms and values have shifted since their initial encounters with outsiders. A prevalent sentiment among participants was that economic prosperity stemming from tourism-related income has led to a growing individualism among Sherpas. This trend

suggests a troubling decline in the longstanding trust and reciprocity networks that have historically been vital for managing livelihood risks within this community. For example, one interviewee commented that:

...now the Sherpa people are always running after money; they don't have time for social gatherings like in the past. Nowadays, if you have money, you can buy everything, so you do not need your neighbors and relatives to help you. Tourism did not bring only money to the region and improved Sherpas' livelihoods but also influenced the culture and tradition of social unity, trust, values and relationships (74 M, Namche).

Participants recognized that family, kinship, and neighborhood networks play a crucial role in bolstering social resilience by sharing knowledge and resources. However, many participants noted that increased financial capital has diminished the importance of reciprocity, thereby weakening social cohesion among Khumbu Sherpa households. This shift can be attributed to the introduction of tourism as a 'cash for work' initiative following the influx of tourists into the region. As a result, traditional labor exchange practices—once integral to Khumbu Sherpa culture—have seen a significant decline (Nepal, 2015; Spoon, 2008). A consensus emerged among participants from both villages that the tradition of labor reciprocity is now nearly extinct within these communities. Historically, this system was vital for agricultural activities, and cultural projects such as painting *mani walls* and constructing monasteries and *chortens*. The erosion of this reciprocity system stems from profound changes in traditional social relations, networking dynamics, and community cohesion among the Sherpas. These elements are essential for enhancing various aspects of livelihood capitals within their society. Regarding this issue, one interviewee underlined that:

...more than money, important is the social unity, strength and happiness because they are qualities of life to make people socially and psychologically fit and resilient. At present, I do not think that there is any Khumbu household who can't meet the basic livelihood requirements such as food, shelter, clothes, and access to education, drinking water, health, and communication facilities. However, the Sherpa people of Khumbu who truly feel honour to be Sherpa are disappointed to observe the loss of rich and unique Sherpa culture, traditional practices, and identity (80 F, Thulo Gumela).

Responses from participants across various age groups reveal a shared concern about the negative effects of tourism on Sherpa culture and social cohesion. Many participants view tourism as a primary driver of economic disparities within Sherpa households, which has, in turn, led to the emergence of distinct social classes based on financial standing. Wealthier Sherpas are often seen as belonging to an upper class, while those with limited access to tourism-related opportunities are perceived as part of a lower class.

In Thulo Gumela, around two-thirds of interviewees noted that wealthier families frequently consider lower-income households to be socially inferior. The majority of key informants in both villages echoed this sentiment. Interestingly, despite their wealth, individuals in villages along the Everest route hold less social influence than local religious leaders, who traditionally play a central role in community decision-making. This power dynamic allows religious leaders to implement policies that tend to favor higher-status individuals, further reinforcing social stratification.

Furthermore, the majority- fifteen interviewees admitted that Sherpas' tourism businesses outside Khumbu cause prolonged absences from their home valley, resulting in limited participation in local and social activities. This trend raises concerns about the weakening of social networks and a decline in community cohesion. Young adult Sherpas, in particular, are disproportionately affected by this shift. They are often expected to leverage their mountaineering skills by assisting international climbers on Mount Everest. The demand for Sherpa support remains high, as Western climbers typically offer significantly higher compensation compared to local clients. This situation not only exacerbates the economic pressures faced by young Sherpas but also poses broader challenges to cultural preservation and community integrity amid growing commercialization driven by tourism.

### Cultural Implications

Several authors (Jacquemet, 2017; Nyaupane et al., 2014; Pawson et al., 1984) have noted that Khumbu Sherpa culture has undergone significant transformation, largely driven by the influence of Western tourism. Identifying and assessing changes in fundamental cultural attributes—such as norms, values, beliefs, behaviors, traditions, and lifestyles—within a specific community, particularly from an outsider's or etic perspective, is very confronting. Hence, numerous scholars (Adger, 2006; Beals et al., 2020; Foster & Gilman, 2015) argue that the most effective way to understand cultural changes in any community is by gathering insights directly from local individuals who have experienced and observed their own culture.

Participants between the age group of 20 to 45 years perceive tourism and its associated modernization as primary factors contributing to changes in Sherpa culture—including shifts in behaviors, dietary habits, clothing choices, and overall lifestyles. Notably, these participants tend to regard the effects of tourism as predominantly positive rather than negative. They recognize that tourism has helped revitalize several traditional cultural and religious practices. Furthermore, some original practices are viewed as outdated or as barriers to enhancing living standards and fostering resilience. For example, one focus group participant articulated that:

... topics related to the Sherpa rituals and festivals might be unique for the non-Sherpa people to observe

and or make issues for their research, but most of the Sherpa traditions have become superfluous at present as they don't have positive and practical implications in our everyday situation. Rather, they are the root of our financial burden. To give an example, every Sherpa household in Khumbu must take the turn of hosting expensive Dumji. Dumji is one of the most important traditional celebrations of the Sherpa community and a key attraction for Khumbu visitors. Established by Guru Rinpoche this festival is regarded as a religious and cultural event to honor his legacy while also promoting the identity, community unity, and respect for tradition of the Sherpa people amidst modern influences. Culturally, people are forced to eat too much food and meat, and drink alcohol during this long 19 days' celebration, but these are now understood by all participants to be bad for health and a waste of money. Furthermore, while such huge expenses might not be problematic for the affluent families, but majority of the households who are compelled to manage their household expenses with limited income might face difficulties [a] big burden (M 38, Thulo Gumela).

All respondents consistently acknowledged that several factors, such as improved transportation, communication, financial resources for acquiring modern tools, and knowledge exchange with tourists during trekking and mountaineering expeditions, have played a crucial role in enhancing the awareness and understanding of the Sherpa people. Moreover, a significant number of participants believed that the impact of modernization on Khumbu Sherpa society is primarily driven by the growing tourism sector and the direct interactions between Sherpas and foreign tourists, whether in hosting or guest capacities. The effects of these interactions are perceived as both beneficial and detrimental. On the positive side, the development of physical infrastructure, driven by the growth of Everest tourism, was widely recognized as a significant advantage. Both respondents and key informants in both villages emphasized improvements such as schools, health posts, electricity, telephone services, airstrips, and internet connectivity, all of which were viewed as positive outcomes of tourism development in the region. These advancements were seen as crucial in strengthening the human, social, and physical capital of Khumbu Sherpa households. However, participants across all age groups expressed the view that the expansion of Everest tourism has led to profound transformations within Sherpa culture. Many elderly informants, in particular, voiced strong concerns about the long-term erosion of their cultural heritage. They seemed worried about the impact of external influences on their Indigenous cultural practices. A recurring theme throughout the interviews was the loss of the local language, which was widely perceived as a critical threshold that could accelerate the decline of other essential cultural elements. This sense of impending cultural disaster was invoked, for instance, by an elderly



interviewee who stated that:

...if the Sherpa people are required to speak with non-Sherpa people, then it is absolutely fine to speak in other languages, but what makes us completely unfortunate and disastrous is when we see an adult Sherpa speaking with another adult Sherpa in Nepali (M 74, Namche).

This indicates that elderly Sherpas exhibit a degree of openness to acceptable changes in their traditional and cultural practices. However, younger participants often view older Sherpas' perspectives as firmly rooted in conservative values. They highlight instances in which elderly Sherpas resist or avoid adapting their traditional methods for celebrating feasts, festivals, and religious rituals, even when such practices may be impractical or harmful to their health. Nonetheless, it is important to note that individuals across all age groups recognize that shifts within Sherpa culture and traditions are not solely driven by tourism; they are also significantly influenced by modernization, personal curiosity, and the desire to embrace new lifestyles, foods, clothing styles, and technologies. This evolution can largely be attributed to improved access to education in the region as well as enhanced transportation and communication links with broader society. Traditional Sherpa culture which is deeply rooted in Tibetan Buddhism upholds core values of spiritual devotion, community cooperation, and harmony with nature (Lama, 2005; Sherpa, 2012). Sherpas' belief systems and their way of life emphasize generosity, contentment, and respect for humans as well as nature, ensuring the transmission of cultural beliefs, traditions, and practices across generations (Sherpa, 2016; Spoon, 2008).

### Environmental Implications

Studies in the Khumbu region indicate that tourism significantly affects the environment (Nyaupane et al., 2014; Sharma, 1998). The existing tourism framework lacks sufficient visitor regulations to protect the area's natural capacity (SNP, 2020; Sun & Watanabe, 2021). Additionally, there are no guidelines for conserving natural resources (Fisher, 1990; Spoon, 2008). This research evaluates environmental impacts on forests, pastures, water resources, trekking trails, and pollution, particularly caused by tourism-related activities in the region. While some locals perceive improvements in forest conditions since the establishment of Sagarmatha National Park (SNP), historical accounts of deforestation during the 1970s remain debated.

Participants expressed satisfaction with tourism's positive impact on safeguarding their local environment, particularly through increased income generated by the sector. As a result, there has been a noticeable decrease in deforestation and the pressure on local wood resources. However, the expansion of settlements and tourism development has resulted in the deterioration of grazing lands. This has had a significant negative impact on the

natural environment and on households that rely on farming and livestock for their livelihoods.

Land use management in the Khumbu region has undergone considerable changes, especially in the upper Khumbu, where a declining local population has led to many uncultivated lands. A notable trend is that many Sherpas from villages along the trekking routes have shifted from agriculture to more profitable tourism-related jobs. Interviews revealed that Sherpa households often hire Rai or Tamang individuals from lower Khumbu for agricultural work due to a labor shortage caused by the booming tourism sector. Initially, locals began as porters and loaders, advancing into various roles within trekking and mountaineering based on their skills. This shift has diminished the interest of both Sherpa and non-Sherpa residents in farming. Participants, including key informants, also highlighted waste disposal, sanitation, and pollution as critical environmental issues exacerbated by the increasing number of tourists in the region. The unregulated issuance of climbing permits contributes significantly to these problems, impacting traveler safety and resource conservation. For instance, while it is suggested that only 100 climbing permits be issued per season for Mount Everest, records show that 381 permits were granted in 2019, raising concerns about fair reinvestment of royalties into the region.

Several participants in this study, however, acknowledge that while issues related to waste and other environmental concerns in the Khumbu region and along the Mount Everest route have posed significant challenges in the past, the current situation has markedly improved. For instance, the Chairperson of the Sagarmatha Pollution Control Committee (SPCC), who served as a primary informant in Namche noted that:

...the current situation of Khumbu is far better than of the past; this region has become safe and cleaner now. Every year huge amounts of garbage are being collected and cleared from the region, both from the trekking as well as climbing routes. We are very thankful to the Nepal Government's a new provision that requires every climber to deposit a nonrefundable US\$4,000 to make them bring back at least 17.6 pounds of trash on their way off the mountain and this has really helped to minimize the garbage problem of the Mount Everest route (KI4, Namche).

Although this key informant noted that significant efforts have been made in recent years to clear garbage from Everest Base Camp, he remained skeptical about the feasibility of recovering the remaining waste, particularly human waste and refuse found above the 8,000-meter "death zone" and across the perilous Khumbu Icefall at the base of the mountain. According to the 2017 Annual Report of the Sagarmatha Pollution Control Committee (SPCC), nearly 25 tons of trash and 15 tons of human waste—equivalent to the weight of three double-decker buses—were successfully removed from Everest Base



Camp (SPCC, 2018).

Notably, most participants in both study villages acknowledged that environmental issues in the Khumbu region are not solely attributable to tourism but are also exacerbated by climate change induced by global warming. They also pointed out that other contributing factors include the carelessness of some local people in adhering to environmental safety regulations. This suggests that the Khumbu Sherpa people, traditionally known for their deep reverence for nature through their Buddhist beliefs, may have become less sensitive to environmental concerns. This shift in attitudes could be attributed to the growing influence of materialism and the desire for greater financial gain through tourism. A significant number of participants in Namche specifically highlighted water contamination and pollution around the Everest Base Camp as major environmental challenges. They identified practices such as open defecation, burning fuelwood, and improper disposal of both biodegradable and non-biodegradable waste as key contributors to these problems. Interestingly, these concerns were not only directed at tourists but also at trekking guides and local Sherpa communities. This underscores the complexity of the issue, in which the actions of both visitors and locals contribute to the region's environmental degradation.

### **Sherpa Perceptions of 'Resilient Livelihood'**

Participants expressed largely aligned perspectives on the concept of a "resilient livelihood" within the context of Khumbu Sherpa households. A prevalent understanding among the participants regarding resilience, or the notion of being resilient, was characterized by the ability to sustain livelihoods effectively across various circumstances, both at present and in the future. One participant in the focus group stated that:

...if you have a good source of income now, and your children will also have no problem in managing their expenses for them and their families in the future, then I think that should be okay in life...because we should not expect more in life as it is a never-ending process. In fact, humans are greedy by nature, and they do not get satisfied with whatever they have although they are rich. So, the good thing is that if you are happy with the things that you can provide for your living during your lifetime, and your family will also not have problems managing their everyday needs, then life is long-lasting (F 62, Namche).

Financial assets, particularly money, were regarded as the most crucial form of capital in this venture. This is attributed to households' ability to leverage financial resources to improve other types of livelihood assets. Additionally, sociocultural factors were considered vital for households in fostering their livelihood resilience. For instance, one interviewee noted that:

...if you have money, you can buy anything that you

want to buy from anywhere, but this is not everything... money does not always work. If you need help with ideas, suggestions, moral and or social support then your family members, friends, relatives, neighbours are the ones to help you, but not the money (F 80, Thulo Gumela).

This suggests that both economic and social possessions play a fundamental role in enhancing resilience. Consequently, livelihood assets can be labelled under economics, sociocultural attributes, and the environment. For example, one participant from the focus group commented that:

...in fact, if you have money then you can buy anything you want such as good food, land, a house, and modern equipment, not only things but also to acquire good education and skills, money is required. If you are required to go to big hospitals for treatment and buy medicines, then you need a lot of money. So, from every angle, money is so powerful for increasing livelihood assets (F 42, Thulo Gumela).

In conclusion, it is evident that the resources that enhance human, physical, and financial capabilities of households are the 'economic related' capital in the context of Khumbu Sherpa society. Secondly, the resources that help to strengthen social relations and networking among Khumbu Sherpa households are the 'social related' capital. These resources also contribute to the preservation and promotion of the Khumbu Sherpa culture, traditions, local practices, social norms, and values. Likewise, the third category is 'related to the environment' or environmental resources, which in the context of Khumbu are the natural capitals, including forests, soil, pastures, and water sources.

Resilience frameworks are utilized in various fields including livelihood studies. These are employed to assess a system's ability to endure challenges, self-organize, and adapt or innovate (Carpenter et al., 2001; Owen et al., 2018). From the Sherpa perceptions of resilience, this study can offer valuable insights into decision-making not only at the individual or household level but also at the broader community level. Moreover, this understanding facilitates an assessment of how theoretical explanations of resilience correspond with local interpretations of what it means to be a 'resilient household' in the context of Khumbu Sherpa society.

### **Conclusions and Policy Insights**

The Sherpa views of tourism in the Everest region present a distinct relationship of both benefits and challenges that significantly influence their livelihood capitals and thus resilience building capability. The positive contributions of tourism were perceived as infrastructural development which led to the enhancement of Sherpa access to basic services such as electricity, drinking water, healthcare, and education. Enhancement in financial capital through tourism-based earnings has been considered vital

in fostering socioeconomic progress because it helped Sherpas to improve their living standards and diversify their income sources. Nonetheless, in addition to these advantages, the negative consequences of the influx of tourism in Khumbu are perceived to include environmental degradation and cultural erosion. There has been a growing trend in the commodification of the local Sherpa culture. On the other hand, while economic advantages derived from tourism have been recognized as key contributors to improving livelihood capitals, its long-term effectiveness to enhance resilience has been questioned, especially given the repercussions of natural calamities such as Nepal's devastating Earthquake of 2015, COVID-19 Pandemic, and variations in climate change due to incessantly rising global temperatures. Particularly, the high-altitude communities are vulnerable to these factors due to their heavy reliance on tourism and traditional sources of livelihood.

The study results suggest that the tourism-related income among Khumbu Sherpa households has led to the formation of their social classes. Participants identified that those benefiting from tourism have become the 'rich' Sherpa, while those deprived of this opportunity are categorized as the 'poor' Sherpa. Consequently, the Sherpas' social stratification has been established on the basis of their economic power to access resources and achieve social statuses. In other words, the unequal distribution of income from tourism has exacerbated Sherpas' social inequalities, weakening their social structure and harmony. Regardless of these drawbacks, financial stability has empowered households to invest in both tangible and intangible forms of livelihood capital, such as education, health, and infrastructure. Besides the economic advantage of tourism, participants believed that the positive interactions between the locals and tourists are vital for developing social initiatives, especially in the domain of resource conservation and the promotion of community-based tourism, which unswervingly upholds local livelihood resilience. Compared to Namche, the households in Thulo Gumela have been instrumental in enhancing their livelihood resilience through the diversification into non-farm activities such as wage workers in the construction trade, including masonry and carpentry, during the off-tourist seasons. This strategy is vital given the vulnerability of ecological challenges in the region and economic fluctuations in the tourism sector, for examples during the time of Nepal's devastating Earthquake in 2015 and the pandemic of COVID-19 both of which posed alarming threats to the long-term sustainability of tourism in Khumbu.

There is a growing risk that a significant rise in global temperatures and shifts in weather patterns will degrade the Khumbu's stunning glaciers, biodiversity, and trekking trails, including access to Everest Base Camp, thereby affecting the region's overall landscape. Hence, loss of tourist attractions in Khumbu not only affects the local economy and livelihoods but also reduces the revenue of

the SNP, which is one of the key contributors to the national GDP. In response to these challenges, collaborative efforts have been made by various stakeholders including government agencies, non-government sectors and local communities. However, there remains a pressing need to work towards a viable future for the people and biodiversity of this region, including immediate action to explore and identify alternative tourism products and strategies, particularly for the underrepresented villages like Thulo Gumela, where communities possess untapped potential tourism products that can diversify tourist engagement. Furthermore, the promotion and marketing of alternative tourism opportunities in Khumbu must be initiated by Nepal's Ministry of Tourism, the Nepal Tourism Board, the Department of National Parks and Wildlife Conservation (DNPWC), the SNP, and local NGOs. Effective policies can only expand the scope of Everest tourism, ensuring that its benefits are more reasonably distributed across the region. Such efforts can create sustainable income-generating opportunities for Khumbu communities that have traditionally been excluded from the tourism economy.

The study underscores the critical need to reevaluate policies at all levels of governance to achieve a harmonious balance between conservation goals and community development objectives. By embracing sustainable tourism practices that prioritize economic resilience, environmental protection, and social equity, we can foster a future where tourism continues to support the livelihoods of the Sherpa communities. This approach will be instrumental in safeguarding the Sherpa cultural heritage and the region's ecological stewardship. Overall, the study offers valuable insights for policy makers and future research aiming to explore the intersection of livelihoods, tourism, and sustainable development, providing a roadmap for policies and strategies that can help build a resilient future and achieve long-term sustainability in the context of Sherpa households in the historic region of Khumbu.

## Declarations

### Ethics Approval and Consent to Participate

This research maintained ethical considerations during response taking process throughout interviews and group discussions with participants.

### Consent for Publication

Not applicable

### Conflict of Interests

There is no conflict of interest with any individual or institution.

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### Author's Contribution

The author himself collected all the necessary data for this research, analyzed data and prepared the article. All data sources and ideas have been properly acknowledged.

### Use of AI

I confirm that the content presented in this article has been entirely written by a human.

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