Mountaineering and National Security Challenge in Nepal

Bhumi Raj Ojha
Lieutenant Colonel, Nepali Army
Corresponding Email: brojha49@gmail.com

ARTICLE INFO

ABSTRACT

Mountaineering is a cornerstone of the Nepal's national identity and a key economic sector in the Nepali economy. However, it is increasingly associated with complex national security challenges. With 461 peaks open for climbing, mountaineering routes are being exploited for non-touristic purposes, including unauthorized communications, influence campaigns, and other illicit activities. This study employs a mixed-methods approach to examine the interrelationship between mountaineering, environmental risk and national security. It integrates policy document analysis with quantitative data derived from surveys of purposively selected key informants. Through better inter-agency coordination, surveillance and environmental risk governance, the analysis reveals crucial opportunities could enhance systemic resilience in terms of security and environmental management. The study argues that existing governance arrangements are inadequate to balance economic opportunity with rising risks. Accordingly, it calls for the implementation of integrated, technology-driven regulations to strengthen security oversight and environmental sustainability. This research offers an important evidence base for strategic policy reforms, including enforcement measures in Nepal's mountaineering sector.

Introduction

Mountaineering has been a cornerstone of Nepal's tourism economy since the mid-twentieth century, contributing significantly to national revenue, international recognition and local livelihoods (Ministry of Culture, Tourism and Civil Aviation, 2025). To further promote high-altitude tourism, the Government of Nepal has officially opened 461 peaks for climbing, of which 102 virgin Himalayan peaks remain unclimbed, representing significant untapped potential for future tourism development (Annual Report 2024/025, 2025). More recently, a policy provision granted free access to 97 peaks in the Sudurpashchim and Karnali provinces for two years to distribute tourism benefits and promote regional development (Ng, 2025). However, these economic prospects are becoming increasingly overshadowed by emerging national security threats

and regulatory gaps. Evidence indicates that foreign engagement in Nepal's mountains now extends beyond tourism, encompassing covert surveillance, unauthorized use of satellite internet in violation of national law (Poudel, 2025), and the introduction of performance-enhancing substances such as xenon gas (Basyal, 2025). Simultaneously, environmental degradation is intensifying. Mount Everest faces significant trash accumulation, overcrowding and pollution of its watershed (Trash and Overcrowding at the Top of the World, 2025), while the wider Hindu Kush Himalaya is suffering from increasing contamination along the path of trekking trails and remote settlements, presenting serious management challenges (Udas, 2025). Therefore, comprehensive research is needed on the intersection of high-altitude tourism, national security and environmental governance in Nepal. This study argues that Nepal's current mountaineering governance framework is critically inadequate for managing the intertwined risks of foreign exploitation and environmental degradation.

This study is guided by two central research questions: (a) How do current trends in foreign involvement in Nepal's mountaineering sector affect national security? and (b) What policy gaps exist in addressing mountaineering-related security and conservation challenges? Addressing these questions is essential for safeguarding Nepal's sovereignty and protecting its fragile mountain ecosystems amid increasing geopolitical rivalry. The research is grounded in the Constitution of Nepal, particularly its provisions on national interest (Article 5.1), which prioritize sovereignty and economic well-being; state policies (Article 51 (g)), which advocate environmentally friendly development and sustainable resource use and the right to a clean environment (Article 30) (*Constitution of Nepal*, 2015). To achieve its objectives, the study employs a structured approach, beginning with a comprehensive literature review, followed by research methodology, analysis of findings, and finally, policy recommendations aimed at recalibrating governance to enhance national security and ensure ecological sustainability in Nepal's mountain regions.

Review of Literature

Mountaineering in Nepal has long been valued for its economic, cultural, and symbolic importance. However, recent analyses reveal that mountaineering is increasingly intertwined with multifaceted non-traditional security challenges (Upadhyay, 2025). This review examines the evolving discourse through four interrelated themes, namely: the dual nature of mountaineering, emerging non-traditional threats, human security dynamics, and governance gaps.

Dual Nature of Mountaineering

Nepal's tourism data underscores the dual character of mountaineering as both an economic asset and a potential security liability. Official statistics for the fiscal year 2080/81 indicate an estimated USD 623,400 in direct revenue from mountaineering activities (Ministry of Culture, Tourism and Civil Aviation, 2024). Conversely, the same period recorded 488 security-related incidents linked to tourism activities, including theft, fraud, harassment, and missing-person reports (Nepal Tourism Statistics, 2025). This pattern suggests that mountaineering is no longer solely a leisure or economic domain but an emerging area of governance and security management as well. Nepal and Mu (2015) further critique the commodification of peaks such as Mount Everest,

arguing that the influx of inexperienced climbers has led to congestion, heightened risks, and increased fatalities.

Non-Traditional Threats to Mountaineering

Mountaineering in Nepal is increasingly framed as a national security concern due to a web of interconnected non-traditional threats. Karki (2025) identifies three primary domains: environmental security, driven by waste accumulation and climate change-induced hazards; human security, arising from the exploitation and risk exposure of Nepali mountain workers; and geopolitical security, shaped by intensified foreign activity in sensitive high-altitude border regions. Khadka (2025) corroborates this assessment, describing the sector as critical juncture characterized by both technological progress and systemic vulnerability. Bhandari and Adero (2025) reinforce this view, noting that recurrent Glacial Lake Outburst Floods (GLOFs) in the Himalayas constitute a non-traditional security threat by undermining human security through displacement, livelihood loss, and infrastructure damage. The combined findings highlight challenges such as glacial instability, overcrowding, weak rescue infrastructure, and inconsistent enforcement factors that collectively threaten ecological integrity and national resilience.

Human Security Dynamics

The human security dimension in mountaineering exposes stark structural inequalities. Nepal and Mu (2015) stress that for international climbers, the risk is a factor of personal pride; to Sherpas and other Nepali workers, risk constitutes a compulsory and often fatal occupational hazard. Building on this, Miller and Mair (2019) employ the concept of liminality to analyze Himalayan adventure tourism, arguing that climbing Sherpas operate within a space of danger and transformation. Through this, they negotiate agency and challenge the dominance of commercial, foreign-led expedition models, thereby reframing mountaineering as both a site of exploitation and resistance.

Governance Gap

Nepal's National Security Policy (2016) broadened the definition of security to encompass political stability, economic resilience, and environmental protection. However, experts observe enduring implementation shortcomings, weak inter-agency coordination, and limited recognition of emerging non-traditional threats (Khanal, 2025). Chhetri (2018) similarly underscores the fragile interdependence between tourism and security, noting the lack of robust safety standards and coordination between tourism operators and security agencies. Collectively, these studies emphasize the urgent need for policy integration, institutional collaboration, and a multidimensional security strategy to ensure the long-term sustainability and resilience of Nepal's adventure tourism sector.

Research Gap

While existing literature have expanded the security paradigm to encompass environmental and human dimensions, and have critically examined governance shortcomings, a crucial connection remains underexplored. In particular, none of the studies have systematically analyzed how unregulated mountaineering directly generates vulnerabilities within Nepal's national security framework. This study addresses this

gap by examining the mechanisms through which weak regulatory enforcement and foreign engagement in the mountains intersect with national security interests.

Research Methodology

This study adopted an exploratory sequential mixed-methods design to navigate the complex positioning of mountaineering as an emerging national security concern in Nepal. Primary data were collected through a structured survey questionnaire. A total of 133 complete and valid responses were obtained from purposively selected key informants, with sampling based on respondents' roles, expertise, and knowledge of the subject. The respondents' details are given in figure 1.
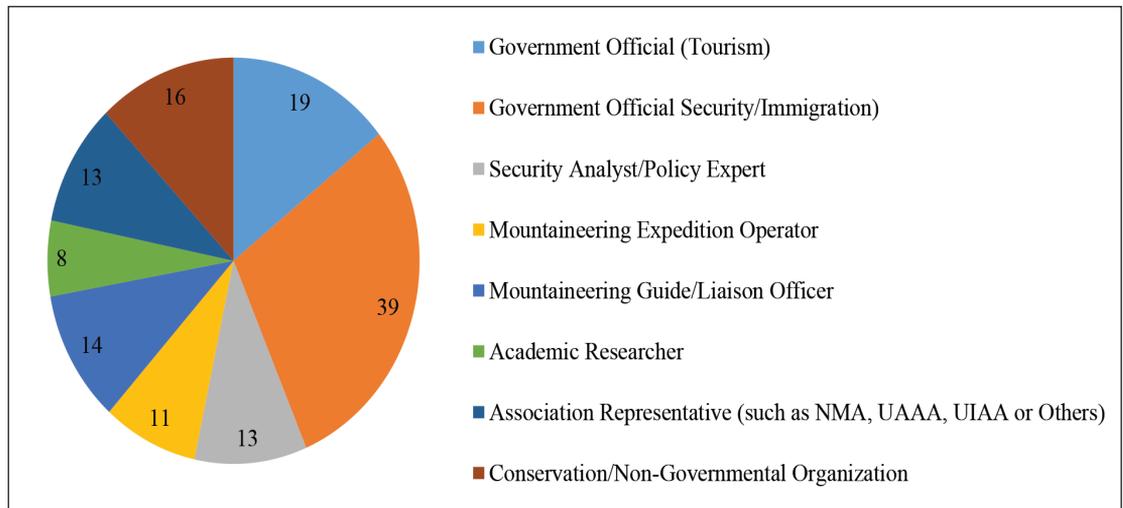

Legend:
- Government Official (Tourism) — 19
- Government Official Security/Immigration) — 39
- Security Analyst/Policy Expert — 13
- Mountaineering Expedition Operator — 11
- Mountaineering Guide/Liaison Officer — 14
- Academic Researcher — 8
- Association Representative (such as NMA, UAAA, UIAA or Others) — 13
- Conservation/Non-Governmental Organization — 16

Figure 1. Respondents Composition
Source: Survey, 2025

Respondents were asked about perceived security risks, inter-agency coordination, environmental risk management (including GLOFs and waste), policy gaps, and recommendations for improving governance and sustainability. The survey data were analyzed using descriptive statistics. Respondents' invaluable contributions provided a deep understanding of the personal experiences and institutional mechanisms linking mountaineering to national security challenges. Secondary data were gathered from policy documents, government reports, and academic literature to contextualize and validate primary findings. Open-ended survey responses and policy documents were analyzed using thematic analysis to identify recurring patterns and themes. The survey was conducted across major mountaineering hubs in Nepal, selected for their high levels of mountaineering activity. The study adhered to standard ethical research principles, including informed consent and confidentiality. Finally, the qualitative and quantitative data were integrated through a process of triangulation to enhance the reliability and validity of the study. Having discussed the research methodology, the study now proceeds to present and discuss the results.

Findings and Analysis

The findings are organized according to the research objectives. The study begins with current trends in foreign participation in Nepal's mountaineering sector, followed by non-recreational or purpose-driven activities. It then examines challenges in verifying achievements, geopolitical sensitivities, cyber vulnerabilities, and issues related to liaison officers. The discussion further addresses climate-induced threats, pollution in the high Himalayas, and concludes with an assessment of government policies on opening new peaks in Karnali and Sudurpashchim Provinces.

Trends in Foreign Mountaineering Participation

Nepal's tourism sector has been experiencing consistent growth, marked by an increase in total arrivals including the mountaineering sector. According to Nepal Tourism Statistics 2024, the country attracted 1,147,548 international tourists in 2024, marking a 13.07 percent increase from the 1,014,882 tourists in 2023. This trend is also reflected in high-altitude tourism. In 2024, a total of 175,575 individuals participated in mountaineering activities, representing a 13.8 % rise compared to the 154,262 in 2023 (Nepal Tourism Statistics 2024, 2025, p. 3). Similarly, mountaineering and adventure tourism in Nepal demonstrated significant growth, increasing from 13.1% in 2023 to 14.5% in 2024 (Nepal Tourism Statistics 2024, 2025, p. 36). Furthermore, in 2024, the number of expedition teams permitted in Nepal reached 2,375, representing a 5.42% increase from the previous year (Nepal Tourism Statistics 2024, 2025, p. 41). These trends indicate a growing global interest in Nepal's adventure and mountain tourism. This has been mainly driven by trekking excursions, mountaineering, and other outdoor pursuits. Respondents' qualitative data also depict a diversification of international participation, adoption of advanced technologies by climbers, and increasing foreign-sponsored expeditions. Figure 2 presents the observations by the respondents.
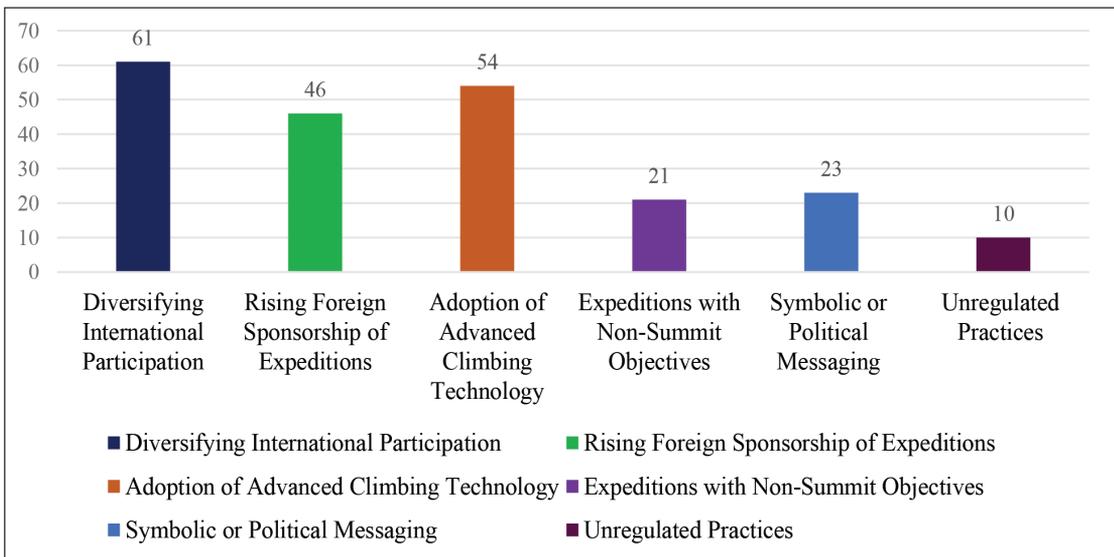

Figure 2. Trends in Foreign Mountaineering
Source: Survey, 2025

This study further examined the nationalities of successful summiteers on three major Himalayan peaks in Nepal, namely, Sagarmatha (Mount Everest, 8,848.86 m), Lhotse (8,516 m), and Manaslu (8,163 m), to quantify foreign participation in ascents above 8,000 meters. The analysis focused on the ten nationalities, excluding Nepal, with the highest number of successful ascents recorded as of December 2024. The leading nationalities on three Himalayas is detailed in figure 3.
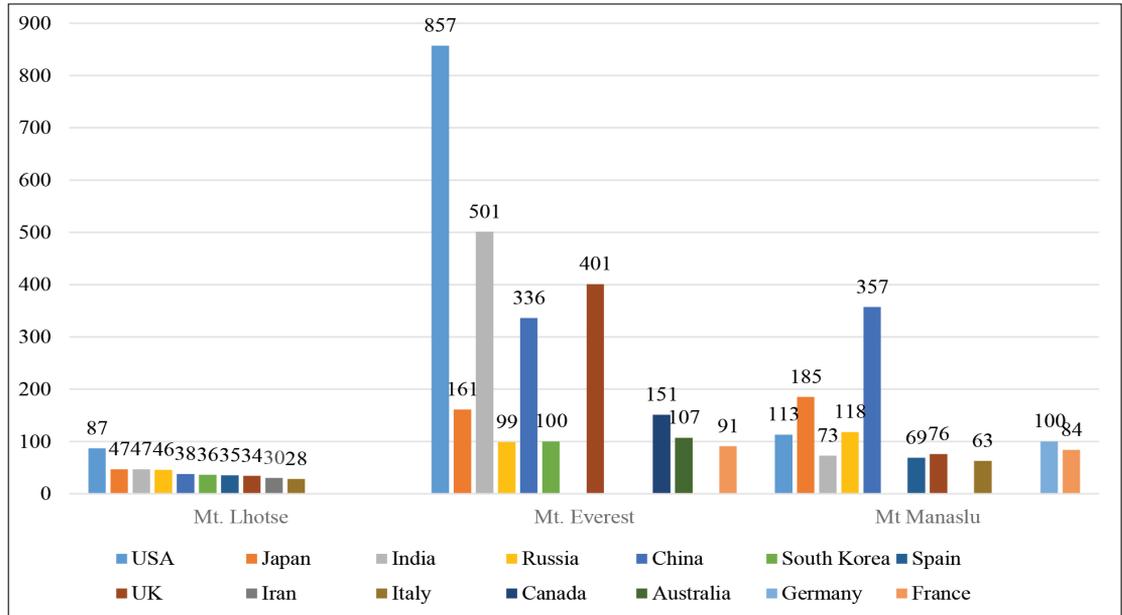

Figure 3. Leading Nationalities on Sagarmatha, Lhotse and Manaslu Summit
Source: Mountaineering in Nepal Facts and Figures 2025

The data reveals that the United States remains the leading contributor of successful summiteers across Sagarmatha, Lhotse and Manaslu, followed closely by climbers from China, Japan and India. Western nations such as the United Kingdom, Italy, France, Germany and Spain maintain strong participation in high altitude mountaineering. Similarly, there is a noticeable mountaineering activity from Asian climbers, particularly from China, Japan, South Korea and Iran.

Non-Recreational/Purpose-driven Mountaineering Activities

The Government of Nepal, through the Sixth Amendment of the Mountaineering Regulations, has implemented reforms to enhance safety, accountability, and environmental responsibility in high-altitude expeditions. Key measures include mandatory guides, restricted solo climbs, limits on family members' presence at high camps, and waste management standards. Summit verification now requires photographic evidence and prior record submission, while climbing fees and wages for liaison officers, guides, sardars,[1] and base camp staff have been increased to enhance professionalism in the sector ("Mountaineering Regulations (Sixth Amendment)-2025, 2025).

---

1   Sardar is a senior local leader of high-altitude support staff in a mountaineering expedition who is responsible for coordination, supervision and liaison with the Expedition Leader.

Collectively, these reforms seek to enhance climbers' safety, promote sustainable practices, and strengthen industry oversight.

Despite regular regulatory reforms, respondents reported that some mountaineering activities in Nepal serve as non-recreational purposes, including intelligence/information collection, scientific research, political symbolism, commercial interests, religious influence, equipment/technology testing and other agendas. Although respondents' perceptions highlight potential national security challenges, independent verification is required by concerned authorities. The perception of the survey respondents on underlying motives of foreign mountaineers is shown in figure 4.
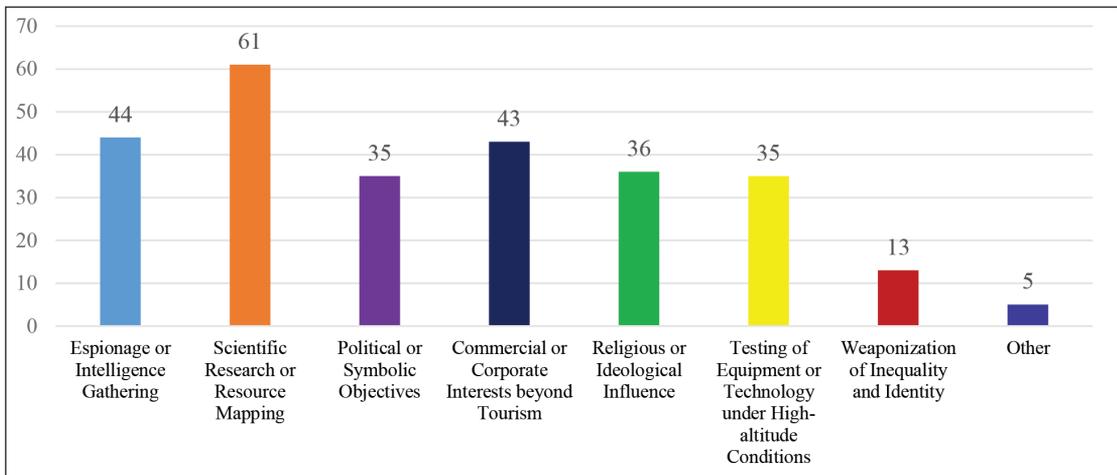

Figure 4. Perceived Underlying Motives of Foreign Mountaineers
Source: Survey, 2025

There is evidence that a few foreign expeditions, at times, engage in unauthorized or non-permitted activities. A letter (Dispatch No. 2076, dated 22 Ashadh 2079 BS) sent by the Ministry of Culture, Tourism and Civil Aviation, Department of Tourism, Mountaineering Section states that one of the renowned foreign mountaineers played the piano at the summit of Mount Everest in the spring season of 2002 without permission. Similarly, the Ministry issued a formal request by issuing Dispatch No. 1101 dated 15 Mangsir 2082 to remove flags and symbols of the Republic of China (Taiwan) from hotels and trekking areas along the Annapurna Base Camp premises, as the displayed items were unauthorized and against the national policy of Nepal. These examples illustrate that foreign nationals' unauthorized conduct poses a significant risk to the national security and sovereignty of Nepal.

Complementing these concerns, data received from the tourist police office, Bhrikutimandap, highlights the need for a comprehensive regulatory framework for mountaineering and tourism as a whole sector through an appropriate framework of regulation. Complaints recorded by tourist at tourist police offices across the country over the past three years are presented in Table 1, with persistent challenges and the need for proper regulation and security measures. The table displays similar incidents such as loss of documents and belongings, theft, fraud and harassment, with a total of 532 cases in fiscal year 2079/080, 488

in 2080/081, 436 in 2081/082 and 224 cases recorded up to Poush 13 of 2082/083. Notably, specific incidents, including passport damage during the Gen–Z protest, were also documented. Collectively, these recurring tourist-related issues, interspersed with unauthorized activities have serious implications for Nepal's national security and governance.

Table 1: Recorded Complaints from Tourists

S. No.	Incidents	Fiscal Year 2079/080	Fiscal Year 2080/081	Fiscal Year 2081/082	Fiscal Year 2082/083 (up to Poush 13)	Remarks
1.	Loss of Documents and Belongings	345	369	388	188	
2.	Stolen/Theft	82	59	20	12	
3.	Fraud/Cheating	33	15	6	2	
4.	Robbery	13	7	-	-	
5.	Pickpocketing	2	2	2	1	
6.	Harassment/Dispute	28	19	8	2	
7.	Attack/Assault	2	3	1	-	
8.	Snatching	1	0	1	-	
9.	Threatening	5	1	1	3	
10.	Missing Person	4	9	5	1	
11.	Misbehave	1	1	1	-	
12.	Kidnapping	1	1	1	-	
13.	Accident	2	2	0	-	
14.	Other	13	0	2	15 (damaged passport during Gen–Z protest)	
	Total	**532**	**488**	**436**	**224**	

Source: Tourist Police Office, Brikutimandap, 2025.

In 2025, Nepal's high-altitude tourism sector experienced two significant controversies. One of these conflicts involved a group of four ex-British Special Forces soldiers who made rapid ascent of Mount Everest using hypoxic tents and xenon gas outside standard acclimatization protocols that raising concerns about safety, fairness, and the observance of familiar mountaineering concepts (Khadka, 2025). Concurrently, a dispute emerged between Sagarmatha National Park and the Civil Aviation Authority over a proposed ban on helicopter sightseeing flights. Park officials emphasized noise pollution and its threat to wildlife, while airline and other stakeholders in tourism argued that its ban negatively affected high-end tourism (Prasain, 2024). These cases show the importance of striking a balance between environmental dangers and the sustainable development of tourism.

Challenge of Verifying Mountaineering Achievements

A major challenge in high-altitude mountaineering is ensuring the authenticity of climbers' summit claims. There have been times climbers falsified their summit claims. For instance, in a recent episode, Nepal banned Indian climbers Narender Singh Yadav and Seema Rani Goswami as well as team leader Naba Kumar Phukon for six years after their false Everest summit claim in 2016 (Nepal Bans India Climbers for Faking Everest Summit, 2021). Similarly, in 2017, Dinesh and Tarakeshwari Rathod were found to have fabricated their claimed 2016 Everest summit using morphed photographs, which resulted in their dismissal from service (India Police Pair Sacked over Faked Everest Climb, 2017). These instances clearly demonstrate the challenges involved in authenticating mountaineering achievements and emphasize the necessity for rigorous documentation, independent validation, and thorough regulatory supervision to uphold credibility in mountaineering.

Geopolitical Sensitivities

Nepal's strategic position between India and China makes its high-altitude areas potential sites for geopolitical maneuvering. Remote peaks near sensitive borders can be exploited by foreign expeditions for clandestine intelligence gathering, resource mapping, or symbolic territorial signaling. If left unchecked, poorly monitored expeditions may exploit mountainous terrain for strategic advantage.

Cyber Vulnerabilities

Unauthorized access to satellite bandwidth and new communications tools during expeditions plays a part in Nepal's widespread cyber vulnerabilities. Unauthorized use of Starlink satellite internet in the Himalayan base camps in Nepal constitutes a major threat to national security. By bypassing Section 21 of the Telecommunications Act, 1997, such unregulated operations compromise Nepal's regulatory sovereignty, create risks of unmonitored data flow, and expose strategically sensitive areas near Everest and Manaslu to potential foreign influence (NTA Orders Immediate Halt to Illegal Use of "Starlink" Internet in Nepal's Himalayan Region, 2025). This also undermines secure channels for communication, crucial for disaster response and the coordinate expeditions. The rapid proliferation of satellite networks like Starlink exposes weaknesses in Nepal's telecommunications regulations. Greater legal control, regulatory reforms, and operator awareness are needed to defend the country's techno-strategic security.

Provision and Challenges of Liaison Officers

The Department of Tourism mandates that all mountaineering expeditions above 6,500 meters include a government-appointed liaison officer (LO) for every tourist seasons. LOs are responsible for verifying and certifying successful summits, receiving benefits of over USD 3,000 per expedition and a daily allowance of Rs 500. Candidates undergo eight-day mountaineering training course and obtain a health certificate (Mountaineering Regulations [Sixth Amendment]-2025, 2025). Despite these provisions, the system faces key challenges, including biased selection favoring connected officials, misuse of health rules to exit expedition early, and limited oversight with no age limits or accountability (Sharma, 2025). These challenges undermine the effectiveness and credibility of liaison officers in monitoring and supporting mountaineering expeditions.

According to an urgent notice issued by the Ministry of Culture, Tourism and Civil Aviation on 22 August 2018, during the Spring 2019 Sagarmatha Expedition season, 15 out of 22 assigned liaison officers failed to accompany their respective teams, amounting to approximately 69 percent non-compliance (Notice Regarding the Absence of Liaison Officers, 2018). These institutional lapses not only undermine regulatory oversight but also present potential national security concerns, increasing the chance of unauthorized movements, illegal activities, and data manipulation.

Climate Induced Threats

Climate-induced disasters prevalent in Nepal's High Himalayas, like Glacial Lake Outburst Floods (GLOFs) pose a major national security menace. As confirmed in ICIMOD Dashboard, Nepal has witnessed 54 GLOFs to date (Oct 21, 2025), leading to 1,050 displaced people and 36 fatalities (ICIMOD, 2025). These events inflict grave loss of life, dislocation of populations, and extensive destruction of critical infrastructure, which undermines the economic stability and social cohesion of society. Human activities, especially mountaineering, contribute to a worsening of these risks, by causingenvironmental degradation, placing increased pressure on delicate mountain ecosystems. The intensity and frequency of GLOFs highlight the dire need to integrate environmental security within national policy frameworks to safeguard Nepal's stability, resilience, and sovereignty.

Pollution in High Himalayas

Environmental degradation in Nepal's high-altitude regions, driven by unmanaged waste, human excrement, abandoned equipment, microplastics, and unretrieved bodies, has evolved into a national security concern. The pollution of glacial streams threatens the health of mountain communities through increased risks of waterborne and respiratory diseases (Limbu, 2024). The growing contamination of fragile ecosystems also accelerates glacial melt, undermining long-term water security and increasing the likelihood of climate-induced disasters (Udas, 2025). These environmental impacts further weaken Nepal economically by damaging the reputation of Everest and other peaks.

Since 2019, the Nepali Army, through the annual "Mountain Clean-up Campaign," in collaboration with state and non-state actors, has been actively involved in waste management in high-altitude regions. Cumulatively, across five campaigns, approximately 119,056 kilograms of waste, 14 corpses, and multiple skeletal remains have been retrieved (Moench, 2024). These figures indicate that waste accumulation and unattended human remains have reached critical levels, highlighting environmental degradation as a significant concern in Nepal's mountainous regions.

In response, the Government of Nepal is preparing to unveil a five-year Everest cleaning strategy (2025–2029), which proposes a Rs 308 million fund for Everest clean-up efforts (Prasain, 2025). However, the clean mountain strategy faces major implementation challenges, including underfunding (with real costs estimated to exceed Rs 1 billion), policy inconsistency due to political instability, and weak enforcement of waste management regulations. Additionally, limited waste transport infrastructure, poor monitoring, and weak accountability among climbers and operators worsen the problem.

Policy of Opening New Peaks

The Government of Nepal's decision (Cabinet decision on July 17, 2025) to waive climbing fees for 97 Himalayan peaks and increase permit prices for Mount Everest to $15,000 is a strategic policy for diversifying adventure tourism and promoting regional development (Marcus, 2025). The initiative is focused on underexplored peaks in both Karnali and Sudurpaschim provinces to alleviate overcrowding along commercial routes, to appeal to exploratory climbers, and to boost local economies. It is also in line with scientific goals, creating "living laboratories" that can be used to study climate change in fragile high-altitude ecosystems. The logic of market segmentation is clear: high-cost Everest expeditions appeal to experienced climbers, while free-access peaks for adventurers seeking less commercialized experiences may form a broader adventure tourism market (Ng, 2025). As illustrated in figure 5, a majority of the survey respondents perceived the Government of Nepal's recent policy of opening 97 peaks for free climbing as a measure with significant tourism and economic benefits, whereas 38 respondents viewed it as a considerable national security concern.
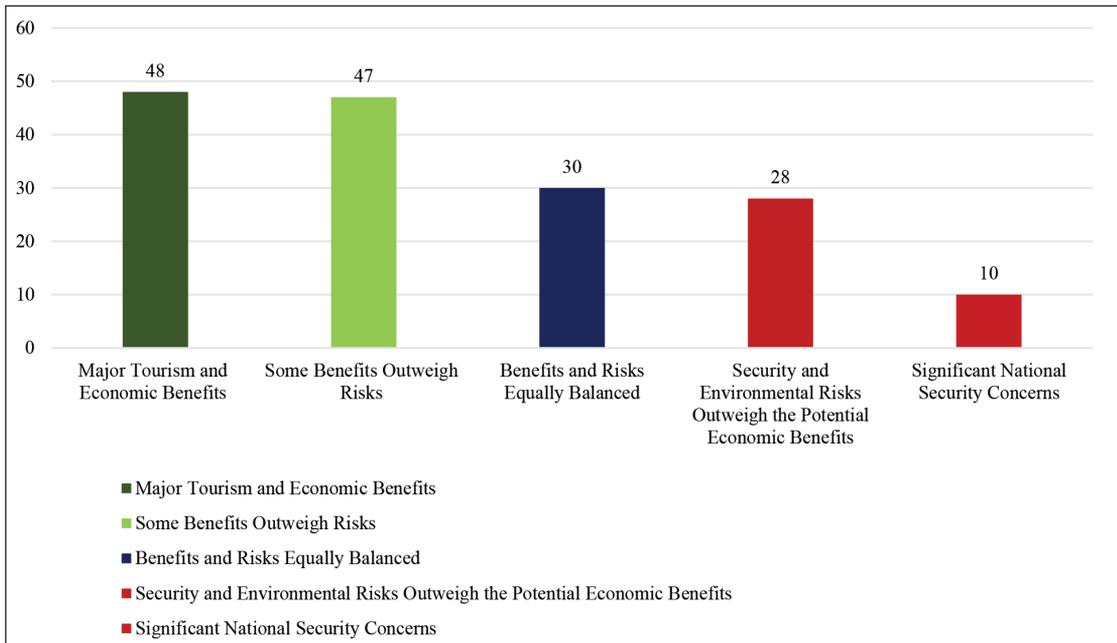

Figure 5. Respondents' Perception on Waiver of Permit Fees
Source: Survey, 2025

Despite its potential, the policy encountered considerable hurdles to implementation. Remote targets face limited infrastructure, difficult access, few basic medical facilities, and costlier logistics, raising doubts about the potential of fee waivers alone to lure climbers. Similarly, royalty fees constitute only a small fraction of total expedition costs, suggesting that complementary investments in transportation, communication, rescue services, and skilled local guides are critical for success (Ng, 2025). However, mountains such as Api (7,132 m), Api West (7,076 m), and Saipal (7,030 m) in Sudurpashchim Province are likely to experience increased mountaineering activity, positioning them as essential high-altitude

training grounds (Himalayan Times, 2025). Survey findings indicate that respondents identified multiple national security risks associated with the Government of Nepal's policy of opening 97 peaks for free climbing. Figure 6 presents the perceived national security risks associated with free climbing.
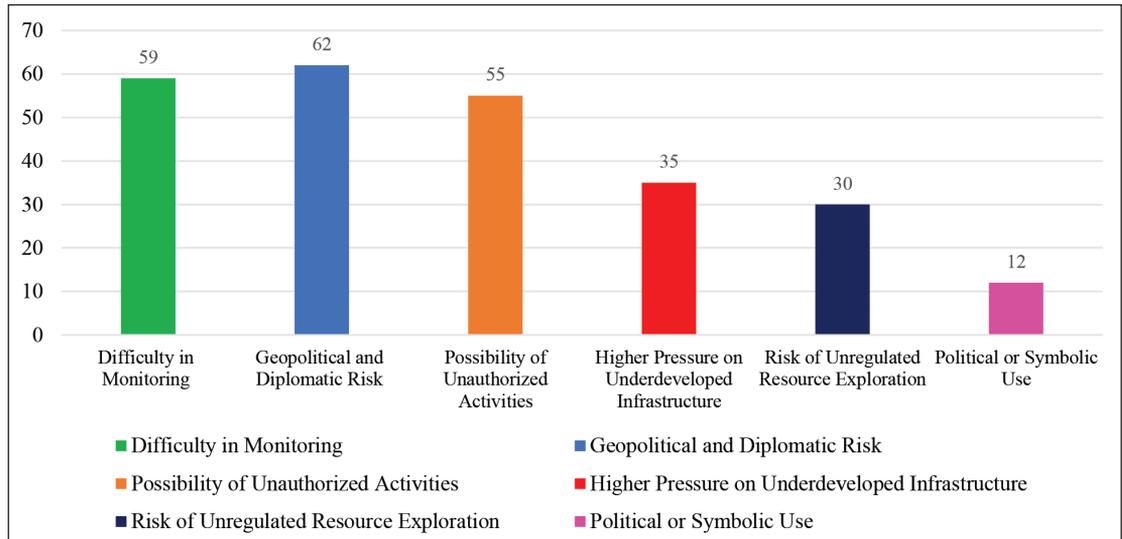

Figure 6. Perceived National Security Risks Associated with Free Climbing
Source: Survey, 2025.

Survey responses as reported in figure 6 indicate that free climbing is widely considered a threat to national security, with the most prominent risks being the struggle of tracking climbers, geopolitical sensitivities, and possible unauthorized activities. Additional pressures on underdeveloped regions and fears of resource exploitation suggest that unregulated climbing could destabilize vulnerable areas. Moreover, Karnali and Sudurpashchim provinces each have a single temporary tourist police post at Rara, Mugu and Silgadhi, Doti, respectively. Both posts are commanded by an Assistant Sub-Inspector of Police and have a limited strength of five personnel, with no female personnel (Tourist Police Nepal, 2025). This makes effective monitoring and facilitation of tourists challenging, especially as there are few permanent posts in place. Hence it is a pressing need to enhance regulatory and surveillance mechanisms in mountaineering zones.

Conclusion

Nepal's Mountaineering sector possesses a double edge, providing a major income to the economy, tourism, and global attention, while simultaneously generating unique national security challenges. The sector's rapid expansion, including opening new peaks and increased foreign participation, has created high risk for climbing activities. The risks stem from geopolitics, unauthorized use of technology, environmental degradation, and safety concerns. The falsified summit claims and non-touristic activities in mountaineering further underscore regulatory and oversight deficiencies.

Although recent policy reforms, notably the Sixth Amendment to Nepal's mountaineering regulations, have enhanced safety, professional standards, and environmental accountability, critical governance gaps persist. These include weak inter-agency coordination, insufficient monitoring, and limited enforcement capacity. These vulnerabilities are exacerbated by climate-induced threats, such as GLOFs and environmental pollution. Therefore, there is an urgent need to integrate environmental security into the national security architecture. Addressing these intertwined challenges necessitates a strategic equilibrium between fostering tourism and safeguarding national sovereignty and ecological integrity. This study concludes that a comprehensive, adaptive, and integrated governance framework is imperative. Only through this holistic approach can Nepal ensure its mountaineering sector remains a sustainable economic asset and well-regulated domain for future generations.

Recommendations

The study, based on the findings, recommends the following measures for enhancing security and sustainability in Nepal's mountaineering sector.

Strategic Policy Reform

Strategic policy reforms must establish a legal foundation by prioritizing national security and environmental sustainability over commercial interests. This requires updating existing regulations to govern high-altitude technologies, defining clear mandates for Liaison Officers and expedition operators, and integrating waste management into environmental diplomacy. Furthermore, reforms must explicitly address non-recreational motives for expeditions and enforce controlled growth in the issuance of permits and the opening of new peaks.

Institutionalizing Carrying Capacity in Mountaineering

In alignment with the April 2024 Supreme Court order to limit mountaineering permits and respect the carrying capacity of Everest and other peaks (Butler, 2025), the Government of Nepal should institutionalize a capacity-based permit system grounded in scientific assessment of environmental resilience. This system should determine safe climber thresholds. Similarly, standardized protocols for acclimatization and preparatory climbs should be adopted to mitigate overcrowding risks in mountaineering. Moreover, permit policies should integrate market segmentation strategies to differentiate between high-cost Everest expeditions and free-access peaks in underexplored regions. This policy will contribute to balanced regional development.

Enforcement Mechanism

The Government of Nepal must institutionalize robust enforcement mechanisms, including real-time climber tracking, inspections of expeditions and systematic monitoring of high-altitude movements. This will significantly enhance the ability to address early indicators of potential hazards, including emerging risks. This framework should be reinforced by clear regulations governing communication technologies in order to deter unauthorized use. Similarly, the foundation should be enhanced by validation of summits and independent audits to ensure the integrity of the system. Additionally, there should be enhanced law enforcement capacity in place to prevent foreign nationals from exploiting tourism for illicit purposes.

Operational Capacity Enhancement

Mountain base camps and remote high-altitude zones should be equipped with trained personnel, surveillance systems, communication infrastructure, and rapid-response capabilities. Inter-agency coordination among the Nepali Army, Nepal Police, Armed Police Force, Nepal, National Investigation Department and tourism authorities should be strengthened through joint protocols for information sharing, expedition tracking, and incident management. Provisions should be established to appoint trained security personnel from all four security organizations as LOs for mountaineering expeditions, based on their expertise.

Capacity Building and Local Engagement

Enhancing institutional and community readiness requires targeted investment in capacity building. LOs, expedition staff, rescue and security personnel must receive specialized training in high-altitude emergency response. Local communities residing along trekking and expedition routes should also be part of the training programs. Meaningful engagement with stakeholders such as the Nepal Mountaineering Association, expedition operators, and community organizations is necessary to ensure that policies are practical and inclusive.

Environmental Protection and Accountability

Safeguarding fragile mountain ecosystems in Nepal's High Himalayas requires strong waste management and accountability systems. The mountain climbers and expedition operators must be compelled to return all waste to the base camp and strict enforcement should be ensured. Community-led and stakeholder-coordinated cleanup efforts are regularly needed. Sustainable tourism frameworks should be more in line with promoting eco-friendly logistics, biodegradable materials, low impact approaches, and utilization of technological applications to lower the environmental impact.

Integrated Data and Investment System

The Government of Nepal should establish an integrated data and investment management system to prevent overinvestment in the tourism sector. Complementary policies should promote tourism diversification and improve regional accessibility. Investments in infrastructure, advanced monitoring technologies, and logistical support, particularly for underexplored peaks such as Api, Api West, and Saipal, are critical to ensuring sustainable outcomes. Similarly, permanent tourist police posts staffed with adequate personnel in Karnali and Sudurpashchim provinces for monitoring and safeguarding mountaineering activities should also be established. Dedicated resources are also required to implement policies governing the opening of 97 new peaks, ensuring both security and environmental sustainability.

Digital Transformation

The Government of Nepal, through public–private partnerships, should prioritize the expansion of digital infrastructure in remote regions and implement targeted digital literacy programs for local enterprises. Concurrently, the Nepal Rastra Bank should establish a secure and interoperable digital payment ecosystem to formalize transactions, enhance financial traceability, and reduce illicit financial flows. Subsequently, the government should apply anonymized data produced

from this ecosystem to assist evidence-based development planning and enhance regional tourism diversification in order to enable inclusive and sustainable growth.

References

Anand, A. (2023, September 27). Global watch: Nepal's new challenge is growing involvement of foreign nationals in crime. *Firstpost*. https://www.firstpost.com/opinion/global-watch-nepals-new-challenge-is-growing-involvement-of-foreign-nationals-in-crime-13176532.html

Basnet, A. (2022). A holistic approach to national security strategy in Nepal: Challenges and prospects. *Prithvi Academic Journal, 5*(1), 182–195. https://doi.org/10.3126/paj.v5i1.45051

Basyal, P. (2025, May 22). *Everest climb record using xenon gas "under investigation"*. BBC News. https://www.bbc.com/nepali/articles/cev4040zzd0o

Bhandari, P. R., & Adero, B. (2025). Interface between glacial lake outburst floods and national security in Nepal. *National Security: A Journal of National Defence University-Kenya, 3*(1), 21–37. https://doi.org/10.64403/sdawae60

Butler, G. (2025, January 23). *Mount Everest: Nepal hits climbers with higher permit fees*. BBC. https://www.bbc.com/news/articles/cd0jlp3ll88o

Chhetri, R. K. (2018). Tourism and security in Nepal. *Journal of Tourism & Adventure, 1*(1), 32–47.

Constitution of Nepal (n.d.) 2015. Ministry of Law, Justice and Parliamentary Affairs. https://www.moljpa.gov.np/prevailing-laws

Himalayan Times. (2025, August 12). *Nepal waives permit fees for 97 peaks in remote Karnali and Sudurpaschim*. The Himalayan Times. https://thehimalayantimes.com/nepal/nepal-waives-permit-fees-for-97-peaks-in-remote-karnali-and-sudurpaschim

ICIMOD. (2025). *GLOFs in high mountain Asia*. International Centre for Integrated Mountain Development. https://www.icimod.org/mountain-hazards/?p=glof

India police pair sacked over faked Everest climb. (2017, August 8). BBC. https://www.bbc.com/news/world-asia-india-40859155

Karki, A. (2025, July 14). *Mountaineering in Nepal: A threat to national security?* Nepal Press. https://english.nepalpress.com/2025/07/14/mountaineering-in-nepal-a-threat-to-national-security/

Khadka, N. S. (2025, May 21). *Everest: British soldiers make history with new method*. BBC. https://www.bbc.com/news/articles/cqj77pgyq81o

Khadka, S. (2025, April 25). *The future of mountaineering in Nepal: Trends, challenges, and opportunities in 2025*. The Wonder Nepal. https://thewondernepal.com/articles/the-future-of-mountaineering-in-nepal-trends-challenges-and-opportunities-in-2025/

Khanal, B. (2025). Revitalizing Nepal's National Security Council and its Secretariat in a Changing Geo-Political Context. *Unity Journal, 6*(1), 297–312. https://doi.org/10.3126/unityj.v6i1.75699

Limbu, S. (2024, April 24). *Amidst growing mountain tourism in Nepal, Mount Everest confronts the perils of pollution.* Earth.Org. https://earth.org/amidst-growing-mountain-tourism-in-nepal-mount-everest-confronts-the-perils-of-pollution/

Marcus, L. (2025, August 13). As Everest costs go up, Nepal just made it free to climb nearly 100 other mountains. *CNN.* https://edition.cnn.com/2025/08/13/travel/nepal-mountain-climbing-free-intl-hnk

Miller, M. C., & Mair, H. (2020). Between space and place in mountaineering: Navigating risk, death and power. *Tourism Geographies, 22*(2), 354–369.

Ministry of Culture, Tourism and Civil Aviation. (2025). *Mountaineering in Nepal: Facts and figures 2025.*

Moench, M. (2024, June 7). Eleven tonnes of rubbish taken off Himalayan peaks. *BBC.* https://www.bbc.com/news/articles/cq5539lj1pqo

Mountaineering Regulations (Sixth Amendment)-2025. (2025, February 3). Nepal Gazette. https://rajpatra.dop.gov.np/welcome/book/?ref=25849

National Security Policy, 2016. (n.d.). Ministry of Defence. https://mod.gov.np/content/8404/8404-national-security-policy-2016/

Nepal bans India climbers for faking Everest summit. (2021, February 11). *BBC.* https://www.bbc.com/news/world-asia-india-56021135

Nepal Police. (2025, October 10). *Data on foreign nationals convicted of serious crimes in Nepal.*

Nepal Tourism Statistics 2024. (2025). Government of Nepal, Ministry of Culture, Tourism and Civil Aviation. https://www.tourism.gov.np/content/83/nepal-tourism-statistics-2024/

Nepal, S. K., & Yang, S. M. (2015). Mountaineering, commodification and risk perceptions in Nepal's Mt Everest region. In *Mountaineering tourism* (pp. 276–297). Routledge.

Ng, K. (2025, August 12). Nepal offers free climbs to 97 peaks as tourism to Everest surges. *BBC* https://www.bbc.com/news/articles/c0j99xxd1z1o

Notice regarding the absence of liaison officers. (2018, August 22). Ministry of Culture, Tourism and Civil Aviation, Department of Tourism. https://giwmscdnone.gov.np/media/pdf_upload/331_hbuljvl.pdf

NTA orders immediate halt to illegal use of "Starlink" internet in Nepal's Himalayan region. (2025, May 6). *Nepal Republic Media*. https://myrepublica.nagariknetwork.com/news/nta-orders-immediate-halt-to-illegal-use-of-starlink-internet-in-nepals-him-92-37.html

Pokhrel, B. (2025, July 3). More than 1,500 foreigners in Nepal's jails. *Kantipur.* https://ekantipur.com/news/2025/07/03/en/more-than-1500-foreigners-in-nepals-jails-03-13.html

Poudel, P. R. (2025, May 30). Live streaming from Mount Everest to social media poses challenge to unauthorized internet regulation. *BBC News.* https://www.bbc.com/nepali/articles/cy8nj5v25d4o

Prasain, S. (2024, December 14). Nepal aviation regulator clashes with national park over Everest chopper ban. *The Kathmandu Post*. https://kathmandupost.com/money/2024/12/14/nepal-aviation-regulator-clashes-with-national-park-over-everest-chopper-ban

Prasain, S. (2025, September 30). Nepal readies five-year strategy to clean Everest. *The Kathmandu Post*. https://kathmandupost.com/money/2025/09/30/nepal-readies-five-year-strategy-to-clean-everest

Sharma, B. (2025, February 1). Liaison officers appointed for two tourist seasons. *Nepal Republic Media*. https://myrepublica.nagariknetwork.com/news/liaison-officers-appointed-for-two-tourist-seasons-85-75.html

Trash and overcrowding at the top of the world. (2025, April 10). *National Geographic Society*. https://education.nationalgeographic.org/resource/trash-and-overcrowding-top-world/

Udas, E. (2025, June 5). *Beat plastic pollution: Coming full circle with our trash in the high mountains*. ICIMOD. https://blog.icimod.org/resilient-economies-landscapes/reflective-piece-for-world-environment-day-2025-beat-plastic-pollution-coming-full-circle-with-our-trash-in-the-high-mountains/

Upadhyay, T. N. (2025). Sustainable development of mountain tourism: Reading mountaineering narratives from Sherpa and non-Sherpa perspectives. *Scholars: Journal of Arts & Humanities, 7*(1). https://doi.org/10.3126/sjah.v7i1.75680

-◆◆◆-