

Geostrategic Significance of Eastern Himalayan Terrain: A Critical Analysis of India-Bhutan Border Security

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Abstract

Geopolitical analysis provides crucial insights into a nation's position among its neighbours, revealing how geography and political dynamics shape national behavior, regional relations, and foreign policy directions. The configuration of borders is influenced by both natural and political forces, plays a central role in a nation's security and development. The Himalayan region illustrates this vividly: while its northern and central zones remain scarcely populated due to high elevation and harsh climatic conditions, the lower Shivalik and southern Himalayan ranges offer hospitable environments with higher oxygen levels and abundant rainfall, fostering dense settlements and forming critical corridors for habitation and defence. These zones are crucial for understanding the geopolitics of southern Himalayan region, especially in nations such as Bhutan, India, Tibet Autonomous Region, and Nepal. Bhutan's high-altitude borderlands hold strategic importance as a geopolitical buffer zone, as demonstrated by incidents like the Doklam standoff, which highlight the enduring security sensitivities in the region. Many research work has done on southern Himalayan region but there is lack of terrain study for border security hence that study is focusing on India Bhutan terrain for securing border. This research aims to address that gap by examining the eastern Himalayan terrain of border area along India and Bhutan. Using a descriptive and exploratory approach grounded in secondary data, the study identifies vital geopolitical areas and analyses their implications for border security and cooperation. The findings seek to inform policy frameworks for effective India-Bhutan border management, linking terrain-based insights with broader strategic and diplomatic objectives.

Keywords: Geostrategic, foreign policy, terrain, Doklam standoff, Himalaya, border security, India-Bhutan relations

Introduction

The Eastern Himalayas form a geopolitically sensitive arc spanning India, Bhutan, Nepal, Tibet Autonomous Region, and Myanmar, where rugged mountain passes, deep river valleys, and high-altitude plateaus covering nearly 65% within India and Bhutan create extreme topography of peaks over 7,000 meters, snow and monsoon that serve as natural defensive barriers while exposing vulnerabilities via narrow passes and riverine corridors (Lintner, 2019; Kaplan, 2012). For India-Bhutan border security, this terrain's strategic centrality revolves around the Doklam plateau, Chumbi valley and around Siliguri corridor linking the mainland to the Northeast positioning Bhutan's highlands as a vital buffer offering strategic depth, early-

warning, and lateral mobility against threats like China's Chumbi Valley, as starkly revealed in the 2017 Doklam standoff (Joshi, 2017). Dually, the Himalayas function as a physical barrier: steep ridgelines and low-oxygen altitudes deter mass incursions by channelling threats into passes, yet southern foothills and valleys facilitate trade and patrols, necessitating integrated management (Gansser, 1964); Nehru's dictum that "geography has been the most important factor in our history" aptly frames how such obstacles are transformed into assets through infrastructure like Project DANTAK (Nehru, 1961)

Bhutan's connective role between India and China's Tibetan Autonomous Region aligns with Mackinder's Heartland theory, positioning the Eastern Himalayas as a strategic hinge of geography, population, and water resources (Mackinder, 1904). Within this conceptual milieu, the India Bhutan frontier acquires distinctive importance: Bhutan's location historically functioned as a protective buffer for India's vulnerable Siliguri Corridor, insulating the Indo-Gangetic heartland from potential northern thrusts and thereby limiting the scope for Chinese strategic penetration into the Bay of Bengal littoral (Rose, 1969). At the same time, Bhutan's very position in this rimland zone has also acted as a constraint on any latent Indian imperial overreach by embedding India's security role within treaty-based obligations rather than direct territorial control, thus tempering hegemonic impulses through institutionalised partnership (Kaplan, 2012). British frontier policies first consolidated this buffer arrangement, which was later formalised by the 1949 India–Bhutan Treaty of Friendship, granting India a guiding role in Bhutan's external affairs while preserving Bhutanese sovereignty (Rose, 1969). The terrain itself steep ridgelines, narrow passes, and high-altitude valleys reinforced this rimland logic by making large-scale occupation costly yet enabling surveillance, staging, and denial, turning geography into a strategic filter rather than an open gateway (Chakrabarti, 2020). The 2007 revision of the treaty signalled a recalibration of this architecture: Bhutan asserted greater sovereign agency while reaffirming deep security and economic cooperation with India (India-Bhutan friendship treaty, 2007). Recent developments, particularly China's growing assertiveness along Bhutan's borders and the 2017 Doklam standoff, translate these structural vulnerabilities into concrete security crises, demonstrating how terrain and geopolitics intersect in the Southern Himalayas (Panda, 2017). Doklam, located near the tri-junction of India, Bhutan, and China, situated at a top ridge of terrain that overlooks approaches to the Siliguri Corridor; any consolidation of Chinese presence there would shorten response times, improve surveillance, and potentially outflank Indian defences, making Bhutan's territorial integrity indispensable to India's security calculus (Joshi, 2017). For Bhutan, the episode underscored that cooperation with India provides both a security umbrella against external pressure and diplomatic room to pursue strategic autonomy amid sharpening great-power rivalry (Lama, 2023). In this sense, the Southern Himalayan terrain emerges not only as a contested physical space but also as a historical frontier and contemporary security dilemma with clear implications for future Asian geopolitics (Bhadauriya, 2025)

At the same time, the Doklam crisis also highlighted that this region cannot be understood solely through a militarised lens. The Eastern Himalayas are a vital zone of connectivity, ecology, and human development, where stable borders underpin trade, hydropower cooperation, and infrastructure projects central to India's Act East Policy and Bhutan's development model (Sikri, 2009). The fragile Himalayan ecosystem rich in biodiversity and

water resources requires a low-tension political environment to avoid the ecological costs of militarisation and to protect downstream populations (Ives & Messerli, 1989). Borderland communities along the India–Bhutan frontier embody this human dimension: their livelihoods, cultural exchanges, and everyday mobility depend on predictable, peaceful cross-border interactions, making them both beneficiaries and informal custodians of stability (Anand, 2024)

Against this backdrop, the article situates the Doklam plateau and the surrounding Southern Himalayan terrain as a critical hinge between. By tracing the historical evolution of the India–Bhutan frontier, analysing contemporary flashpoints like Doklam, and foregrounding the role of terrain and borderland societies, it argues that this border is central to maintaining regional balance, safeguarding India’s sovereignty, and enabling Bhutan’s carefully calibrated pursuit of strategic autonomy in an increasingly contested Himalayan order (Basumatary, 2023).

Literature review

Geopolitical cooperation and strategic depth

The first thematic strand in the literature concerns geopolitical cooperation and the provision of strategic depth. From a deductive perspective, classical ideas of buffer state and chokepoint frame Bhutan as a critical buffer that protects India’s narrow Siliguri Corridor, often described as the country’s Achilles’ heel because it is only about 20–22 kilometres wide and vulnerable because it is nearest point from the Chumbi Valley and adjacent high ridgelines (Aguiar, 2025). Within this framework, Bhutan’s territory provides early-warning space and operational room, reinforcing the argument that terrain and alignment together shape India’s border security posture in the Eastern Himalayas.

Inductively, the 2017 Doklam standoff is treated as choke point for India-Bhutan border. The 73 days confrontation at the India–Bhutan–China tri-junction showed how an international dispute inside Bhutanese territory can rapidly escalate into a regional security flashpoint, validating long-standing assessments of corridor vulnerability and demonstrating that Bhutanese security is inseparable from India’s strategic calculations (Phuntsho, 2017). the moment when maps were translated into operational decisions, as India physically intervened to prevent changes on the ground that could have compromised its access to the Northeast, thereby highlighting how terrain-driven vulnerabilities translate into concrete security behaviour (Gurjar, 2019).

Within this geopolitical theme, infrastructure appears as a second sub-strand. Project DANTAK, initiated in 1961, is read not just as development cooperation but as a long-term strategy of terrain-shaping, in which roads, bridges, and airfields serve dual civilian and military purposes. Scholars argue that such connectivity creates lateral mobility options that reduce India’s overdependence on the single Siliguri chokepoint, allowing forces and supplies to move along alternative Himalayan routes and thereby strengthening deterrence and crisis-response capacity (Lama, 2024). Hydropower cooperation through projects such as Chukha, Tala, and Mangdechhum adds an economic dimension as energy exports from Bhutan to India are treated as “resource linkages” that raise the cost of instability and embed border security within a broader web of interdependence consistent with liberal and interdependence theories (Ranjan, 2018).

A further layer of this literature examines diversification of connectivity corridors. Analyses of planned and emerging projects, including rail and multimodal initiatives like the Kokrajhar Gelephu link, suggest a gradual shift from reliance on a single narrow land corridor to a more networked connectivity architecture that integrates Bhutan more tightly into India's Act East Policy. Inductively, these developments are interpreted as practical responses to terrain-induced vulnerability, in which infrastructural redundancy and cross-border linkages become tools for reducing strategic pressure on the Siliguri Corridor and enhancing resilience along the India–Bhutan border (Singh & Verma, 2023). .

Diplomatic cooperation and negotiated autonomy

A second major theme in the literature centres on diplomatic cooperation and Bhutan's negotiated autonomy within an asymmetric relationship. Studies of treaty evolution trace a movement from “guardianship to partnership,” with the 1949 Treaty of Friendship commonly analysed through theories of asymmetric alliances and protector protégé dynamics, in which India provided security assurances and developmental support in exchange for alignment in foreign and security policy (Sharma & Sharma, 2016). The 2007 treaty revision is widely interpreted as institutionalising a more equal partnership while still preserving close consultation, thereby demonstrating how formal arrangements evolve to accommodate Bhutanese sovereignty without undermining India's security interests in the Eastern Himalayas (Wangchuk, 2009). .

Inductively, this treaty trajectory feeds into the concept of “assertive alignment,” where Bhutan carefully expands its diplomatic space but does not fundamentally depart from India's. Recurring Indian financial commitments, such as substantial support to Bhutan's Five-Year Plans, are read as instruments of development diplomacy that stabilise Bhutan's society and economy, especially in border-adjacent regions, and thus indirectly reinforce the security of the India–Bhutan frontier. This literature shows how economic and developmental instruments, although not purely military, underpin the geostrategic function of the terrain by anchoring Bhutan's policy choices in a dense network of India-centred incentives (Turner & Wangchuk 2025)

Boundary negotiations between Bhutan and China form a second diplomatic subtheme and act as a crucial test case for this framework. Bhutan actively seeks a negotiated settlement with China while maintaining close alignment and continuous consultation with India. Diplomacy here is not treated as an external add-on to military posture but as a primary method of managing Himalayan security, in which quiet coordination between Thimphu and New Delhi ensures that any prospective Bhutan–China arrangement does not compromise India's vital interests around the Siliguri Corridor (Pankaj, 2024).

The literature on every day and societal integration complements these high-politics accounts by focusing on cross-border trade, digital payment systems like RuPay and UPI, and people-to-people ties that bind the two economies. Drawing on liberal peace and interdependence theories, these works argue that when borderland communities benefit materially from connectivity and stability, the domestic political cost of frontier confrontation increases, reinforcing a preference for cooperative security management along the India–

Bhutan border. In this way, diplomatic and economic integration is directly connected to the central theme of terrain-based security, as local stakeholders become invested in preserving the stability of a strategically fragile frontier (ESCAP, 2025).

Security cooperation and institutionalised border management

A third cluster in the literature focuses on security cooperation and institutionalised management along the border of India–Bhutan frontier. From a deductive standpoint, the “one border, one force” principle under which the Sashastra Seema Bal (SSB) is the security force on the Indian side is presented as a model of integrated border management designed for a friendly and largely demarcated border. Regular coordination meetings, joint patrols, and standard operating procedures against smuggling, wildlife crime, and river-related hazards translate high-level trust into routine practices that stabilise the frontier and demonstrate how institutional design interacts with terrain challenges (Mohan, et al., 2017).

Capacity-building initiatives constitute a second subtheme within this security cooperation literature. Institutions such as the Indian Military Training Team (IMTRAT) and Project DANTAK embed Indian security and engineering personnel within Bhutan’s defence and infrastructure systems, enhancing Bhutan’s capabilities while simultaneously giving India granular situational awareness in a sensitive Himalayan belt (Hiremath, 2007). Inductively, the long-term acceptance and continuity of these missions are taken as evidence that deeply embedded cooperation can mitigate some of the anxieties usually associated with asymmetric partnerships, particularly in areas where mountainous terrain complicates surveillance, logistics, and rapid response (Basumatary, 2023).

Hydropower is also reframed as a security issue rather than a purely economic one. Studies note that tariff negotiations, grid synchronisation, and flood management protocols demand constant bilateral coordination, effectively turning shared river basins into strategic assets that must be co-governed. This supports the notion of energy flows and river control become instruments of both development and deterrence, further entangling border security with resource management (Sauvagerd, 2018). At the same time, analyses of Bhutan–China boundary talks emphasise what has been called “silent security diplomacy”: low-visibility coordination between India and Bhutan, away from public scrutiny, designed to protect India’s core vulnerabilities while preserving Bhutan’s diplomatic room to negotiate. In the high-altitude and politically sensitive Eastern Himalayas, such discreet mechanisms are seen as more effective than overt alliance signalling in preventing escalation and maintaining trust (Smith, 2014).

Synthesis: from frontier to security complex

When synthesised, these strands of literature collectively recast the India–Bhutan border not as a static line but as a multi-layered security complex shaped by terrain, chokepoints, diplomatic bargains, infrastructural networks, and institutional arrangements. The case of India-Bhutan border security reinforces broader theories about buffer states, chokepoints, and asymmetric partnerships by showing how the Eastern Himalayan terrain and the Siliguri Corridor produce structural vulnerabilities that are managed through alliance-like cooperation, embedded institutions, and dense economic ties (Chandra, 2020). Inductively, specific episodes and

practices Doklam, the evolution of Project DANTAK, hydropower-driven interdependence, and diplomatic engagement of both nations generate more nuanced concepts such as “assertive alignment” and “hydro-strategic interdependence” that help explain how a small Himalayan kingdom and a regional power co-manage a fragile but pivotal frontier (Haidar, 2023).

For the purposes of your article, this synthesis can be used to frame the Eastern Himalayas as an integrated geostrategic terrain where India–Bhutan border security is simultaneously a function of physical geography, infrastructural design, diplomatic evolution, and everyday institutional practices. This conceptualisation aligns with your overarching research question by demonstrating that the geostrategic significance of the Eastern Himalayan terrain lies not only in its physical features but also in how those features are mediated through cooperative arrangements that convert a potentially exposed frontier into a managed, though still vulnerable, security complex (Davis, 2023).

Results and Findings:

The findings indicate that the India–Bhutan frontier functions as an integrated geostrategic system rather than a conventional international boundary. Bhutan’s terrain and location significantly enhance India’s strategic depth around the Siliguri Corridor by providing buffer space, early-warning advantages, and lateral mobility options, so that any alteration in Bhutan’s border status most clearly illustrated by the 2017 Doklam standoff has an immediate and direct impact on India’s security calculations. This confirms that Indian and Bhutanese security are structurally inseparable in the Eastern Himalayas.

The results further show that infrastructure and hydropower cooperation, particularly through Project DANTAK and major joint hydropower projects, have converted geography into a dual-use asset that simultaneously supports development and military logistics. These arrangements generate “hydro-strategic interdependence,” where energy flows and road networks act as stabilising linkages that increase the political and economic costs of conflict for both sides. At the diplomatic level, the evolution from the 1949 Treaty of Friendship to its 2007 revision, coupled with Bhutan’s carefully calibrated engagement with China, reveals a pattern of “assertive alignment” in which Bhutan incrementally widens its diplomatic space while remaining firmly anchored within India’s security umbrella.

Finally, the analysis of institutionalised mechanisms such as SSB led border management, IMTRAT’s training role, joint security practices, and quiet coordination on Bhutan–China boundary talks demonstrates that routine, everyday security cooperation is as significant as high-level diplomacy in shaping outcomes. Together, these elements convert the Southern Eastern Himalayas into a managed security complex where sovereignty, stability, and strategic necessity are continuously balanced, reinforcing the argument that the India–Bhutan border is best understood as an integrated geostrategic system rather than a simple line on the map.

Discussion and recommendations:

The study recommends that India and Bhutan prioritise sustainable lateral connectivity such as rail and road links like Kokrajhar Gelephu to reduce overdependence on the Siliguri Corridor while ensuring environmental safeguards and local benefits, deepen institutional cooperation

by widening IMTRAT and SSB frameworks to include structured forums with border communities so that human security shapes joint hydropower and patrol governance, and maintain transparent yet discreet coordination on Bhutan–China boundary negotiations to balance Bhutan’s diplomatic autonomy with the protection of India’s core vulnerabilities; for research, it proposes integrating geospatial analysis with ethnographic fieldwork to trace how terrain, infrastructure, and security are experienced in borderlands, foregrounding local agency in trade, migration, and resource use, and developing scenario-based models that examine how climate change and evolving Chinese postures around Doklam Chumbi could reshape this managed security complex.

Conclusion

The Eastern Himalayan terrain centred on the India–Bhutan frontier—emerges as a deliberately engineered security complex in which geography, development, and diplomacy are fused into a single geostrategic system. Bhutan’s upland buffer and the Doklam episode confirm that any shift in its border posture translates immediately into altered risk around the Siliguri Corridor, making Indian and Bhutanese security structurally interlinked. Dual-use infrastructure under Project DANTAK, hydropower integration, and new connectivity corridors convert fragile highlands into corridors of both growth and manoeuvre, while the 1949–2007 treaty evolution codifies Bhutan’s expanding agency without loosening its anchoring within India’s security umbrella. Routine mechanisms joint patrolling, SSB and IMTRAT cooperation, and shared resource governance stitch these strategic and developmental layers into everyday stability, positioning the India–Bhutan border as a pivotal node in South Asia’s security architecture whose future resilience depends on carefully balanced connectivity, protected autonomy, and sustained community-inclusive management.

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