



Geopolitics of Water Sharing in South Asia: A Case of Indus and Ganga Basins

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Abstract

The geopolitics of water sharing in South Asia has emerged as a critical dimension of regional security and cooperation, with the Indus and Ganga river basins standing at the center of hydro political debates. Shared by multiple countries including India, Pakistan, Nepal, Bangladesh, and China, these transboundary rivers not only sustain millions of livelihoods but also serve as instruments of power, negotiation, and conflict. The Indus Waters Treaty (1960) between India and Pakistan remains a rare case of durable bilateral agreement despite political hostilities, yet recent tensions highlight challenges of climate change, water scarcity, and unilateral projects. Similarly, the Ganga basin epitomizes both cooperation and contestation, as India's water management policies intersect with Nepal's hydropower ambitions and Bangladesh's downstream concerns. The increasing pressures of population growth, agricultural demand, and changing monsoon patterns further intensify the stakes. This study explores how water-sharing agreements, power asymmetries, and emerging environmental threats shape the geopolitics of South Asia, making the Indus and Ganga basins a test case for balancing national interests with regional sustainability.

Keywords: Geopolitics, Water Sharing, Indus Waters Treaty, Ganga Basin, South Asia, Transboundary Rivers, Hydro politics, Climate Change

Introduction

Water has emerged as one of the most critical strategic resources in the 21st century, and nowhere is this more evident than in South Asia, where densely populated countries are heavily dependent on transboundary river systems for agriculture, industry, energy, and human survival. The Indus and Ganga basins, originating in the Himalayas and flowing across multiple national boundaries, are not merely geographical features but geopolitical arenas where issues of sovereignty, development, and security converge. The Indus basin, shared primarily by India and Pakistan under the framework of the 1960 Indus Waters Treaty, represents one of the rare long-standing water-sharing agreements in a politically hostile region, yet recurring disputes over hydropower projects, flow diversion, and ecological stress continue to fuel mistrust. The Ganga basin, on the other hand, involves India, Nepal, and Bangladesh, highlighting the complexities of multilateral water management as upstream infrastructural policies directly affect downstream availability and sustainability. Rapid population growth, urbanization, and climate change have further intensified competition for water resources, making them



instruments of both cooperation and conflict. Against this backdrop, the geopolitics of water sharing in the Indus and Ganga basins offers critical insights into how natural resources shape regional diplomacy, influence inter-state relations, and define the prospects of peace, stability, and sustainable development in South Asia.

The geopolitics of water in South Asia has become increasingly significant in recent decades, as shared rivers such as the Indus and Ganga basins serve as both vital lifelines and contested resources among regional states. The Indus River system, flowing through India and Pakistan, is regulated by the Indus Waters Treaty of 1960, often cited as one of the most successful examples of resource-sharing agreements despite recurring political hostility between the two nations. However, tensions over water allocation, dam construction, and climate-induced variability continue to threaten the treaty's resilience. Meanwhile, the Ganga basin, spanning India, Nepal, and Bangladesh, represents a complex hydropolitical landscape where power asymmetry, development imperatives, and downstream vulnerabilities shape water-sharing disputes. With agriculture-driven economies heavily dependent on irrigation, coupled with rising population pressures and climate change-induced uncertainties, the politics of water distribution is becoming central to South Asia's stability and development. Examining the Indus and Ganga basins, therefore, provides valuable insights into how transboundary water governance influences regional diplomacy, national security, and the prospects for cooperative sustainable growth.

Colonial Legacies

The geopolitics of water sharing in South Asia is deeply rooted in the colonial legacy of river management, where British policies on irrigation, canal construction, and river basin development prioritized revenue generation and strategic control rather than equitable distribution. When the subcontinent was partitioned in 1947, the artificial political boundaries did not align with natural river systems, creating immediate disputes between India and Pakistan over the Indus basin. Similarly, in the Ganga basin, colonial-era infrastructure and flood management projects left behind a legacy of dependency and mistrust that shaped post-independence relations between India, Nepal, and Bangladesh (then East Pakistan). These historical legacies continue to influence water-sharing politics, as disputes are not merely environmental or economic but also tied to the unresolved tensions of partition and post-colonial state formation.

Indus Waters Treaty (1960)

The geopolitics of water in South Asia cannot be understood without considering the colonial legacies of river management and the subsequent institutional frameworks developed after independence, most notably the Indus Waters Treaty (1960). The partition of India in 1947 created one of the most complex water-sharing disputes in the modern world, as the Indus basin's headwaters lay in India while its canals irrigated vast agricultural lands in Pakistan. This asymmetry immediately transformed rivers into instruments of political bargaining and national security. The World Bank-mediated Indus Waters Treaty attempted to institutionalize cooperation by dividing rivers between the two states, and while it has survived decades of



conflict, it remains vulnerable to new challenges such as unilateral dam projects, hydropower expansion, and climate-induced variability. In the Ganga basin, too, colonial-era legacies and post-colonial asymmetries have shaped disputes between India, Nepal, and Bangladesh, where water remains both a resource for development and a source of geopolitical tension.

Ganga Water Disputes

The Ganga basin, shared by India, Nepal, and Bangladesh, is one of the most significant yet politically sensitive river systems in South Asia, where competing national interests have given rise to recurring water disputes. The central conflict revolves around India's infrastructural projects, particularly the Farakka Barrage constructed in 1975, which Bangladesh has long argued reduces dry-season flows, causing agricultural losses, environmental degradation, and livelihood challenges downstream. Nepal, an upstream state, also seeks to utilize the Ganga tributaries for hydropower generation and economic development, often clashing with India's strategic control over river flows and flood management. Unlike the Indus system, the Ganga basin lacks a comprehensive multilateral framework, making water sharing dependent on bilateral agreements that are often temporary or politically contested. These disputes highlight the fragility of water governance in the region and illustrate how shared rivers can become flashpoints of tension when upstream development and downstream needs remain unbalanced.

Hydropolitics and Power Asymmetry

Hydropolitics in South Asia is characterized by significant power asymmetries, where upstream states, particularly India, exercise disproportionate influence over shared river systems such as the Indus and Ganga basins. India's geographical advantage as the upper riparian country allows it to control river flows, build dams, and design water infrastructure that directly impacts downstream neighbors like Pakistan and Bangladesh, both of which are heavily dependent on these rivers for agriculture, food security, and livelihoods. This asymmetry often translates into political bargaining power, where water becomes not just a natural resource but also an instrument of diplomacy, leverage, and sometimes coercion. While India frames its policies as developmental and sovereign rights over water, smaller downstream states perceive them as hegemonic practices that threaten their survival and ecological balance. The geopolitics of water sharing in South Asia, therefore, is not just about scarcity but about how power relations, historical mistrust, and uneven bargaining capacities shape water cooperation and conflict across the region.

Climate Change and Environmental Stress

The geopolitics of the Ganga basin underscores the complex interplay of water disputes and power asymmetry that defines South Asia's hydropolitical landscape. As the upstream riparian, India holds significant control over the basin's flow, which affects downstream Bangladesh and Nepal's ability to manage agriculture, hydropower, and flood risks. The long-standing conflict over the Farakka Barrage, which diverts Ganga waters during the dry season, reflects how infrastructure development by India has sparked grievances in Bangladesh, where reduced flows impact irrigation, navigation, and fisheries. Nepal, too, has raised concerns over India's dominant role in hydropower and flood-control projects, which limit Kathmandu's ability to



harness its water resources for national development. The lack of a basin-wide treaty and India's disproportionate leverage create a situation where hydropolitics is shaped less by cooperation and more by asymmetrical power dynamics. This asymmetry amplifies mistrust and fuels recurring disputes, making the Ganga basin a central arena for studying the geopolitics of water in South Asia.

Ganga Water Disputes

The Ganga River, one of the most significant transboundary rivers in South Asia, is at the center of recurring water disputes involving India, Bangladesh, and Nepal, where competing national interests and asymmetrical power relations complicate cooperative water governance. The Ganga basin sustains more than 400 million people across the three countries, making it one of the most densely populated and agriculturally dependent river systems in the world. However, disputes arise primarily due to India's infrastructural dominance, most notably the construction of the Farakka Barrage in 1975, which diverts dry-season flows to flush silt from the Kolkata port, leaving Bangladesh with reduced water availability for irrigation, fisheries, navigation, and ecological balance. Bangladesh has consistently argued that the barrage has intensified desertification in its northern districts, damaged agriculture, and created environmental degradation, while India defends it as a strategic necessity for navigation and flood control. Although the Ganga Water Sharing Treaty of 1996 between India and Bangladesh attempted to address these concerns by allocating water during the lean season, disputes persist due to fluctuating flows, inadequate data sharing, and India's continued infrastructural projects upstream. Nepal, too, plays a critical role in the Ganga basin as an upstream riparian, with significant hydropower potential, but tensions have often arisen over India's control of joint projects and flood management strategies, with Kathmandu accusing New Delhi of limiting its ability to independently utilize its water resources. Seasonal variations caused by erratic monsoons and climate change further intensify these disputes, as floods in the wet season and scarcity in the dry season complicate water-sharing arrangements. Unlike the Indus basin, which is governed by a comprehensive treaty framework, the Ganga basin lacks a permanent, basin-wide institutional mechanism to manage disputes, leaving countries dependent on bilateral negotiations, temporary accords, and politically sensitive adjustments. This institutional vacuum, coupled with India's geographical and political dominance, perpetuates mistrust and makes equitable water sharing difficult to achieve. The Ganga water disputes thus reflect not only ecological and developmental challenges but also deeper geopolitical dynamics, where issues of sovereignty, dependency, and national security intersect, making cooperative management an ongoing challenge for South Asia.

Hydropolitics and Power Asymmetry

Hydropolitics in South Asia is fundamentally shaped by power asymmetry, where geographical advantages, economic capacity, and political influence allow dominant riparian states to control shared water resources, often at the expense of weaker downstream neighbors. In the Indus and Ganga basins, India occupies the strategic upper riparian position, giving it considerable leverage over river flows that sustain Pakistan, Bangladesh, and Nepal. This positional



advantage has translated into political power, as seen in the Indus basin where India, despite the 1960 Indus Waters Treaty, continues to develop hydropower projects on western tributaries, raising concerns in Pakistan about potential manipulation of water flows during conflict. In the Ganga basin, India's ability to divert water through structures like the Farakka Barrage exemplifies how upstream infrastructural dominance directly impacts downstream Bangladesh, generating accusations of water hegemony. Nepal, while upstream on several tributaries, remains economically and politically weaker, leaving it dependent on India for joint hydropower development and flood management, which often results in unequal agreements. These asymmetries are not merely geographical but also political, as India's regional dominance, coupled with its ability to frame water as a sovereign resource, enables it to dictate the terms of engagement. Smaller states such as Bangladesh and Nepal, facing acute dependence on these rivers, perceive water-sharing negotiations as survival issues, which amplifies the sense of vulnerability and mistrust. Climate change and environmental degradation further exacerbate these asymmetries, as erratic monsoon patterns, glacial retreat, and seasonal variability increase the reliance of downstream countries on upstream flows controlled by India. While scholars debate whether water is more likely to lead to conflict or cooperation, in South Asia the asymmetry of power often tilts negotiations towards India's favor, limiting the prospects for truly equitable sharing. Yet, this dominance also places a responsibility on India to act as a regional leader by ensuring transparency, data sharing, and cooperative frameworks, as unilateral actions risk deepening mistrust and destabilizing regional relations. Thus, the hydrogeopolitics of South Asia reveals that water disputes are not simply about scarcity but about the unequal distribution of power, where upstream control translates into geopolitical leverage, shaping the politics of cooperation and conflict in the Indus and Ganga basins.

Conclusion

The geopolitics of water sharing in South Asia, particularly in the Indus and Ganga basins, underscores how rivers are not only ecological lifelines but also strategic assets deeply embedded in regional politics, security, and diplomacy. While the Indus Waters Treaty (1960) remains a landmark example of institutionalized cooperation despite enduring hostilities, its fragility under the pressures of climate change, new infrastructure projects, and political mistrust demonstrates the limits of treaty-based mechanisms in a volatile region. The Ganga basin, in contrast, illustrates the complexities of multilateral river management, where India's upstream dominance and infrastructural control create persistent disputes with Nepal and Bangladesh, further exacerbated by the absence of a basin-wide governance framework. Across both basins, power asymmetry remains the defining feature of hydrogeopolitics, with India's geographical advantage translating into bargaining leverage, often perceived as hegemonic by its smaller neighbors. Rapid population growth, rising agricultural demand, and the uncertainties of climate change have added new layers of urgency, turning water into both a resource for development and a potential trigger of instability. The challenge for South Asia lies in transforming rivers from contested resources into platforms of cooperation, which requires greater transparency, data sharing, and regionally inclusive institutions. Ultimately,



the cases of the Indus and Ganga basins highlight that sustainable peace and prosperity in South Asia will depend not only on managing water scarcity but also on addressing the deeper issues of trust, equity, and power that shape transboundary river governance.

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