

HYDRO POLITICS IN THE WESTERN HIMALAYAS: INDUS WATER TREATY SUSPENSION AND ITS IMPACT ON JAMMU AND KASHMIR

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ABSTRACT

India and Pakistan signed the Indus Water Treaty on 19 September 1960. The treaty divides the waters of the Indus River Basin between India and Pakistan. The treaty assigned approximately 80 percent of the basin's flows to Pakistan through exclusive rights over the western rivers (Indus, Jhelum, and Chenab). The eastern rivers (Ravi, Beas, and Sutlej) were assigned to India. Despite the treaty being unfavourable to India, India honoured it throughout the turbulent history of relations between India and Pakistan. On 22nd April 2025, terrorists sponsored by Pakistan attacked tourists in Pahalgam and killed 26 of them. On 23 April 2025 India decided to hold the treaty in abeyance. As an upper riparian state, India holds sway over the distribution and flow of water. Pakistan is heavily dependent on the Indus River system for irrigation and drinking purposes. Three of the six rivers (Indus, Jhelum, and Chenab) over which Pakistan has exclusive rights flow through J&K. Jammu and Kashmir is already the flashpoint of the India-Pakistan conflict. The abeyance of the treaty impacts the geopolitics of both countries, and Jammu and Kashmir is in the middle. This paper explores the geopolitical implications of this decision for India and Jammu and Kashmir.

Keywords: Indus Water Treaty, Hydro politics, Western Himalayas, Jammu and Kashmir.

INTRODUCTION

The Himalayas can be called the 'Water Towers of Asia'. The snow-covered mountain peaks are the source of most major rivers flowing in South Asia. Most of the rivers in the Indus River, Ganga River, and Brahmaputra River systems originate from the Himalayas. The Western Himalayas are the originating point of all the rivers in the Indus River system. These rivers flow into three countries, namely China, India, and Pakistan. All the rivers of the Indus River system flow first into India and then into Pakistan. As the upper riparian state in the region, India holds a strategic advantage in controlling the water flow of these rivers. The Indus River system has been the lifeline of the people living in the Indus Plains. The Indus Valley Civilization developed around the Indus River system. (Shirsat et al., 2026; Rehman et al., 2025)

During the colonial period, a vast network of irrigation systems was developed in the Indus Basin to increase agricultural productivity. By the 1940s, it was the most extensive network in the world, with 34000 miles of canals and 26 million acres of irrigated land. The partition of India was carried out in a haphazard manner without considering the natural flow of rivers in the region. There was a well-organised network of canals for irrigation and water control facilities, such as headwork, to control the flow of water. After the partition, most of the canal network came under the territorial jurisdiction of Pakistan, and most of the water control facilities came under India's territorial jurisdiction. India, being the upper riparian state, had control over the management of water flow in the rivers. A Standstill Agreement was signed between India and Pakistan in December 1947 which ensured constant waterflow into Pakistan from Indian headworks, the treaty expired in 1948. India temporarily halted the flow of water into Pakistan, exposing Pakistan's vulnerability to India's control over the flow of water. After 1948, both countries approached the World Bank for a mediating role to resolve

the dispute between them regarding the distribution of water. The negotiations went on for a decade, involving various rounds of negotiations and experts from various fields discussing the terms of the agreement. The discussions shifted from the volumetric distribution of water which is more complex, to the geographic distribution of water which is less complex and easy to implement. Both countries accepted the geographical distribution of rivers into 'western' and 'eastern' rivers. Pakistan gained control over 80% of the river basin's waterflow, and India gained control over 20%. Finally, the treaty was signed on 19 September 1960 in Karachi by Pandit Jawaharlal Nehru, the Prime Minister of India, and Ayub Khan, the President of Pakistan. (Dr. Duryodhan Nahak 2025; Shirsat, Fowler, and Scott 2026)

India was given full rights over the 'eastern' rivers and Pakistan was given full rights over the 'western' rivers. India was allowed to build run-of-the-river hydropower plants on Western rivers. It can generate electricity without storing water and can store only small quantities of water for domestic use. The volume of water that India can store varies from river to river. The storage limit was 0.40 million acre-feet for Indus, 1.50 million acre-feet for Jhelum, and 1.70 million acre-feet for Chenab. The pondage limit was 2 million acre-feet for each project. The treaty had provisions for a graded dispute resolution mechanism. It was a three-tier system, tier 1 was the Permanent Indus Commission (PIC), which had one commissioner from each country who was an expert. Tier 2 was a neutral expert appointed by the World Bank who usually handled technical and engineering-related issues and his decision was binding upon both the parties. Tier 3 was the Court of Arbitration, consisting of seven members appointed according to treaty guidelines. It usually handles legal disputes between parties. There was a provision for data exchange between both parties. (Singh, n.d.)

The Indus Water Treaty is considered one of the most successful water-sharing treaties of the 20th century. Despite the hostile relations between India and Pakistan, the treaty remained intact. The treaty survived three major wars (1965, 1971 and 1999) and many other conflicts and tensions between both nations. India honoured the treaty despite it being unfavourable for India and despite multiple provocations from Pakistan. In addition, one reason for the success of the treaty was the allocation of rivers to countries rather than the distribution of river water which increases complexity. However, Pakistan did not refrain from sponsoring terrorism against India despite its repeated warnings. On 22nd April, 2025, terrorists sponsored by Pakistan attacked innocent tourists in Pahalgam and massacred 26 of them mercilessly. On 23 April 2025 India announced that it had decided to keep the Indus Water Treaty in abeyance. India reiterated its stand that 'blood and water cannot flow together'. (Jyoti & Kapur, 2023; Ranjan, 2025; Shirsat et al., 2026)

The decision to suspend the Indus Water Treaty was not a sudden decision taken in haste. It was a culmination of decades of cross-border terrorism sponsored by Pakistan and internal discontent over the under-utilisation of western rivers which it was naturally entitled to. In 2024, India invoked Article XII (3) of the Indus Water Treaty, formally informing Pakistan of its intention to modify the treaty. The permanent indus commission formed under the treaty is supposed to have at least one meeting per year. The last meeting was held in 2022, after which India decided not to participate. Pakistan's repeated objection to any project which India sought to build on the western rivers posed technical and economic challenges for India. India's unaddressed concerns for decades and failed attempts to modify the treaty led to an increase in its assertiveness. (Koch, 2026)

The treaty was signed in the 20th century when climate change was not as serious an issue as it is today. In the past six decades, the climate change scenario has undergone a dramatic change, and the existing treaty lacks a mechanism to manage it. The Himalayan region which is the source of all the rivers under the Indus Water Treaty, is the most vulnerable to climate change. The temperature in the

Hindukush-Himalayas has been increasing more than the global average. Rapidly receding glaciers and fast-reducing ice cover have temporarily increased river water flow. The situation is further aggravated by erratic rainfall patterns which lead to flooding and droughts. In addition, the heavy siltation loads of these Himalayan rivers pose a structural challenge to the existing dams built on these rivers. The existing mechanism is simply not adequate enough to handle and properly govern the distribution and utilisation of water in the Indus River Basin. Certain changes are projected for the future, including earlier peak flows in June (usually occurring in July and August), more intense floods, and longer dry seasons. Under these changing circumstances, the treaty has become outdated. (Rehman et al., 2025; Shirsat et al., 2026; Mahla & Jeganaathan, 2026)

Jammu and Kashmir has been the flashpoint of the India-Pakistan conflict since independence. Its geographical location and demographic composition have made it prone to conflict. Jammu and Kashmir has been the worst sufferer of this conflict. The Indus Water Treaty geographically distributes the rivers between India and Pakistan. The 'western' rivers, that is, the Indus, Jhelum, and Chenab, are allocated to Pakistan. These rivers flow through Jammu and Kashmir and into Pakistan. Due to their allocation to Pakistan, India can use very little of them, and their utilisation is limited for India. As a result, Jammu and Kashmir, despite being rich in water resources and having an abundant flow of major rivers, could not use them. Pakistan objected to any river project announced by India in Jammu and Kashmir and challenged it in arbitration courts and tribunals. This has led to inordinate delays in developmental projects. Jammu and Kashmir has lagged behind in development not because it lacks natural resources but due to the unjust nature of the Indus Water Treaty and the continuous conflict between India and Pakistan. (Mahla & Jeganaathan, 2026; Nahak, 2025)

POLITICS OF HYDROLOGY IN SOUTH- ASIA

South Asia is a geopolitically complex region with actors having a very complex geopolitical history. Water has become the most important issue in international politics. It is predicted that future global wars will be fought over water. The issue becomes more contentious in South Asia which is one of the most water-scarce regions with ever-increasing water demand due to the rapidly increasing population. The situation is further worsened by climate change which reduces the availability of water and makes the seasonal availability of water uneven. Climate change is the main cause of water insecurity in South Asia. Climate change leads to glacial melting and monsoon variability, leading to water scarcity and floods, thus increasing the risk of conflicts. The water flow of Himalayan rivers is predicted to reduce by 30-40% by 2050. (Dogar et al., 2026; Khatoon et al., 2025; Rehman et al., 2025)

Bilateral animosity, power asymmetry, and the uneven distribution of water make the issue of interstate water distribution very complex. In the region, rivers are not just a natural resource, but rivers flowing across borders imbibe within them sovereignty, identity, and national security. It can shape diplomatic engagement and geopolitical narratives. Chinese hegemonic activities and the construction of mega dams in ecologically sensitive Himalayan regions, such as the dam on the Yarlung Tsangpo, raise concerns over the distribution of water in Asia. The strategic rivalry between India, Pakistan, and China complicates the issue of river water distribution in the Indus River. The Indus flows through China, and China can control the waterflow of the Indus. It can be used as an instrument of strategic competition. (Dogar et al., 2026; Ranjan, 2025)

HYDRO POLITICAL DISPUTES BETWEEN INDIA AND PAKISTAN

The Indus River system forms the lifeline of Pakistan, supporting 96% of its crop production. The basin comprises approximately 65 percent of Pakistan's land area and 80 percent of Pakistan's population is directly or indirectly dependent upon Indus River system. Virtually all the electricity produced in Pakistan comes from these rivers. Due to its dependence on the Indus River system, its

water has acted as an instrument of geopolitical competition between India and Pakistan. Pakistan's national security is directly dependent on water security. The unavailability of water for a short time will result in drought, and Punjab and Sindh will become desert in no time. Unseasonal rainfall can result in floods, as observed in 2022 and 2025. Any disruption in the water supply will lead to a humanitarian crisis in Pakistan. Water has become a major political issue in Pakistan, and the politicisation of water has led to the rise of water nationalism. (Khatoon et al., 2025; Dogar et al., 2026)

Pakistan has always objected to any project that India has ever decided to undertake. Pakistan objected to the Baglihar dam project, arguing that it violated the treaty's technical specifications. It claimed excessive pondage and improperly low heights for power intakes, and in 2005, Pakistan approached the World Bank to appoint a neutral expert. In 2007, the neutral expert, Professor Raymond Lafitte, ruled in India's favour. It upholds the overall design of the project with minor modifications. Pakistan objected to the Kishanganga project on the Jhelum River, arguing that it would reduce the water supply and thus violate the treaty. India was designed to divert river water to a powerhouse through a tunnel before returning it to the river. The dispute went to the court of arbitration, which allowed the project to proceed. Similarly, Pakistan objected to the Rattle project on the Chenab River, raising objections over the project's design, pondage, spillways, and sediment outlets. The case is still under investigation. After India put the Indus Water Treaty in abeyance, it decided to move forward with project construction as India was no longer bound by treaty obligations. For Pakistan, the Indus Water Treaty has always been an unfinished agenda, like Kashmir. Pakistan understands its vulnerability in the region, and taking control of Kashmir was to take control of the sources of the Indus River System. Pakistan's survival depends on the Indus River system, and it currently holds a very vulnerable position. (Nahak, 2025; Singh, n.d.)

INDUS WATER TREATY AS A RESTRAINT ON DEVELOPMENT OF JAMMU AND KASHMIR

Jammu and Kashmir has abundant water resources with four major rivers (Indus, Jhelum, Chenab, and Tawi) and numerous small streams and other water bodies, such as lakes (Wular, Dal, and Mansar). Despite being rich in water resources, Jammu and Kashmir is facing acute water stress. Snowmelt water fulfils most of the water demands in Jammu and Kashmir including drinking, agriculture as well as hydroelectricity production. Himalayan glaciers are melting at a rapid pace, posing a threat to water availability. Agriculture accounts for 70% of the economy of Jammu and Kashmir, and water stress has a severe impact on it. Keeping this in view, there is need to develop efficient water-use technologies, improved forecasting system and climate- smart agricultural practices. (Mahla and Jeganaathan 2026)

In Jammu and Kashmir, the Indus Water Treaty is a restraint on economic development. Since the rivers flowing through Jammu and Kashmir (Indus, Jhelum, and Chenab) come under 'western rivers', Pakistan has exclusive rights over them, and India's rights are limited. There are restrictions on building large-scale dams and water storage capacity. This prevents the region from realising the full potential of its natural resources. Jammu and Kashmir has a hydroelectric potential of 16475 megawatts but currently only 3263 megawatts of energy is being produced (J&K State Economic Survey, 2017). The region persistently suffers from power shortages despite its potential to produce it. These mega river projects are not only a source of energy production but also provide water for irrigation and are a benchmark of economic and social development in the region. These mega projects are a source of employment for the local population. (Mahla & Jeganaathan, 2026; Jyoti & Kapur, 2023)

Pakistan has repeatedly objected to India's construction of dams on western rivers, such as the Baglihar and Kishanganga dams, although neutral experts have deemed these projects treaty-compliant. This has led to an inordinate delay in completing these projects. After its construction began, Pakistan objected to the design parameters of the Baglihar dam, claiming that it violated the treaty. The Tulbul navigation project was proposed as a lock-and-control structure on the Jhelum River at the mouth of Wular Lake to maintain a minimum level of water in the Jhelum River to ensure year-round navigation between Baramulla and Srinagar. Construction was halted because Pakistan objected, arguing that it violated the Indus Water Treaty. The project would have helped improve inland water transportation, electricity generation, and flood control. However, the project remains stalled due to Pakistan's objections. (Jyoti & Kapur, 2023; Shirsat et al., 2026; Ranjan, 2025)

The Indus Water Treaty is directly related to the politics of Jammu and Kashmir, and it was one of the reasons for the annexation of Jammu and Kashmir by Pakistan. On 3 April 2002" the Jammu and Kashmir Legislative Assembly called for a review of the treaty. The IWT has been treated as the "Most Unfair Document" to the UT of Jammu and Kashmir. India has proposed and built various projects on Chenab River (Baglihar, Dul Hasti, Salal, Ratle, Kwar and Pakal Dul) to address long term development imbalance and ensure energy security in the region. After the treaty suspension, economic justice can be provided to the people of Jammu and Kashmir. (Mallick, 2006; Nahak, 2025)

Simultaneously, the construction of mega dams in this ecologically and seismically sensitive area increases the risk of disasters and environmental concerns. Furthermore, these projects lead to deforestation, land submergence, and the displacement of large populations, leading to environmental refugees. The development needs of the people must be balanced with environmental sustainability. Infrastructure development should be carried out, but at the same time it must be ensured that it is sustainable and environmentally friendly. (Nahak 2025)

ABEYANCE OF INDUS WATER TREATY AND ITS IMPACT

After the Pahalgam attack, India announced putting the Indus Water Treaty 'in abeyance' and reiterated that "blood and water cannot flow together" and the treaty will remain in suspension till "Pakistan winds up cross border terrorism". India also announced that it was no longer bound by restrictions to exploit the waters of the western rivers. India justified the suspension of the Indus Water Treaty by the doctrine of *rebus sic stantibus* (fundamental change of circumstances), insisting that the circumstances have drastically changed from those of 1960 when the treaty was signed. The population of India has grown vastly, and so has the water demand. In addition, Pakistan has been sponsoring terrorism in India and has not backed down despite repeated warnings from India. India was 'too generous' with Pakistan with sharing 80% of water with it despite itself facing huge water stress. The Parliament Standing Committee on Water Resources of the 17th Lok Sabha, in its 12th report, urged the Government of India to take necessary diplomatic measures to renegotiate the IWT with Pakistan. The standing committee observed that "present-day pressing issues such as climate change, global warming and environmental impact as assessment were not taken into account by the Treaty". The suspension of the IWT is not only morally justified but also legally justified and geopolitically prudent. Cooperation cannot occur in a vacuum and cannot be separated from security concerns. The international community must realise that the treaty needs to be renegotiated in light of the 21st century challenges of terrorism and climate change. (Bhattacharjee, 2025; Koch, 2026; Manhas, 2026; Shah et al., 2025)

With the suspension of the Indus Water Treaty, India is no longer bound by limitations on the usage of the western rivers, and India would be able to enhance the capacity of existing projects and build new projects on these rivers. Pakistan will also lose the right to joint inspections in India. India will also be

able to limit and cut off the flow of water and divert it into canals and channels. After the suspension of the treaty, India has taken steps to leverage the waters of the western rivers. India has fast-tracked work on major hydroelectric projects such as Pakal Dul, Ratle, and Kwar on the Chenab River. In addition, India should initiate projects which it had proposed, such as the Tral irrigation project in Pulwama, modernisation of the main Ravi canal in Samba and Kathua, and the fourth project of Rajpora lift irrigation. (Bhattacharjee, 2025; Koch, 2026; Shirsat et al., 2026)

CONCLUSION

Geopolitics is a complex web of various geopolitical phenomena occurring simultaneously. The Indus Water Treaty signed between India and Pakistan was not just a technical treaty to share the waters between India and Pakistan; it was a hydro political settlement with a complex history, imbibing within itself colonial legacy, Cold War geopolitics, partition anxiety, as well as territorial control over water and sovereignty. There were complex inherent tensions with the distribution of water from the beginning, and India managed to honour the treaty despite it being unfavourable for India, and itself facing severe water shortages and domestic opposition to the treaty. India's decision to keep the treaty in abeyance is not just a reaction to Pakistan's unrelenting support for terrorism but the culmination of many other factors. The treaty was signed in 1960, and the situation has drastically changed since then. Climate change has become a major challenge, and the Himalayan region, from where these rivers originate, is the most vulnerable to climate change. The treaty lacks a mechanism to deal with changing climatic and rainfall patterns. Second, both India and Pakistan are rapidly growing nations with predominantly agricultural economies. Countries are already facing huge water stress, and water demand is expected to increase further. Water availability has become an issue of national importance, and it has become increasingly difficult for India to honour a treaty under which it has to share water with a hostile neighbour while already facing water stress.

At present, India does not have the infrastructure to divert a substantial amount of Indus River system water because most of the dams are run-of-the-river which do not need massive storage. However, after the suspension of the treaty, India can build infrastructure at a much faster pace without Pakistan's interference and develop storage capacity. However, the development of new infrastructure and updating the existing infrastructure must be carefully performed, considering climate concerns, the topography of the region, and the seismic sensitivity of the area.

Rivers do not comply with national boundaries, and water is a natural resource which needs to be shared with everyone. The Indus Water Treaty ensured the sharing of the waters of the Indus River system after its basin was divided between India and Pakistan. The treaty was successful to a great extent in surviving the hostile relations between both neighbours. It has survived three wars and numerous conflicts. However, the reality has drastically changed, and the treaty needs to be renegotiated. Along with political and technical considerations, climatic and environmental factors must be considered while renegotiating the treaty. The Hindukush Himalayan region, from where the river system emerges, is facing severe climatic stress. The glaciers which feed these rivers are melting rapidly, temporarily increasing the flow but, in the long run, reducing the water flow. The rivers flow through the seismically sensitive zone, and building any infrastructure for water usage must be done while keeping in view its sustainability. In addition, the existing infrastructure is becoming outdated and requires immediate upgrades. These Himalayan Rivers carry heavy siltation loads, and desiltation is becoming a significant challenge. The rivers feed a large population which is primarily dependent on agriculture. The region is already facing huge water stress, and water demand is expected to increase further. The groundwater levels in the region have dropped to alarming levels, and underground aquifers are drying up. The treaty must be renegotiated, keeping in view the changing

circumstances. The focus should not only be on the judicial division of water but also on ensuring that water flow remains stable and sustainable.

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