FROM TREATY TO WEAPON: HYBRID COERCION AND THE SUSPENSION OF THE INDUS WATERS TREATY IN 2025

Zubeda Anjum Niazi & Houria Sheikh[*]

Abstract

The suspension of the Indus Waters Treaty (IWT) by India in April 2025 marked a consequential shift in South Asian water diplomacy. It transformed a longstanding cooperative framework into a tool of hybrid coercion. This research endeavours to reframe the IWT as a strategic arena where legal thresholds, climate vulnerabilities, and hydro-technical design intersect to create leverage over downstream populations. It will analyse official statements, treaty texts, litigation records, and hydrological data to examine how India's unilateral suspension manipulated treaty mechanics, signalled political intent, and withheld critical flow data without formally abrogating the agreement. Along these lines, the research will examine the faultlines in the treaty's legal and technical architecture, the amplifying role of climate-induced water stress, and the suspension's place within broader hybrid conflict dynamics. Furthermore, the subsequent ruling by the Permanent Court of Arbitration highlights the contested nature of the treaty along with the challenges of enforcing legal norms in the face of strategic manipulation. This research concludes that even though the IWT remains formally intact, it now requires urgent legal, technical, and cooperative innovation to prevent escalation, as it operates under conditions of strategic fragility.

Keywords: Indus Waters Treaty, India, Pakistan, Hybrid Coercion, Water.

Introduction

The region has long been the most volatile trigger of crises in South Asian geopolitics. In April 2025, however, it was the rivers that spoke the language of coercion when India unilaterally suspended the Indus Waters Treaty (IWT), hardly a day after the Pahalgam attack, rewriting the script of bilateral pressure.[1] This move by India was a strategic pivot, a calculated act of holding water rights hostage to political messaging, rather than a technical dispute over spillway gates or sediment flushing. As a result, control over river flows became an overt instrument of hybrid statecraft, spun from the strands of legal ambiguity, climate-driven fragility, and hydro-technical leverage, for the first time in the six-decade history of the treaty.

[*]Zubeda Anjum Niazi is Independent Researcher and Freelance Security Analyst. Houria Sheikh is Political and Economic Advisor at the Embassy of Portugal in Islamabad. The author can be reached at zubeda.anjum@outlook.com.

The IWT was signed under the auspices of the World Bank in 1960.[2] Ever since, it has been celebrated as an improbable achievement, i.e., a functional framework between adversaries that is presumably resilient enough to outlast diplomatic breakdowns and wars. So much so that its origin story has been mythologised as evidence that, instead of being exploited as a weapon, water can be a bridge.[3] Regardless, a quieter truth lies beneath this narrative: the treaty's very architecture contains wriggle room for exploitation by the upper riparian with a geopolitical ulterior motive, in the form of technical clauses and procedural thresholds that can be repurposed as pressure points. In this vein, the 2025 suspension exposed the seams, illustrating how a collaborative legal instrument could be reframed as a coercive tool without crossing into outright abrogation.[4]

In this context, India deliberately used the phrase "blood and water cannot flow together" to reframe hydro-diplomacy through a security lens.[5] Along these lines, in operational terms, the suspension meant delaying Permanent Indus Commission (PIC) engagements, withholding hydrological data, and altering release patterns in ways that negatively impacted Pakistan's already fragile water security, whilst symbolically it announced that river control could now be part of the deterrence repertoire. It is pertinent to note that, in the basin's precarious climate reality, marked by erratic monsoons, acute downstream dependence, and glacier retreat, such measures may carry both long-term destabilising potential and immediate material consequences.[6]

Taking these developments into account, this research endeavours to examine the April 2025 suspension not as a momentary retaliation but as a structural shift, i.e., the deliberate recasting of the Indus Basin as a contested theatre of hybrid coercion rather than a domain of dispute resolution. In this regard, the central hypothesis will encircle India's instrumentalisation of the treaty as a transition from cooperative institutionalism towards overt coercive regional water politics.

Research Problem and Questions

Despite its reputation for resilience, IWT has not been sufficiently examined as a potential instrument of coercion under conditions of political crisis and environmental stress. Existing analyses tend to treat treaty disruption as either rhetorical posturing or legal breakdown, overlooking how institutional ambiguity and hydro-technical control can be strategically leveraged without formal abrogation. Hence, this study is guided by the following research questions:

- How did India's 2025 suspension of the IWT alter the functional character of the agreement?
- In what ways does this suspension constitute a form of hybrid coercion rather than treaty withdrawal under international law?
- How do legal ambiguity, hydro-technical design, and climate-induced vulnerability interact to produce coercive leverage in the Indus Basin?

So, the research will focus on how the 2025 suspension exposed the IWT as more than a framework of technical cooperation. It revealed the treaty itself as a contested domain of soft conflict, where hydrological flows and legal provisions can be weaponised as instruments of political manoeuvring. This shift not only aggravated the carefully constructed architecture of the IWT but also raised profound concerns about the stability of regional security and the long-term durability of the treaty, thereby morphing the rivers into channels of rivalry rather than cooperation. To situate this argument within existing scholarship, the following section reviews the dominant academic approaches to the IWT, hydro-political power asymmetries, and climate stress in the Indus Basin. It identifies key conceptual and empirical gaps that this study seeks to address.

Literature Review

Traditionally, scholarly engagement with the IWT has been dominated by narratives of institutional resilience and legal durability. Since its signing, the treaty has frequently been cited as one of the most successful examples of transboundary water cooperation between hostile states. [7] As a result, early legal scholarship framed the IWT as a technocratic solution that successfully insulated water-sharing arrangements from broader political and military conflict between India and Pakistan, even during periods of war and diplomatic rupture. This body of literature emphasised the IWT's clarity of allocation, its structured dispute-resolution process, and its permanent institutional mechanisms as key sources of its longevity.[8]

Nevertheless, this celebrative framing has been questioned more in recent academic works. Contemporary scholars, while acknowledging the treaty's endurance, argue that its survival has often come at the cost of rigidity, growing asymmetries, and limited adaptability in practical implementation.[9] Rather than interrogating how power operates within the treaty framework, much of the classical literature treats the IWT as a static legal instrument instead of a politically contested governance structure. As a result, the strategic implications of treaty design, particularly under conditions of heightened geopolitical tension, remain underexplored.[10]

A second strand of literature situates the IWT within the broader hydro-political dynamics of South Asia. Scholars working on riparian politics have highlighted how upstream-downstream asymmetries shape bargaining power, water security outcomes, and infrastructure development. Within this framework, India's position as the upper riparian has been identified as a structural advantage that allows it to exercise influence via project design, interpretation of technical provisions, and timing of releases, even while remaining formally compliant with treaty obligations.[11]

Along these lines, studies examining disputes over the Baglihar and Kishanganga projects illustrate how engineering design choices such as drawdown flushing, inter-tributary diversion, and spillway gates operate as sites of political contestation rather than as neutral technical decisions.[12]

These works demonstrate how hydro-technical parameters can generate downstream vulnerability without constituting overt treaty violations. However, rather than analysing how treaty mechanisms can be strategically leveraged during periods of crisis, much of this literature remains focused on discrete project-level disputes.

Pakistani scholarship has specifically drawn attention to the cumulative impact of upstream infrastructure on Pakistan's energy generation, agricultural sustainability, and water security. However, these analyses do not fully theorise water control as an instrument of coercive state behaviour and often frame vulnerability in material or developmental terms.[13]

Furthermore, an emerging body of research highlights climate change as a critical stress multiplier in the Indus Basin. Increased frequency of extreme weather events, glacial retreat, and erratic monsoon patterns have significantly altered hydrological predictability in the region.[14] The disproportionate dependence of Pakistan on the western rivers, combined with governance challenges and limited storage capacity, has been widely acknowledged as a structural vulnerability in the face of climate variability.

However, climate change remains treated mainly as an external environmental challenge rather than an internal variable shaping treaty politics, despite this growing recognition, and existing literature rarely integrates climate stress into analyses of treaty compliance or transboundary power relations. Consequently, the interaction between strategic water control and climate-induced uncertainty, particularly in politically adversarial contexts, remains insufficiently examined.

Legal experts examining international water law have pointed out that treaties lacking explicit exit clauses or adaptive review mechanisms may paradoxically become more vulnerable to strategic manipulation. In the case of the IWT, the absence of provisions addressing climate adaptation, prolonged non-cooperation, or suspension creates interpretive grey zones that could be exploited without formal abrogation.[15]

Even though arbitration outcomes under the IWT have been analysed extensively, particularly through the decisions of neutral experts and the Permanent Court of Arbitration (PCA), limited attention has been paid to how institutional paralysis, procedural delays, and data withholding function as tools of pressure. Moreover, the gradual erosion of routine mechanisms, like the Permanent Indus Commission (PIC), has been noted but rarely conceptualised as part of a deliberate coercive strategy.[16]

Consequently, taken together, existing scholarship reveals several critical gaps. First, literature tends to separate technical, environmental, and legal analyses, rather than examining how these dimensions interact to produce strategic leverage. Second, while IWT is widely studied as a technical and legal agreement, it has not been sufficiently analysed as a potential instrument of hybrid coercion in political crises.

Third, climate change is recognised as a background stressor but is not theorised as a factor that amplifies coercive potential within treaty frameworks. Finally, the notion of treaty *suspension without abrogation* remains unexplored, mainly in both South Asian security studies and international water law.

This research will address these gaps by reframing the IWT not only as a cooperative regime under strain, but as a contested institutional space where legal ambiguity, climate vulnerability, and hydrological control converge. By situating India's 2025 suspension within the conceptual framework of hybrid coercion, the research aims to contribute to a more nuanced understanding of how transboundary water agreements operate under contemporary environmental and geopolitical pressures.

Theoretical Framework

This study has adopted an integrated theoretical framework drawing upon hydro-hegemony, complex interdependence, and realist institutionalism to analyse IWT as a strategically contested institutional arrangement rather than a purely cooperative water-sharing regime. Concurrently, these approaches enable a nuanced examination of how institutional constraints, asymmetrical power, and environmental stress intertwine to facilitate coercive behaviour sans formal abrogation of the treaty.

Hydro-Hegemony

As developed in critical hydro-politics literature, the concept of hydro-hegemony provides the primary lens for examining power relations within the Indus Basin. Hydro-hegemony explains how control over shared water resources is exercised not only through material dominance but also through a combination of infrastructural development, legal framing, geographic position, and discursive power.[17] Hegemonic influence often manifests through technical and institutional mechanisms rather than overt coercion, in river basins characterised by pronounced upstream-downstream asymmetry.

When applied to India and Pakistan, hydro-hegemony highlights how India's upper-riparian position enables it to shape hydrological outcomes through project design, treaty interpretation, and flow regulation. While formally permissible under the IWT, infrastructure such as run-of-the-river hydropower projects can generate downstream vulnerability by affecting predictability, sediment management, and timing. As per this framework, treaty clauses and engineering parameters are not neutral instruments but sites of political leverage, allowing space to exert pressure whilst maintaining a semblance of legal compliance.

Complex Interdependence

Whilst hydro-hegemony elucidates asymmetrical control, it does not sufficiently explain the persistence of the IWT despite recurrent militarised conflict and political crises. To address this limitation, the framework incorporates complex interdependence, which highlights multiple channels of interaction, mutual vulnerability, and issue-specific collaboration even among rival countries. States are constrained by reputational costs, functional dependencies, and international scrutiny that discourage outright institutional rupture under conditions of complex interdependence.[18]

Complex interdependence, in the case of the IWT, helps explain how coercive behaviour can take the form of calibrated disruption rather than a formal withdrawal. The treaty has remained operational, serving functional purposes for both states, including signalling restraint, risk management, and maintaining a framework for dispute containment. Consequently, coercion is exercised through ambiguity, such as suspending institutional engagement, selectively invoking legal procedures, or delaying data exchange, rather than through explicit termination of the treaty.

Realist Institutionalism

This study has further drawn on realist institutionalism to reconcile the coexistence of institutional endurance and coercion, which views international institutions as tools that persist insofar as they serve the strategic interests of powerful states.[19] From this perspective, institutions do not eliminate power politics; they channel and structure it.[20]

When applied to IWT, realist institutionalism suggests that rather than a shared commitment to cooperation, treaty durability reflects its continued strategic utility. India enjoys a recognised legal and procedural framework under the treaty, which allows it to apply pressure while limiting international backlash. On the contrary, it constrains Pakistan by confining contestation to institutional and legal avenues that are inherently slow and procedurally restricted. Thus, the 2025 suspension can be understood as a strategic recalibration *within* the institutional framework, rather than a departure from it.

Climate Stress as an Amplifier of Coercive Potential

It is pertinent to note that hydro-hegemony, realist institutionalism, and complex interdependence were not originally developed with climate change as a central concern; this study will integrate climate-induced hydrological stress as a crucial yet amplifying variable because climate change has increased variability in river flows, intensified downstream dependency, and reduced adaptive capacity, especially for lower riparians.[21]

Even marginal disruptions in treaty implementation can produce disproportionate economic, psychological, and political effects under such conditions.[22] Ergo, by magnifying vulnerability and narrowing response options, climate stress augments the coercive potential of institutional control. Incorporating environmental precarity into the theoretical framework will allow the study to move beyond treating climate change as an external backdrop and instead conceptualise it as an integral factor shaping strategic interaction within transboundary water regimes.

These theoretical perspectives together enable the Treaty to be analysed as a contested institutional space where restraint, cooperation, and coercion coexist. Hydro-hegemony endeavours to explain how power asymmetry generates leverage; realist institutionalism clarifies why treaty endurance can coincide with coercive practice, and complex interdependence accounts for institutional persistence and calibrated restraint. Moreover, incorporating climate stress into this framework will further demonstrate that mechanisms that were once stabilising now serve as pressure points under contemporary environmental and geopolitical conditions.

All in all, the framework serves as the analytical foundation for examining India's 2025 suspension of the IWT as a tool of hybrid coercion, operating through hydro-technical control, strategic signalling, and legal ambiguity, rather than an overt treaty violation.

Methodology

In terms of methodology, the research adopts a qualitative design, focusing on analytical and interpretive approaches to political developments and treaty interpretation, drawing on qualitative content analysis of primary and secondary sources. These include arbitration records, governmental statements, and official treaty documents.

The scope of analysis spans 2022–2025; although earlier cases of discord are also used as background/contextual reference. The study follows the evolution of state behaviour, legal discourse, and policy narratives, using process-tracing techniques, to evaluate how India's suspension of the IWT exemplifies hybrid coercion.

Legal-Technical Faultlines in the IWT

Brokered by the World Bank, the IWT was signed as a bilateral agreement between India and Pakistan in 1960. It divides water rights and establishes mechanisms for cooperation and dispute resolution to promote peaceful sharing of this critical resource by allocating the waters of the six rivers in the Indus River system.[23]

The Indus Basin Rivers are divided into two groups as per the treaty, i.e., the three *eastern rivers,* which are Ravi, Sutlej, and Beas, allocated exclusively to India, and Indus, Chenab, and Jhelum, the three *western rivers,* which are assigned primarily to Pakistan, receiving about 80% of the water flow.

Moreover, India retains limited rights to the western rivers through domestic use and run-of-the-river hydroelectric power projects. However, it cannot substantially alter water flows to Pakistan.[24]

In this context, the IWT established the PIC, where commissioners appointed by both countries work to facilitate annual meetings, conflict management, and data exchange, along with providing a structured three-tier dispute resolution mechanism which involves a *neutral expert* appointed by the World Bank to settle technical issues, a Court of Arbitration for legal disputes, and bilateral negotiations.[25]

To this date, the foundation of IWT is often lauded for its vision and stability. However, beneath its celebratory facade lies a stratified structure of legal thresholds and technical controls that can be exploited as potential fissures for strategic manoeuvre.

The treaty's Article IX's *graded dispute settlement mechanism* is at the heart of the treaty. It provides a step-by-step mechanism to settle disputes between the two members. The process begins with the PIC, a joint body that works to resolve questions about the interpretation or application of the treaty. If the disagreement is technical in nature, for example, issues over dam design or water regulation, it will be referred to by a *neutral expert*, whose decision is final. Nevertheless, an issue can be taken to a Court of Arbitration (CoA) under Annexure G, if the dispute goes beyond technical matters or remains unresolved, assuring that even the most complicated disputes have a clear channel for settlement.[26]

However, what makes this multi-tiered process fragile is the power it grants over what qualifies as technical, a designation that dictates the entire path of resolution, not just its complexity. The Baglihar dam case in 2007[27] and the Kishanganga dispute in 2013[28] reveal how design specifications, i.e., freeboard, drawdown flushing, and sluice gates, can serve as both engineering parameters and diplomatic levers.

In the Baglihar dam case, the *neutral expert* adjusted India's proposed freeboard and allowed drawdown flushing. This was ostensibly a technical adjustment with clear geopolitical resonance, since sluice operation could be used to manipulate flow cycles along with sediment retention downstream.

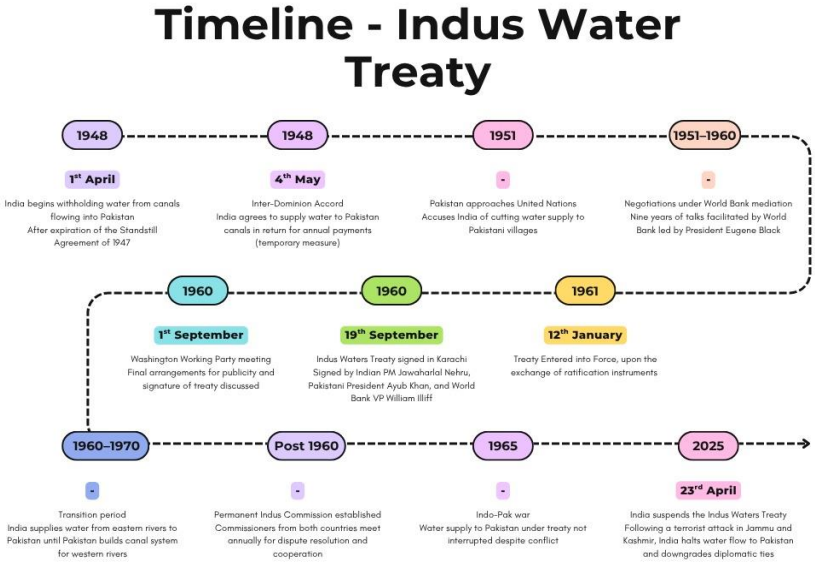
In the case of the Kishanganga dam, water diverted between tributaries raised both technical and interpretative concerns, and the CoA rejected Pakistan's expansive, amorphous reading of the then-existing uses, endorsing a more static interpretation tied to the project's crystallisation date instead. Consequently, it limited Pakistan's claim to evolving usage.

These cases indubitably underscore how hydro-technical design can become a proxy for power and is not neutral infrastructure; in fact, it is a way to shape downstream flows under the guise of compliance.

On top of this, the PIC's strained functioning further compounds the dynamic. Furthermore, in recent years, we have witnessed stalled meetings. India halted PIC consultations in 2022, thereby making the treaty's institutional continuity vulnerable. Such a vacuum creates wriggle space for exploitation, whether in the form of delayed data sharing, deferring decisions, or pushing disputes directly to external bodies under contested jurisdiction.[29]

In this vein, it is also noteworthy that as of early 2025, procedural overlaps have emerged. Both a *neutral expert* and a CoA simultaneously proclaimed competence over relevant issues, introducing uncertainty and potentially contradictory outcomes. That overlap is strategic rather than merely bureaucratic, because a channel can be marshalled for leverage if one channel is hamstrung. Likewise, India's expressed objection to PCA authority further exacerbates instability in dispute resolution, and that, too, in a region where there is already active rivalry between the two key players.[30]

Also, the treaty's inherent rigidity in the form of its division of *eastern* vs *western* rivers, along with the absence of exit clauses, results in an asymmetric dependency. India, as the upper riparian, concedes vast Western flows, yet lacks the flexibility to renegotiate or withdraw easily. Only a 12-month notice under Vienna Convention norms applies, and even that is untested in practice.[31] As a result, this lack of dynamism becomes a fault line, especially under strategic recalibration and climatic stress.



The 2025 Suspension: Water Walk-Out as Political Message

The IWT has long been projected as insulated from the vagaries of the India-Pakistan conflict. Nevertheless, the events of April 2025 delivered a shattering counter-narrative when, on April 22, following the Pahalgam attack, New Delhi announced the *suspension* of the Treaty. The Indian officials framed it not as a withdrawal or abrogation, but rather as a treaty *held in abeyance.* This deliberate, ambiguous phrasing sought to weaponise uncertainty for personal gain. Along these lines, the symbolism was unmistakable because, for the first time in six decades, water emerged as an overt tool of coercive diplomacy between the two nuclear rivals.[32]

Amidst this backdrop, Narendra Modi, the current Prime Minister of India, conjured the rhetorical slogan that "*blood and water cannot flow together",* linking the suspension to long-standing allegations of Pakistan's presumed patronage of terrorism. In his vow to "*divert every drop of our rivers to India's farmers",* he reframed the IWT from an international legal obligation to a negotiable bargain contingent upon the behaviour of Pakistan. It is pertinent to note that, through repositioning, India sought to normalise the idea of weaponising shared rivers as leverage within a broader hybrid warfare framework, where politics, hydro-engineering, and law intersect.[33]

Although the suspension was not mere symbolism, reports of sudden, politically timed hydrological disruptions began to emerge. The closure of spill gates at Baglihar[34] and a noticeable decline in Chenab flows reaching the plains of Pakistan.[35] Simultaneously, India also delayed mandatory hydrological data-sharing and postponed the annual meeting of the PIC.[36] These steps carried a powerful political message; they were not just catastrophic in immediate hydrological terms. Moreover, through these steps, India aimed to signal its capacity to instil fear and uncertainty by tightening or loosening the metaphorical taps at will.

Pakistan responded swiftly, immediately, by rallying international support and labelling the move a *'water bomb'*.[37] Pakistani officials warned that any deliberate diversion of Western River flows would be considered an act of war. Besides, in the strategic circles of Pakistan, the 2025 suspension was not seen as just a routine bureaucratic issue; instead, it was viewed as a major shift in how water is treated. Indian actions showed that water was no longer a shared resource for cooperation, but a tool for pressure and control. Experts even likened it to nuclear brinkmanship, warning that if water became more politicised, it could potentially turn into a new kind of deterrent weapon.[38]

Additionally, the hydro tug-of-war between India and Pakistan exposed two serious concerns at once. Firstly, it demonstrated how fragile the IWT really was when faced with intense political or military crises. Secondly, it highlighted how India's leadership was increasingly willing to reinterpret the treaty through a realist, security-focused, and nationalist lens.

Furthermore, unlike previous threats to suspend the treaty, which were often brushed off as empty talk, the 2025 walkout manifested in actual administrative steps, albeit limited. Hence, setting a troubling precedent that although legal agreements once protected the Indus Basin, it can now be susceptible to the unpredictable forces of regional conflict and escalation.

Hybrid Coercion: Water as Strategic Signal

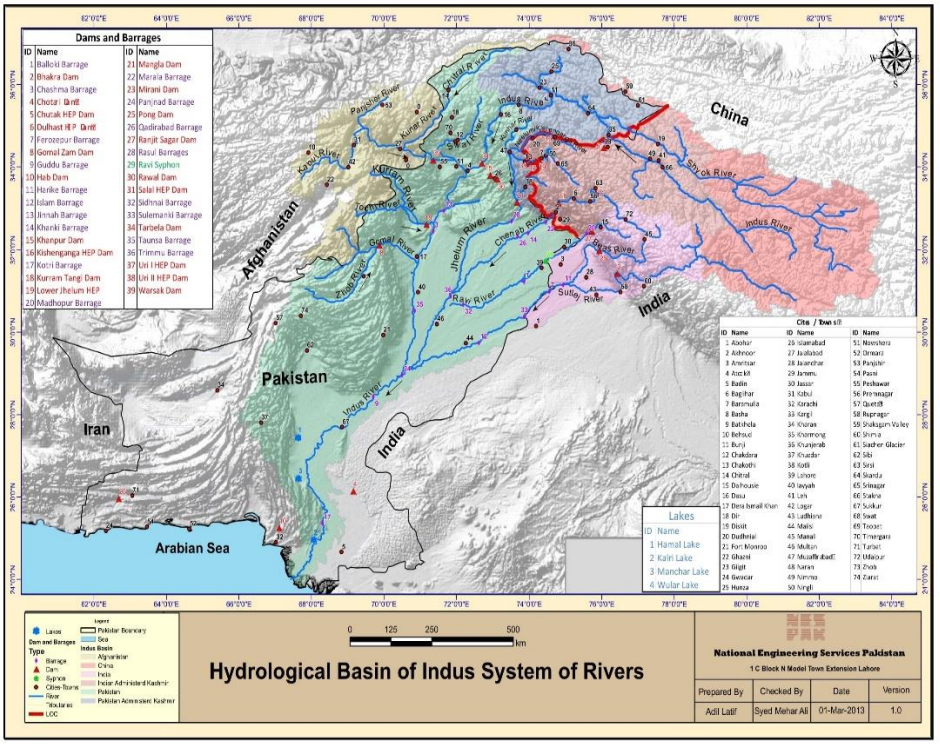
The April 2025 suspension was not just an isolated act of retaliation but an entry into a broader pattern: the deliberate weaponisation of waters states have used in the past as a strategic tool to achieve various military and strategic objectives. It has been done either by denying access to water resources or by attacking them. In the context of the recent India-Pakistan crisis, the latter is the case.[39] By unilaterally suspending the IWT, India intended to deny access to water as a hybrid-coercion tool. However, weaponisation of water is not a new phenomenon, of the three western rivers on which Pakistan has the legal right under international law. Pakistan considers it an act of war.[40] This adventurous move of India has many socio-economic, political, and environmental implications. The public statements made by the Indian Prime Minister in the last decade also encompass India's aggressive intentions towards the blockade of water in the western rivers, which could be catastrophic for Pakistan.[41]

Pakistan, a water-scarce country with a water capacity of only 30 days, heavily relies on the western rivers for agricultural, industrial, and domestic use. The agriculture sector utilises almost 91 per cent of the country's total water use, with 2.6 and 2.5 per cent for domestic and industrial use, respectively. After the treaty, to maintain the flow of water in the canal system, Mangla and Tarbela dams were constructed, providing an alternative for the eastern rivers allocated to India. The water flowing in Mangla and Tarbela also comes from the three western rivers, and almost 80 per cent of Pakistan's agricultural and hydropower projects rely on this water. Therefore, a water blockade in the western rivers could cause a serious existential crisis for Pakistan.

The changing climate is making this situation even worse. An increase in temperature would melt glaciers, increase water inflow into rivers, and cause flooding in various parts of Pakistan. In the long run, this would reduce the glacier's size, and water flow in the rivers would decline in the coming decades. It has been estimated that the flow of water in the Indus Basin could decrease by approximately 50 per cent by the year 2030.[42] Given the environmental challenges, IWT plays a critical role in the water balancing between Pakistan and India, and its suspension would also have serious implications for global peace and security, given the nuclear status of both states.

IWT has been a long-standing agreement between the two nations for decades and has not been undermined even in wartime. However, the unilateral decision to put the treaty in abeyance signified India's intention to adopt coercive behaviour towards Pakistan and jeopardise regional peace and stability. The statements made by Indian officials regarding the water blockade showed Indian aggression on the issue, but India has been violating this treaty since it came into effect. The construction of the Kishanganga and Baglihar Dams, as mentioned afore, is a significant example of tension and violation between the two states. Also, after the recent suspension, the Indian government accelerated the construction of its new projects on the Chenab River, including Ratle, Kiru, Pakal Dul, and Kwar, with a total capacity of 3014 Megawatts.[43] The Indus River System Authority (IRSA) of Pakistan released a statement on 5 May stating that a decrease in water flow was observed in the Chenab, indicating that India was violating the IWT by altering the flow of water in the western rivers. [44] India has also been exploiting its upstream riparian position to maintain its geostrategic advantage by controlling the flow of water into Pakistan's rivers. Ergo, the suspension of IWT was a strategic move by India to use it as a hybrid warfare tool to achieve its geostrategic objectives, along with damaging the agrarian economy of Pakistan. Moreover, it will allow India to manipulate the flow of water and create floods and drought in Pakistan, given that it is the lower riparian.

This asymmetrical Indian authority over the western rivers unquestionably jeopardises Pakistan's water security, as it is already dealing with domestic water governance challenges at the provincial level; this issue could further aggravate the situation by inducing psychological, socio-economic, and political pressure.[45] As long as this treaty can be suspended at whim, there cannot be an exchange of hydrological data between the countries, making Pakistan vulnerable to Indian machinations because it will provide India with an opportunity to deprive Pakistan of using any institutional framework for a dispute resolution mechanism under IWT, allowing it to use hydro-diplomacy for water weaponisation.



Climate Stress as a Pressure Tool

Meanwhile, hybrid coercion has also intensified under climate stress, thereby multiplying vulnerability and shrinking resilience within the treaty framework. When the IWT was concluded in the 1960s, climate change had not manifested itself as a significant threat. Nevertheless, it is currently one of the most significant threats, as it affects every sphere of life through changes in weather patterns and the ensuing issues. In this vein, it must be noted that almost 95% of agricultural land in Pakistan's Indus Plain region depends on the Indus Basin, which is also affected by climate change.

Climate change has severely affected Pakistan. Although the country contributes only 1 per cent of global carbon emissions, it still has to deal with severe damage inflicted by floods that cost almost 3.2 trillion PKR in 2022, which was not the first time floods have hit Pakistan hard. The country faced severe floods in 1961, 1974, 1994, and 2010.[46] Currently, Pakistan is facing flash floods in the northwest of Khyber Pakhtunkhwa, Gilgit-Baltistan, Kashmir, and Karachi. These frequent floods have taken the lives of hundreds and displaced thousands of people. Climate change has affected agricultural production, biodiversity loss, massive population displacement, and health problems.[47] As mentioned earlier, the glacier melt will not only lead to flash flooding but also turn rivers into seasonal streams with low water levels.

Under the given circumstances, the suspension of IWT poses a serious challenge to the already struggling water-scarce economy of Pakistan, and a blockade of water from the Indian side could push the country into a severe existential crisis. It could also increase political pressure and tensions at the domestic level, and a short-term solution to the problem is not the only way to address the crisis, because IWT lacks a climate-resilient framework. It does not address the issues that both countries are facing due to climate change. Pakistan's insufficient storage capacity also makes it vulnerable to Indian aggression. With the current reservoirs, Pakistan's storage capacity is almost 12.68 MAF, which practically means it can store water for only thirty days. India has a water capacity of 220 days, which exceeds the standard global capacity. Pakistan's lower riparian position and inadequate hydro infrastructure make the crisis even more severe. During the suspension, no data were shared by the Indian authorities, which is essential for early flood warnings and disaster management, especially during the unpredictable monsoon season. It exposes Pakistan's agricultural land and its masses to floods and drought in the regions sustained by the western rivers.[48] It is essential to address the issue with the right approach, not only to preserve Pakistan's national interests but also to maintain regional peace and stability.

Regional Upsurge: China, Upstream Dynamics & Strategic Triangles

Given the regional dynamics, it is pertinent to note that the hydro-politics of the Indus Basin is triangular, with China, Pakistan, and India as parties. There is a complex geopolitical relationship between the three that shapes how the situation would unfold, with Chinese interests involved in Pakistan while it faces a threat from aggressive India. India, the most populous country and aspiring regional power in South Asia, plans to construct more than 200 dams in the region, with large reservoirs to sustain its geoeconomic interests. China also plans to construct a hundred more dams in the region. Before going deeper into the discussion, the geostrategic location of these three states with respect to the natural flow of water must be noted. China is the uppermost riparian in the region, with India as its lower riparian, whereas India is the upper riparian to Pakistan. This makes Pakistan the lowermost riparian in the Indus water system. These geostrategic dynamics significantly shape the region's hydro-politics.

India shares hostile relations with Pakistan, while having competitive ties with China, and all of them have nuclear weapons. There is a history of wars and territorial disputes in the region. The suspension of IWT will not only have implications for Pakistan but also for China, as its strategic interests lie in the region with its vast investments in the Kohala Dam and Azad Pattan projects under CPEC. China is also investing in various projects along the Jhelum River, such as Korat, Mahl, and Chakhoti. Given China's interests and investment in Pakistan, it is believed that India's aggression could be deterred with a Chinese response.[49] Besides, China has a history of exploiting its upper riparian position in the past conflicts to deter Indian aggression. The way it blocked the Lalho Project, which is situated on the Xiabuqu River and linked to the Brahmaputra in 2016, demonstrates Chinese hydrological diplomacy.

Similarly, during the Doklam standoff in 2017, China also denied access to hydrological information crucial for early flood warnings.[50]

Recently, China announced the Yarlung Tsangpo Project in Tibet, the largest dam in the world. It jeopardises Indian hydrological interests, as the river flows into Arunachal Pradesh and becomes the Brahmaputra in the Assam region of India.[51] India's heavy reliance on the Brahmaputra suggests that it could face serious hydrological challenges by the project's completion, as it supports the lives of 130 million people in Assam and sustains 6 million hectares of agricultural land in the region. This project could provide China with an opportunity to manipulate water flow in Indian territory, use it for hydro-political advantage, and deter Indian aggression. Furthermore, the absence of a formal water treaty governing bilateral water distribution between China and India complicates hydrological politics between the two. It allows China to take any action without being held accountable to India for those actions, despite the profound implications those actions have for India.

Moreover, although China is not the direct party to this issue, its geostrategic and hydro-political interests lie in the region. The abeyance of IWT and the water blockage endanger the Chinese project on the Jhelum River, which would attract Chinese attention to the matter. As the uppermost riparian, China has the advantage of controlling the flow of the Sutlej and Indus rivers, since both originate in Chinese territory. The change in the Indus River's flow could cause India to lose almost 36% of the river's volume and threaten the livelihoods of millions of people who rely on it. The Sutlej River diversion can cost India 3600 MW of hydropower energy that supports its densely populated urban regions.[52] At the same time, Pakistan shares cordial relations with China and has been part of CPEC, with joint water projects underway. These hydro-political dynamics provide Pakistan with an opportunity to seek diplomatic ground to address this crisis by strengthening its hydrological cooperation with China. China, being the strongest actor in the region with an advantageous geostrategic location, can play a significant role in this crisis.

These regional interactions, when viewed through the lens of hydro-hegemony, underscore how control over upstream positions, along with infrastructural development, has increasingly become an instrument of strategic influence. Thus, it is evident that the Indus Basin operates as a geopolitical theatre, not merely as a hydrological system, where cooperative as well as coercive impulses exist side by side, indicating that water diplomacy in the South Asian region is a component of hybrid strategic competition rather than being insulated from power politics.

Pathways Forward: Legal Innovation or Managed Competition?

India's 2025 suspension placed Pakistan at a critical juncture in rethinking both the legal and strategic dimensions of the IWT. Although the decades-long water-sharing pact does not provide for unilateral abeyance, there is no guarantee that India will not do so again during a conflict. Moreover, historically, the strength of the IWT lay in its insulation from political turbulence.

Nevertheless, it is worth noting that its very endurance has made it rigid in the face of new challenges. Consequently, for Pakistan, the legal route appears at once necessary and fraught because the treaty text itself does not allow for unilateral suspension, and under the Vienna Convention, such an act cannot be justified except under extraordinary circumstances. A case before the PCA could therefore offer Islamabad both a legal avenue and a symbolic reaffirmation that international law still holds weight in water diplomacy, just as it did this time around. However, this path is not without risk, as prolonged litigation may freeze practical cooperation and give India time to consolidate upstream infrastructure advantages.

Aside from that, political mechanisms offer Pakistan an opportunity to re-anchor the treaty through dialogue, alongside legal recourse. Even though once envisaged as the quiet engine of the IWT, the PIC has long been reduced to a ritualistic exchange of data. Restoring its mandate, or even proposing a climate-responsive update, could reframe water as an everyday survival issue rather than a zero-sum contest.

In addition, the theoretical framework employed in this research underscores how institutional resilience, as the central tenet of realist institutionalism, can coexist with coercive practice. Institutions like the IWT persist because, despite power asymmetry, they retain their instrumental value to all involved parties. Hence, in this regard, Pakistan's options are well situated within a realist understanding of cooperation rather than an idealistic reform, giving way to pragmatic adaptation to power realities.

Precedents exist in the Mekong River Commission[53], which, despite rivalries, has introduced basin-wide dialogue on climate adaptation, and even bitter rivals like Israel and Jordan have managed to compartmentalise technical water-sharing within hostile environments. [54] Such examples indicate that depoliticised technical collaboration, if carefully managed, is not entirely utopian. However, the appetite for genuine reform remains limited because of the rampant animosity between India and Pakistan.

Along these lines, it is in this space between political stasis and legal innovation that technical solutions could offer an incremental way forward via shared satellite hydrology, transparent flood early-warning systems, and even joint feasibility studies for irrigation or dam safety.

More importantly, climate adaptation infrastructure, such as drought mitigation projects or transboundary flood control, could be framed not as concessions but as parallel investments in regional resilience. For Pakistan, being a lower riparian, such initiatives would not only secure downstream rights but also position it as a proactive player shaping, rather than merely reacting to, the discourse on water governance.

In the 1960s, when the treaty was concluded, climate change was not well-known. The treaty does not incorporate the provisions relevant to water pollution, glacier melt, changing weather patterns, rainfall, and other environmental factors. These factors have various economic, social, psychological, and political implications. Some amendments, such as incorporating the climate change provision, are needed in the IWT to address the challenges posed by climate change.

Moreover, international laws governing transboundary water flow were not well-established in the 1950s. However, the international legal framework regarding transboundary water flow, such as the Berlin Rules of 2004 and the Helsinki Rules of 1966, currently exists. The UN Watercourse Convention also discusses similar issues. These internationally accepted norms should be incorporated into IWT to improve transparency and the effective management of transboundary water flow.

Climate change patterns can be measured accurately using advanced technologies such as remote sensing, satellite imagery, and water mapping. India and Pakistan should agree to use these technologies under the IWT and to share data to avoid misconceptions and improve transparency. The data should also be shared with the World Bank, which played a mediatory role to ensure accountability by both state parties.

The Chinese factor is also very important in the region's hydro-politics. Given China's uppermost riparian status, it can play a significant political and diplomatic role in Indus Basin hydro-politics. Pakistan should use this opportunity to its political advantage by developing stronger ties and hydrological cooperation with China. Moreover, some provisions should be added to the treaty regarding the conflict situation to restrain the Modi government from violating it in future crises. In addition, the treaty should be reassessed every 5 or 10 years through a joint session between Pakistan and India, with the World Bank as a mediator, to ensure its relevance and effectiveness in the future.

Realism has, however, tempered these options, what with the treaty now entangled in security posturing and nationalist signalling. Hence, the more likely future is not one of cooperative upgrades but of managed competition entailing a tacit recognition that while cooperation remains desirable, mistrust will define the operational environment. In practice, this means Pakistan must prepare for a hybrid strategy by defending its legal position via international fora, extracting whatever limited cooperation remains possible through the PIC, and simultaneously investing in domestic water resilience to reduce vulnerability to upstream manoeuvring.

IWT would cease to be a shield against conflict, instead becoming a fragile framework to manage rivalry, a space where law, politics, and technology intersect uneasily.

In this vein, for Pakistan, the lesson of 2025 is not merely that treaties can be suspended, but that their durability rests on a constant recalibration of politics, adaptation, and law. Besides, whether this moment will lead to legal innovation or entrenched managed competition will depend on Islamabad's resolve to balance strategic caution with imaginative diplomacy in a region where every river embodies the weight of insecurity and history alike.

Conclusion

In an era where rivers can be weaponised and treaties suspended at will, South Asia faces a new reality. India, through the unprecedented unilateral 'pause', demonstrated that treaty structures, albeit resilient, can be strategically leveraged to achieve geostrategic, economic, and political objectives. The episode clearly underscores that the IWT is a contested domain where legal interpretation, hydrological engineering, and climate vulnerability intersect to create a landscape of soft conflict. It is not merely a technical agreement governing water allocation.

In addition, Pakistan's dependency on the western rivers, combined with heightened climate stress and limited storage capacity, exposes the asymmetric pressures the lower riparian faces. Likewise, the recent suspension also illustrated how upstream control could translate into tangible socio-economic shocks, from agricultural disruption to energy insecurity, while amplifying political and psychological pressure and the intertwining of domestic vulnerabilities with regional dynamics, particularly China's upstream presence and India's hydro-strategic ambitions, adds a layer of complexity, highlighting the Indus Basin as a triangular arena of influence, rather than a bilateral water-sharing issue.

Moreover, even though legal, technical, and political pathways offer avenues for response, the suspension demonstrates the limitations of existing frameworks. While Vienna Convention interpretations, PCA arbitration, and climate-responsive treaty updates provide potential remedies, the evolving strategic environment suggests that managed competition may be the pragmatic reality in the near term. This could potentially include joint hydrological monitoring, climate-adaptive infrastructure, and diplomatic engagement. Regardless, their effectiveness hinges on consistent cooperation, an increasingly fragile commodity in the wake of 2025.

Given this, the emerging role of China as an upper riparian actor shaping regional hydro-politics and the potential stabiliser in the region is a research avenue that future researchers can explore to recalibrate existing power asymmetries and illuminate how transboundary water governance might evolve under intensifying geopolitical as well as climatic pressures. Because ultimately, the durability of transboundary water regimes is dependent upon legal design but also on their adaptability to new forms of competition as well as coercion.

Nevertheless, for Pakistan, the impending challenge is to transform vulnerability into diplomatic leverage, which can be achieved by investing in trilateral engagement, water resilience, and data transparency, thereby reinstating the fact that the globally lauded Treaty is not just a relic of the past. Instead, it is a living framework to navigate a potentially turbulent future.

References

[1] Das, Anupreeta, et al, "How India's Threat to Block Rivers Could Devastate Pakistan," *The New York Times*, April 24, 2025,.https://www.nytimes.com/2025/04/24/world/asia/india-pakistan-indus-waters-treaty.html.

[2] Bauer, Pat, "Indus Waters Treaty," *Encyclopaedia Britannica*, last modified August 21, 2025. https://www.britannica.com/event/Indus-Waters-Treaty.

[3] The World Bank, "Fact Sheet: The Indus Waters Treaty 1960 and the Role of the World Bank," (brief, June 11, 2018), World Bank, https://www.worldbank.org/en/region/sar/brief/fact-sheet-the-indus-waters-treaty-1960-and-the-world-bank

[4] Khan, Fareha Iqtidar, "Weaponising Water: India's Suspension of IWT," *Centre for Strategic & Contemporary Research*, June 10, 2025, https://cscr.pk/explore/themes/defense-security/weaponising-water-indias-suspension-of-iwt/

[5] Sharma, Shivangi, "'Blood and Water Can't Flow Together': PM Modi Gives Clear Message to Pakistan on Indus Water Treaty," *Daily Jagran*, July 29, 2025, 9:50 p.m. IST. 'Blood And Water Can't Flow Together': PM Modi Gives Clear Message To Pakistan On Indus Water Treaty

[6] Ali, Misbah Ashiq, "The Indus at Risk: Why Pakistan's Survival Depends on a 1960 Treaty," *Modern Diplomacy*, May 28, 2025, https://moderndiplomacy.eu/2025/05/28/the-indus-at-risk-why-pakistans-survival-depends-on-a-1960-treaty/

[7] Asit K. Biswas, "Indus Water Treaty: The Negotiating Process," Water International 17, no. 4 (1992): 201–209, published by the International Water Resources Association (IWRA), accessed via Third World Centre for Water Management, https://www.thirdworldcentre.org/wp-content/uploads/2015/05/induswattreaty.pdf.

[8] Salman M. A. Salman and Kishor Uprety, Conflict and Cooperation on South Asia's International Rivers: A Legal Perspective (Washington, DC: World Bank Publications, 2002).

[9] Neda A. Zawahri, "India, Pakistan and Cooperation along the Indus River System," Water Policy 11, no. 1 (February 2009): 1–20, https://doi.org/10.2166/wp.2009.010.

[10] Ramaswamy R. Iyer. "Indus Treaty: A Different View." Economic and Political Weekly 40, no. 29 (2005): 3140–44. http://www.jstor.org/stable/4416904.

[11] Mark Zeitoun and Jeroen Warner, "Hydro-hegemony: A Framework for Analysis of Trans-boundary Water Conflicts," Water Policy 8, no. 5 (2006): 435–460, https://doi.org/10.2166/wp.2006.054.

[12] Zawahri, Neda A., and David Michel. 2018. "Assessing the Indus Waters Treaty from a Comparative Perspective." Water International 43 (2): 1–17. https://doi.org/10.1080/02508060.2018.1498994.

[13] Arfan, Muhammad. 2023. "Reimagining Indus Water Treaty for Future Sustainability of the Indus Basin." Pakistan Institute of Development Economics (PIDE). https://pide.org.pk/research/reimagining-indus-water-treaty-for-future-sustainability-of-the-indus-basin/.

[14] Khan, Maria Jawad. 2024. "Pakistan's Dual Crisis: Conflict and Climate." Pakistan Institute of Development Economics (PIDE). https://pide.org.pk/research/pakistans-dual-crisis-conflict-and-climate/.

[15] McCaffrey, Stephen C. 2019. The Law of International Watercourses. 3rd ed. Oxford: Oxford University Press.

[16] Indus Waters Treaty Arbitration (Pakistan v. India), Award on Issues of General Interpretation of the Indus Waters Treaty, https://jusmundi.com/en/document/decision/en-indus-waters-treaty-arbitration-pakistan-v-india-award-on-issues-of-general-interpretation-of-the-indus-waters-treaty-friday-8th-august-2025.

[17] Zeitoun, M., Cascão, A.E., Warner, J. et al. Transboundary water interaction III: contest and compliance. Int Environ Agreements 17, 271–294 (2017). https://doi.org/10.1007/s10784-016-9325-x.

[18] Keohane, Robert O., and Joseph S. Nye Jr. 1998. "Power and Interdependence in the Information Age." Foreign Affairs 77, no. 5 (September–October): 81–94. https://doi.org/10.2307/20049052.

[19] Mearsheimer, John J. "The False Promise of International Institutions." International Security 19, no. 3 (1994): 5–49. https://doi.org/10.2307/2539078.

[20] Grieco, J. "Systemic Sources of Variation in Regional Institutionalization in Western Europe, East Asia, and the Americas." In The Political Economy of Regionalism, edited by Helen Milner and Edward Mansfield. New York: Columbia University Press, 1997.

[21] Rasul, Golam. "Food, Water, and Energy Security in South Asia: A Nexus Perspective from the Hindu Kush Himalayan Region," n.d. doi:10.1016/J.ENVSCI.2014.01.010.

[22] W. W. Immerzeel, L. P. H. van Beek, and M. F. P. Bierkens, "Climate Change Will Affect the Asian Water Towers," Science, vol. 328, no. 5984, pp. 1382-1385, 2010.

[23] *India, Pakistan, and International Bank for Reconstruction and Development*, The Indus Waters Treaty 1960 (with annexes), *United Nations Treaty Series*, vol. 419, no. 6032 (registered January 16, 1962), https://treaties.un.org/doc/Publication/UNTs/Volume%20419/volume-419-I-6032-English.pdf

[24] Ibid.

[25] Chatta, Umar, "Indus Waters Treaty: A Global Model for Peaceful Coexistence in a Warming World," *The Express Tribune*, August 21, 2025,https://tribune.com.pk/story/2562270/indus-waters-treaty-a-global-model-for-peaceful-coexistence-in-a-warming-world

[26] *Islamic Republic of Pakistan v. Republic of India*, "Arbitration Pursuant to Article IX and Annexure G of the Indus Waters Treaty 1960," Permanent Court of Arbitration, accessed August 22, 2025, https://pcacases.com/web/sendAttach/47319.

[27] *Baglihar Hydroelectric Plant (Pakistan v. India)*, Neutral Expert Determination on Points of Difference Regarding the Baglihar Hydroelectric Plant Referred by the Government of Pakistan under the Provisions of the Indus Waters Treaty, February 12, 2007, https://www.mowr.gov.pk/SiteImage/Misc/files/Baglihar%20Expert%20Determination%20(PDF).pdf

[28] *Indus Waters Kishenganga Arbitration (Pakistan v. India)*, Award in the Arbitration regarding the Indus Waters Kishenganga, Reports of International Arbitral Awards, vol. XXXI, p. 1 (2013), accessed August 22, 2025, https://legal.un.org/riaa/cases/vol_XXXI/1-358.pdf.

[29] Yousafzai, Fawad, "India Not Responding to Pak Call for Holding PIC Meeting," *The Nation*, August 9, 2024,https://www.nation.com.pk/09-Aug-2024/india-not-responding-to-pak-call-for-holding-pic-meeting.

[30] *Indus Waters Treaty Neutral Expert Proceedings (India v. Pakistan)*, PCA Case No. 2023-14, "Updated Party Representatives, Wednesday 5th June 2024," https://jusmundi.com/en/document/decision/en-indus-waters-treaty-neutral-expert-proceedings-india-v-pakistan-updated-party-representatives-wednesday-5th-june-2024.

[31] United Nations, *Vienna Convention on the Law of Treaties*, United Nations, Treaty Series, vol. 1155, p. 331, May 23, 1969, https://legal.un.org/ilc/texts/instruments/english/conventions/1_1_1969.pdf.

[32] Vishwanath, Ambika, "India's Indus Waters Treaty Suspension: What Happens Next?" *The Diplomat*, May 9, 2025,https://thediplomat.com/2025/05/indias-indus-waters-treaty-suspension-what-happens-next/.

[33] Sharma, Shivangi, "'Blood and Water Can't Flow Together': PM Modi Gives Clear Message to Pakistan on Indus Water Treaty," *Daily Jagran*, July 29, 2025, 9:50 p.m. IST, 'Blood And Water Can't Flow Together': PM Modi Gives Clear Message To Pakistan On Indus Water Treaty

[34] NEWS9 Live, "J&K: Gates of Baglihar Dam Closed Amid Rising Tensions | Chenab River | News9," YouTube video, 3:00, posted [approx. 3 months ago], https://www.bing.com/videos/riverview/relatedvideo?

[35] Hasnain, Khalid, and Kiani, Khaleeq, "Chenab Parched After India Reduces Flows Manifold," *Dawn*, May 6, 2025, https://www.dawn.com/news/1908705/chenab-parched-after-india-reduces-flows-manifold.

[36] Prabal, AJ, "The Indus Water Treaty: What India Can and Cannot Do by 'Suspending' It," *National Herald India*, April 25, 2025,https://www.nationalheraldindia.com/national/the-indus-water-treaty-what-india-can-and-cannot-do-by-suspending-it.

[37] "British-Pakistani Lawyers Call IWT Suspension a 'Water Warfare'; Vow to Form Legal Task Force," *Associated Press of Pakistan*, August 19, 2025, https://www.app.com.pk/national/british-pakistani-lawyers-call-iwt-suspension-a-water-warfare-vow-to-form-legal-task-force/.

[38] Ali, Shafqat, "IWT Fully in Force, Pakistan Writes to India," *The Nation*, May 15, 2025, https://www.nation.com.pk/15-May-2025/iwt-fully-in-force-pakistan-writes-to-india.

[39] Facini, Andrew. 2023. "Water Weaponization: Its Forms, Its Use in the Russia-Ukraine War, and What to Do About It." The Center for Climate & Security. June 1, 2023. https://climateandsecurity.org/2023/06/water-weaponization-its-forms-its-use-in-the-russia-ukraine-war-and-what-to-do-about-it/.

[40] Reporter, Our Staff. 2025. "IWT Suspension Act of War: Federal Minister." The Nation, May 26, 2025. https://www.nation.com.pk/25-May-2025/iwt-suspension-act-of-war-federal-minister.

[41] Ethirajan, Anbarasan. 2025. "India to Stop Water Flowing Across International Borders, Modi Says." May 7, 2025. https://www.bbc.com/news/articles/cd9l9qwyv230.

[42] "Climate-Proofing the Indus Water Treaty | CSIS." n.d. https://www.csis.org/blogs/new-perspectives-asia/climate-proofing-indus-water-treaty.

[43] Ahmed, Aftab, Singh, Sarita, "India advances Kashmir hydro projects after suspending pact with Pakistan, document shows", 6th May 2025. https://www.reuters.com/world/asia-pacific/india-advances-kashmir-hydro-projects-after-suspending-pact-with-pakistan-2025-05-06/

[44] Indus River System Authority, Press Release, 05th May 2025. http://pakirsa.gov.pk/Doc/IRSA_Advisory_Kharif_2025_May.pdf

[45] Mahmood, Sahar Arshad, and Muhammad Salman Khalid. 2025. "Water Scarcity in Pakistan & Mdash; a Geopolitical Ticking Time Bomb." DAWN.COM, July 28, 2025. https://www.dawn.com/news/1913435.

[46] Aqsa, Sayyeda Sajjad, "Climate Change and Indus River Basin: Implications for Pakistan", 24th May 2025. https://nips.nust.edu.pk/storage/2021/09/2.-NIPS-Aqsa-Sajjad-Policy-Insight-24May2023docx.pdf

[47] Amin, Muzhira. 2025. "Flooded, Forgotten, Forsaken &Mdash; Pakistan&Rsquo;S Endless Monsoon Crisis." DAWN.COM, August 19, 2025. https://www.dawn.com/news/1931472.

[48] "We Need Dams, and Need Them Urgently." DAWN.COM, April 16, 2025. https://www.dawn.com/news/1904578.

[49] Godara, Hari, Jyoti M. Pathania, and Gaurav Kumar. 2024. "Hydro-Political Dynamics between China–India–Pakistan: Dams and Transboundary River Governance amidst Geopolitical Contestations." Journal of Asian Security and International Affairs 11 (3): 400–422. https://doi.org/10.1177/23477970241263154

[50] "India-China Relations and the Geopolitics of Water." n.d. Lowy Institute. https://www.lowyinstitute.org/the-interpreter/india-china-relations-geopolitics-water.

[51] Wong, Tessa. 2025. "China Starts Building World's Largest Dam, Fuelling Fears in India." July 21, 2025. https://www.bbc.com/news/articles/c4gk1251w140.

[52] Lone, Asma Khan. 2018. "Making of India-Pakistan-China Water Wars." South Asian Voices. February 9, 2018. https://southasianvoices.org/making-india-pakistan-china-water-wars/.

[53] Greg Browder and Leonard Ortolano, "The Evolution of an International Water Resources Management Regime in the Mekong River Basin," Natural Resources Journal 40, no. 3 (Summer 2000): 499–531, https://www.jstor.org/stable/24888536

[54] "Jordan and Israel: Tensions and Water Cooperation in the Middle-East," Climate-Diplomacy, 1948, https://climate-diplomacy.org/case-studies/jordan-and-israel-tensions-and-water-cooperation-middle-east.