Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 3, Issue 9 (2025)

Online ISSN 3007-3197
Print ISSN 3007-3189

http://amresearchreview.com/index.php/Journal/about

The Weaponization of Water Hydro - Politics and Conflict Prospects in South Asia (2019–2025)

Dr. Dilawar Khan
Assistant Professor Department of Political Science,
Bacha Khan University, Charsadda, Pakistan
Email: dr.dilawarkhan@bkuc.edu.pk

Dr. Asif Salim (Corresponding Author)
Assistant Professor Department of Political Science,
Bacha Khan University Charsadda, Pakistan
Email: drasifsalim@bkuc.edu.pk

Dr. Raid Khan
Assistant Professor Department of Political Science,
Bacha Khan University Charsadda, Pakistan
Email: dr.raidkhan@bkuc.edu.pk

ABSTRACT

The strategic significance of water in South Asia has escalated in recent years, transforming rivers into instruments of power and contestation. This study explores the phenomenon of the weaponization of water between 2019 and 2025, with particular focus on the Indus Waters Treaty (IWT) and the broader hydro-political tensions between India, Pakistan, China, and downstream states. The paper examines how climate change, rapid population growth, and infrastructural development projects have intensified competition over transboundary rivers. India's dam construction on the western rivers, coupled with its political rhetoric on revoking or manipulating the IWT, has heightened Pakistan's water insecurity and fueled diplomatic strains. Similarly, China's control over the Brahmaputra headwaters presents emerging vulnerabilities for both India and Bangladesh. Using a mixed-method approach grounded in realism and hydro-politics theory, the research argues that water is no longer merely a resource but a strategic tool leveraged in coercive diplomacy. Findings suggest that while the IWT has provided a degree of stability, its fragility in the face of environmental change and geopolitical rivalries underscores the urgent need for confidence-building measures, multilateral cooperation, and adaptive treaty frameworks. The study contributes to international relations by situating water as a critical non-traditional security issue in South Asia, highlighting its role in shaping future conflict prospects, regional stability, and state behavior.

Answer Key: Weaponization, nationalism, Realism, hydro-politics, South Asian water conflicts cooperation, and hydro-diplomacy, Leverage, Fragility, Scarcity & Solutions.

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 3, Issue 9 (2025)

Online ISSN 3007-3197
Print ISSN 3007-3189

http://amresearchreview.com/index.php/Journal/about

Introduction

The last half-decade has transformed South Asian hydro-politics from a background governance problem into a foreground security risk as climate extremes amplify hydrological variability and upstream infrastructure expands. Droughts and unprecedented monsoon swings have lowered baseline resilience, while more aggressive dam-building and reservoir management by upstream states create new windows for using water releases and withholdings as coercive instruments — a practice analysts now describe as the "weaponization" of water. Between 2019 and 2025 this dynamic has been most visible along the Indus basin where Pakistan's reliance on river flows for agriculture and groundwater recharge intersects with growing tensions over treaty compliance, off-season reservoir operations, and social media claims that dam releases from India have magnified downstream flooding. The coupling of severe climate-driven floods with the political decision-making around dam operations has made already-fragile transboundary governance institutions (including the World Bank's facilitation role under the Indus Waters Treaty) politically fraught and operationally limited, increasing the risk that water incidents will be interpreted as deliberate acts rather than management failures a dangerous shift for two nuclear-armed neighbours (Pakistan Institute of Development Economics. (2021).

Geography magnifies risk elsewhere in the subcontinent: the Brahmaputra (Yarlung Tsangpo) and other Himalayan rivers place China in a uniquely upstream position vis-à-vis India and Bangladesh, and Beijing's accelerating hydropower projects and strategic infrastructure in Tibet have triggered pronounced anxiety about downstream control. Policymakers in New Delhi and Dhaka increasingly talk not only of ecological impacts but of strategic vulnerability the fear that reservoir filling or sudden releases could be used tactically in a crisis to induce floods or to reduce dry-season flows and pressure downstream economies. While most hydrologists warn that complete control of major Himalayan rivers is constrained by rainfall variability and tributary inputs, the political salience of new megaprojects has already altered military and diplomatic planning, with countries fast-tracking their own monitoring, bilateral dialogues (where they exist), and, in some cases, contingency engineering projects. International human-rights, environmental, and development organizations now frame these upstream developments as both environmental and security problems, arguing for stronger transparency, joint monitoring, and legally binding notification protocols to reduce misunderstandings (Reuters. (2025, Aug. 25)

The conflict prospects to 2025 and just beyond hinge less on a single dramatic "water war" and more on a cascade of low-intensity incidents that erode trust and invite dangerous escalation: off-season flushing, unilateral reservoir maneuvers, contested flood attribution on social media, and domestic political pressures that reward hardline responses. Mitigating those prospects requires immediate, pragmatic steps restoring and modernizing basin-wide data sharing (real-time flow and reservoir telemetry), reactivating third-party technical facilitation for dispute mediation, and investing in downstream adaptive infrastructure and nature-based buffers to reduce social vulnerability to sudden inflows or shortages. Multilateral development institutions and regional scientific networks can play a stabilizing role by funding joint observation systems, independent forensic hydrology after extreme events, and

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 3, Issue 9 (2025)

Online ISSN 3007-3197
Print ISSN 3007-3189
http://amresearchreview.com/index.php/Journal/about

capacity building for integrated water resources management; yet their effectiveness depends on political willingness to depoliticize technical channels. If states instead weaponize water rhetorically or operationally, the result will be repeated humanitarian crises, economic loss, and an elevated risk that routine water incidents become focal points for broader security confrontation (World Bank. (2019).

Literature Review

The conceptual literature over the past decade has moved from deterministic "water-war" proph ecy toward a more nuanced understanding of **water weaponization** as a practice and discourse that increases the risk of escalation without requiring full control of river systems. Recent reviews synthesize two separate strands — traditional securitization and the emerging empirical work on deliberate interference with water infrastructure — and argue that weaponization is better seen as a spectrum of coercive behaviours (from rhetoric and data secrecy to operational reservoir manipulation) rather than a single binary event. Scholars emphasize that weaponization functions through three linked mechanisms: (1) upstream structural control (dams, reservoirs, diversions); (2) operational choices (timing of fills/releases, flow withholding during dry seasons); and (3) information politics (opacity, selective data disclosure, and social-media attribution). This conceptual shift reframes risks: rather than asking whether states will start a "water war," the literature asks how repeated low-intensity water incidents amplified by climate extremes and politicized information environments erode institutional trust and create pathways to miscalculation. Comprehensive literature reviews and conceptual pieces provide the theoretical scaffolding for empirical analysts to map how technical choices become political signals in transboundary basins (Lopes, P. D. (2025)

Empirical studies of South Asia's basins (especially the Indus and the Brahmaputra systems) supply mixed but worrying evidence that the conditions for weaponization have increased since 2019. A large body of policy and technical literature documents how extreme monsoon variability, glacial melt, and repeated catastrophic flooding in Pakistan (notably 2022 and continuing high-impact monsoon years) have made downstream societies acutely sensitive to changes in upstream operations and announcements; concurrently, institutional frictions in the Indus Waters Treaty dispute mechanisms (including Neutral Expert proceedings and arbitration cases since 2020 2022) highlight how legal channels can become politicized during crises. Case studies and field reports also show that downstream public narratives often conflate operational flood management with malicious intent, especially when real-time hydrometric data are limited or contested. At the Brahmaputra, journalistic investigations and government statements since 2024 2025 reveal growing anxiety in India and Bangladesh about large hydropower projects in Tibet both from potential dry-season flow reductions and from the security calculus of an upstream actor with limited transparency. Together, these empirical literatures underscore that climate shocks plus contested infrastructure projects heighten the salience of water as a political instrument even when full hydraulic domination is impossible (World Bank. (2019)

The prescriptive and policy literature converges on a pragmatic, technically grounded set of interventions to reduce misperception and lower the probability that routine

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 3, Issue 9 (2025)

Online ISSN 3007-3197
Print ISSN 3007-3189

http://amresearchreview.com/index.php/Journal/about

water events escalate into security crises. Prominent recommendations echoed across academic reviews, multilateral reports, and policy think-tanks include establishing real-time basin telemetry and open data protocols, reactivating independent third-party technical facilitation for post-event forensic hydrology, and investing in downstream adaptive infrastructure and nature-based flood buffers. Scholars stress that legal or diplomatic fixes alone are insufficient: technical transparency and joint scientific platforms are necessary to decouple natural hydrological variability from allegations of deliberate manipulation. At the same time, several authors warn that these technical measures are politically fragile; they require sustained institutional trust, depoliticized scientific channels, and funding mechanisms that insulate cooperative systems from bilateral crises. The literature therefore frames near-term risk reduction as both a governance and a technical challenge one that depends on revitalizing basin institutions (or creating credible substitutes) while scaling climate adaptation to reduce the humanitarian consequences of both floods and deliberate operational choices.

Statement of the Problem

The weaponization of water in South Asia poses a growing challenge as shared rivers become politicized amidst climate change, rapid dam construction, and territorial disputes. Despite existing frameworks like the Indus Waters Treaty, mistrust and competing national interests have eroded cooperative mechanisms. Unilateral hydropower projects and limited data-sharing heighten the risk of misperceptions and escalation between riparian states. Frequent floods and droughts further amplify the securitization of water, linking natural disasters with political blame. This evolving dynamic threatens regional stability, food security, and peace prospects between nuclear-armed neighbors.

Objectives

To analyze how water resources have been strategically used as a tool of political leverage and conflict in South Asia between 2019 and 2025.

To examine the implications of hydro-politics on regional security, interstate relations, and prospects for cooperative water management in South Asia.

Research Questions

How has the weaponization of transboundary water resources influenced political tensions and conflict dynamics among South Asian states from 2019 to 2025?

What are the potential pathways for mitigating hydro-political conflicts and fostering cooperative water governance in South Asia during the period under study?

Methodology

this study applies a qualitative, comparative case study method to analyze hydro-politics in South Asia (2019–2025). It focuses on India–Pakistan, China–India, and Pakistan–Afghanistan water disputes.

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 3, Issue 9 (2025)

Online ISSN 3007-3197
Print ISSN 3007-3189

http://amresearchreview.com/index.php/Journal/about

Data Collection

Data will be gathered from treaties, official reports, think-tank publications, academic literature and media sources. Emphasis will be on government documents and policy statements.

Data Analysis

Thematic and discourse analysis will identify patterns of water weaponization and conflict. Comparative evaluation and triangulation will ensure reliability and validity.

Theory

Realism (Power Politics Theory) – Realism emphasizes that states act in their own national interest, seeking power and security. Water, as a vital resource, becomes a strategic tool and potential weapon in interstate relations, especially in conflict-prone regions like South Asia.

Model of the Theory

Hydro-Hegemony Framework, this model, derived from realist thinking, explains how powerful riparian states (e.g., India, China) dominate weaker downstream states (e.g., Pakistan, Bangladesh) through control over Transboundary Rivers, using treaties, coercion, or infrastructure projects as instruments of power.

Significance of the Study

This study is significant as it highlights how water, a critical lifeline in South Asia, is increasingly being weaponized as a tool of political leverage and conflict. By analyzing hydro-politics from 2019 to 2025, it provides fresh insights into the evolving security dynamics of the region. It contributes to academic literature on international relations and conflict studies by linking resource scarcity with geopolitical rivalries. Practically, the findings can guide policymakers, regional organizations, and peace building actors to develop cooperative water governance mechanisms and prevent future conflicts.

Background of the Study

Water weaponization refers to the deliberate use of water resources as a tool of coercion, leverage, or dominance in interstate relations. In regions where Transboundary Rivers play a crucial role in agriculture, energy, and human survival, states may exploit their geographic or infrastructural advantage to influence political and strategic outcomes. Unlike traditional military weapons, water as a weapon is less visible but equally destabilizing, as it can threaten food security, livelihoods, and national stability. In international relations, the phenomenon of water weaponization is often examined within the framework of hydro-politics and the politics of scarcity. (Wolf, 1998; Allan, 2001; Zeitoun & Warner, 2006)

Regional Overview

South Asia is one of the most water-stressed and conflict-prone regions in the world, with transboundary rivers such as the Indus, Ganges, Brahmaputra, and Kabul serving as lifelines for millions. The geographical interdependence of states like India, Pakistan, China, Afghanistan, and Bangladesh creates opportunities for cooperation but also raises tensions when water is used as a strategic instrument. For instance,

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 3, Issue 9 (2025)

Online ISSN 3007-3197
Print ISSN 3007-3189
http://amresearchreview.com/index.php/Journal/about

India's control of the Indus headwaters, China's upstream projects on the Brahmaputra, and Afghanistan's dam construction on the Kabul River have fueled regional suspicions and disputes. The region's reliance on agriculture and hydropower makes water a critical factor in both national development and security.
(Gleick, 2014; Iyer, 2007; Mustafa et al., 2017)

Research Gap

While extensive scholarship exists on hydro-politics and the Indus Waters Treaty, fewer studies specifically examine the weaponization of water in South Asia during the recent period of 2019–2025. Most existing literature focuses either on historical disputes or on broad resource scarcity issues, leaving a gap in analyzing how contemporary political shifts, climate challenges, and infrastructural strategies have reshaped water conflicts. Moreover, limited comparative studies exist that integrate India–Pakistan, China–India, and Pakistan–Afghanistan water disputes under a single analytical framework. Addressing this gap will provide a more holistic understanding of hydro-politics as a driver of conflict and cooperation in the region.
(Zeitoun et al., 2011; Biswas, 2011; Hussain, 2020)

Regional Water Dynamics in South Asia

Regional Water Dynamics in South Asia

South Asia is home to some of the most complex and contested transboundary river systems in the world, with the Indus, Ganges, Brahmaputra, and Kabul rivers forming the backbone of regional water supply. These rivers not only sustain the livelihoods of millions of people but also hold geopolitical significance due to their cross-border flows. The Indus River system, originating from Tibet and flowing into Pakistan through India, is governed by the Indus Waters Treaty (IWT) of 1960, a rare example of enduring cooperation between hostile neighbors. However, in recent years, India and Pakistan have accused each other of treaty violations, raising questions about the future of this landmark agreement. Similarly, the Brahmaputra River, flowing from China into India and Bangladesh, is central to disputes over dam-building and resource management. The Kabul River, shared between Afghanistan and Pakistan, is emerging as another flashpoint, as Afghanistan seeks to develop its water infrastructure, raising Pakistan's concerns about reduced downstream flows. These dynamics make South Asia a key arena for hydro-politics, where water is both a shared necessity and a contested resource (Wolf, 1998; Iyer, 2007; Mustafa et al., 2017)

The **Indus River Basin** illustrates the deep interdependence of South Asian states and the fragility of water-sharing mechanisms under conditions of political rivalry. Covering an area of more than one million square kilometers, the basin supports the world's largest contiguous irrigation system, crucial for Pakistan's agriculture-dependent economy. The IWT allocates the three eastern rivers (Ravi, Beas, Sutlej) to India and the three western rivers (Indus, Jhelum, Chenab) to Pakistan. Although hailed as a successful conflict-prevention mechanism, the treaty is under strain due to India's construction of hydropower projects on the western rivers, which Pakistan perceives as a violation. Increasing water scarcity, climate variability, and rapid population growth add further stress to this fragile arrangement. The Indo-Pak rivalry

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 3, Issue 9 (2025)

Online ISSN 3007-3197
Print ISSN 3007-3189
http://amresearchreview.com/index.php/Journal/about

transforms water into a strategic bargaining chip, threatening not only bilateral relations but also the security of the broader region. The Indus case highlights the delicate balance between cooperation and conflict in transboundary river governance (Gleick, 2014; Rahaman, 2012; Wirsing, 2017).

The **Brahmaputra River Basin** is another crucial water system with immense geopolitical significance, primarily involving China, India, and Bangladesh. Originating in Tibet as the Yarlung Tsangpo, the river flows into India's Arunachal Pradesh and Assam before entering Bangladesh, where it merges with the Ganges. The river's enormous hydropower potential and strategic location make it a focal point of contention. China, as the upstream power, has embarked on massive dam-building projects in Tibet, sparking concerns in India and Bangladesh about reduced downstream flows and ecological impacts. India itself has hydropower ambitions in Arunachal Pradesh, which complicates the situation given its border disputes with China. Meanwhile, Bangladesh, as a downstream state, fears that upstream water control will worsen flooding in monsoon seasons and droughts during dry periods. The Brahmaputra exemplifies how overlapping territorial disputes, climate vulnerabilities, and development ambitions transform water governance into a matter of national security and regional stability (Biswas, 2011; Hussain, 2020; Zeitoun & Warner, 2006)

The **Kabul River Basin**, though smaller than the Indus and Brahmaputra, is increasingly significant due to Afghanistan's post-war reconstruction efforts and Pakistan's water insecurity. The river originates in Afghanistan and flows into Pakistan's Khyber Pakhtunkhwa province, providing critical water for agriculture and urban supply in both countries. Afghanistan has initiated dam projects, such as the Shahtoot and Kama dams, to support its growing needs for drinking water, irrigation, and electricity. However, Pakistan fears that these projects will reduce its already stressed water availability, potentially affecting Peshawar and surrounding regions. Unlike the Indus, there is no formal treaty governing Kabul River water-sharing, which heightens the potential for disputes. Climate change, declining snowmelt, and erratic rainfall further complicate the situation. Without cooperative agreements, the Kabul River risks becoming another point of friction in Pak-Afghan relations, intensifying mistrust and undermining broader regional peacebuilding efforts. This underscores the urgent need for institutionalized water-sharing frameworks in South Asia (Mustafa et al., 2017; Wirsing, 2017; Wolf, 1998)

Case Studies of Water Conflicts (2019–2025)

India - Pakistan Disputes

The India - Pakistan water conflict is one of the longest-standing disputes in South Asia, largely shaped by the Indus Waters Treaty (IWT) of 1960. Despite the treaty being celebrated as a rare example of cooperation between two rival states, its durability has been increasingly challenged between 2019 and 2025. India's growing hydropower projects on the Chenab and Jhelum rivers, such as the Kishanganga and Ratle dams, have raised serious concerns in Pakistan regarding reduced downstream flows and treaty violations. Pakistan argues that India's unilateral construction undermines the spirit of the IWT, which was intended to ensure equitable water distribution. The February 2019 Pulwama crisis further aggravated tensions, as India

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 3, Issue 9 (2025)

Online ISSN 3007-3197
Print ISSN 3007-3189
http://amresearchreview.com/index.php/Journal/about

threatened to "maximize the use" of its share of Indus waters, which Pakistan perceived as water weaponization. These developments show how water disputes have been increasingly intertwined with broader political and security crises, raising the risk that water management may shift from cooperative to coercive dynamics in the years ahead (Gleick, 2014; Wirsing, 2017; Mustafa et al., 2017)

China - India Tensions

China - India tensions over water are primarily centered on the Brahmaputra River, known as the Yarlung Tsangpo in Tibet, which originates in China and flows into India and Bangladesh. China's ambitious hydropower projects in Tibet, particularly the construction of large dams, have heightened India's concerns about reduced downstream flows and potential ecological disruptions. Since 2019, China has accelerated its plans for mega-hydropower stations near the Great Bend of the Brahmaputra, which India perceives as a strategic threat. This dispute is further complicated by unresolved territorial conflicts in Arunachal Pradesh, where India also seeks to exploit the river's hydropower potential. These overlapping issues illustrate the nexus between water security and territorial disputes, as water becomes another front in Sino-Indian rivalry. Moreover, the lack of a binding water-sharing treaty between China and India leaves the situation vulnerable to mistrust and unilateral action, making the Brahmaputra a potential flashpoint for conflict in South Asia's geopolitics (Biswas, 2011; Hussain, 2020; Zeitoun & Warner, 2006)

Pakistan - Afghanistan Challenges

The Pakistan - Afghanistan water conflict revolves around the Kabul River, which originates in Afghanistan and flows into Pakistan's Khyber Pakhtunkhwa province. For decades, the absence of a formal water-sharing agreement has allowed both countries to exploit the river independently, but recent developments have intensified disputes. Since 2019, Afghanistan has sought to enhance its water infrastructure by constructing projects like the Shahtoot and Kama dams to meet domestic irrigation and drinking water needs. While Afghanistan frames these projects as essential for economic development, Pakistan fears they will significantly reduce downstream flows, affecting agriculture and urban water supply in Peshawar and surrounding districts. This dispute is particularly sensitive because it coincides with fragile Pak-Afghan relations after the U.S. withdrawal from Afghanistan in 2021. Without an institutional framework to regulate Kabul River waters, the conflict risks escalating into another layer of mistrust, further complicating already strained bilateral ties and undermining regional stability (Rahaman, 2012; Mustafa et al., 2017; Wolf, 1998)

Comparative Outlook (2019 - 2025)

The comparative study of India - Pakistan, China - India, and Pakistan - Afghanistan water conflicts highlights the broader patterns of hydro-politics in South Asia during 2019 - 2025. In all three cases, water has shifted from being a potential avenue for cooperation to an instrument of strategic rivalry. India's dominance in the Indus basin reflects hydro-hegemony, while China's upstream control of the Brahmaputra demonstrates how power asymmetry allows it to dictate terms to weaker riparians. Afghanistan's assertion over the Kabul River mirrors smaller states' attempts to

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 3, Issue 9 (2025)

Online ISSN 3007-3197
Print ISSN 3007-3189
http://amresearchreview.com/index.php/Journal/about

secure resources despite regional resistance. These disputes underline the absence of strong institutional mechanisms for cooperative water governance across the region. They also demonstrate how water scarcity, climate change, and political mistrust converge to transform rivers into tools of coercion rather than collaboration. Addressing these conflicts requires not only technical solutions but also political will to integrate water-sharing into broader peace building frameworks (Zeitoun et al., 2011; Wirsing, 2017; Hussain, 2020).

Water as a Tool of Power and Conflict

Water as Strategic Coercion

In South Asia, water has increasingly emerged as a strategic tool of coercion, where dominant riparian states exploit their geographic advantage to influence weaker downstream neighbors. India, for example, has repeatedly hinted at reviewing or reinterpreting the Indus Waters Treaty (IWT) as a pressure tactic against Pakistan during political or military crises. Following the 2019 Pulwama incident, Indian officials openly declared their intention to "stop Pakistan's share of water," framing water as a tool of punishment rather than a shared necessity. Such rhetoric reflects a shift from cooperative management to coercive diplomacy, where water becomes a bargaining chip in broader security disputes. Similarly, China's control over the headwaters of the Brahmaputra allows it to signal power through large-scale dam-building projects, indirectly coercing India into accepting Chinese dominance. These examples demonstrate how upstream states weaponize water resources not only through actions but also through threats, signaling their ability to disrupt flows as leverage in negotiations (Mustafa et al., 2017; Wirsing, 2017; Zeitoun & Warner, 2006).

Water as a Bargaining Tool

Water is also used as a bargaining tool in interstate negotiations, where riparian states link water-sharing arrangements with political or security concessions. The Indus Waters Treaty has often been at the center of Indo-Pak bargaining, with Pakistan framing India's dam construction as treaty violations, while India asserts its right to harness waters for hydropower. These disputes have provided both states with opportunities to negotiate not only technical issues but also broader diplomatic agendas. Similarly, in Afghanistan, water projects on the Kabul River have become bargaining instruments in its fragile relations with Pakistan. Afghan policymakers argue that water is their sovereign right, while Pakistan insists on formal agreements to ensure its agricultural security. In both cases, water negotiations are not isolated technical matters but rather embedded in larger security bargains. This makes water governance less about resource management and more about political trade-offs, where each side seeks to extract maximum strategic advantage.
(Wolf, 1998; Rahaman, 2012; Hussain, 2020)

Water as a Means of Control

Control over Transboundary Rivers allows dominant states to establish hydro-hegemony, shaping the political and economic behavior of weaker states. China exemplifies this through its upstream control of the Brahmaputra, where dam-building projects enhance its ability to dictate terms to India and Bangladesh. Such

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 3, Issue 9 (2025)

Online ISSN 3007-3197
Print ISSN 3007-3189
http://amresearchreview.com/index.php/Journal/about

infrastructural dominance provides China with both energy security and bargaining power, reinforcing its regional hegemony. India employs similar tactics vis-à-vis Pakistan by advancing projects on western rivers of the Indus, thereby asserting control within the limits of the IWT but stretching its interpretation to Pakistan's disadvantage. Control does not always require physical diversion of water; even the perception of control can shift the balance of power. The uncertainty created by upstream projects forces downstream states to act defensively, reducing their room for independent policy-making. Thus, water control is not only about material flows but also about psychological leverage, where dominant states embed their authority in regional politics through hydrological superiority (Zeitoun et al., 2011; Biswas, 2011; Gleick, 2014).

Water in Regional Power Politics

The strategic use of water in South Asia reflects a broader pattern where resource politics intersects with national security, sovereignty, and regional rivalry. Water scarcity, combined with rapid population growth and climate change, has heightened its value as a tool of statecraft. Dominant riparians use water-related threats, negotiations, and projects to expand their influence, framing water not as a shared resource but as an extension of national power. This approach undermines the possibility of regional cooperation and instead reinforces mistrust, as seen in Indo-Pak hostility, Sino-Indian rivalry, and Pak-Afghan disputes. The absence of strong regional water institutions makes it easier for powerful states to employ unilateral strategies of control, coercion, and bargaining without facing accountability. Consequently, water in South Asia is no longer merely a developmental issue but a central component of conflict and security politics, where rivers are weaponized to assert dominance and suppress vulnerability (Wirsing, 2017; Hussain, 2020; Mustafa et al., 2017).

Implications for Peace and Security

The hydro - politics of South Asia significantly impacts regional peace and security by shaping the trust deficit among states. Shared river systems such as the Indus, Brahmaputra, and Kabul are not merely sources of water but also symbols of sovereignty and survival. India and Pakistan, for instance, have witnessed recurring disputes over the Indus Waters Treaty (IWT), with accusations of treaty violations exacerbating political mistrust. This contestation has deepened the already fragile relationship between the two nuclear-armed neighbors, where water emerges as both a conflict driver and a bargaining chip in broader security negotiations. The lack of mutual confidence in water-sharing regimes weakens the prospects of long-term cooperation and risks converting technical disagreements into strategic confrontations (Wolf, 2007).

Hydro-politics also directly influences regional cooperation mechanisms by either fostering dialogue or reinforcing divisions. For example, while the IWT between India and Pakistan has survived wars, its recent strains reflect a declining spirit of cooperation in South Asia's water politics. Similarly, China's upstream control of the Brahmaputra River has raised concerns in India and Bangladesh about future unilateral diversions and dam constructions. These concerns undermine the

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 3, Issue 9 (2025)

Online ISSN 3007-3197
Print ISSN 3007-3189
http://amresearchreview.com/index.php/Journal/about

effectiveness of regional organizations such as SAARC, which struggle to integrate water governance into a collective security framework. Without trust-building, hydro-politics tends to fuel nationalist rhetoric, making it difficult to operationalize transboundary water management as a platform for peacebuilding (Zeitoun & Mirumachi, 2008).

The securitization of water has further contributed to the militarization of borders, particularly in South Asia's most contested zones. In Pakistan, India's hydro-infrastructure projects in Jammu and Kashmir are often viewed as strategic attempts to exert political pressure. Similarly, disputes between Afghanistan and Pakistan over the Kabul River highlight how developmental projects can escalate into threats to national security. These tensions align with the concept of "water weaponization," where dominant riparian states can use water as a coercive tool in interstate rivalries. Such dynamics do not merely affect bilateral relations but also strain the regional security architecture, increasing the likelihood of misperceptions and escalation in crisis situations (Gleick & Heberger, 2014).

Ultimately, the future of peace and security in South Asia is intertwined with the ability of states to depoliticize and cooperatively manage transboundary water resources. Water, if approached through frameworks of joint management and equitable sharing, can become a catalyst for confidence-building rather than conflict. Regional institutions, confidence-building measures, and third-party mediation could serve as mechanisms to prevent disputes from spiraling into crises. However, without political will and trust, hydro-politics is more likely to exacerbate instability than promote peace. Ensuring water security, therefore, becomes inseparable from broader efforts at building sustainable interstate trust and cooperative security in South Asia (Sinha & Bhattacharya, 2016).

Prospects for Resolution and Policy Options

The resolution of water conflicts in South Asia requires robust **institutional reforms** that strengthen existing frameworks and create new ones to address emerging challenges. The Indus Waters Treaty (IWT) of 1960 remains a remarkable model of resilience, but its inability to deal with issues like climate change, new dam projects, and population growth shows the urgent need for reform. Updating the treaty to incorporate mechanisms for data sharing, early-warning systems, and dispute resolution procedures would enhance its credibility. Furthermore, national water institutions in Pakistan, India, and Afghanistan need greater technical capacity and legal empowerment to negotiate and implement water agreements effectively. Without institutional reforms, ad hoc bilateral negotiations will continue to falter in the face of political and environmental pressures (Biswas, 2011).

Another pathway for resolution lies in **regional cooperative mechanisms** that transcend bilateral arrangements. South Asia lacks a strong multilateral water-sharing framework, despite its heavy dependence on Transboundary Rivers. Regional organizations like SAARC have largely failed to integrate water diplomacy into their security agenda due to mistrust and political rivalries. However, creating a South Asian Water Council under SAARC or BIMSTEC could provide a platform for data exchange, capacity building, and cooperative projects. By adopting principles of integrated water resources management (IWRM), states could shift from zero-sum

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 3, Issue 9 (2025)

Online ISSN 3007-3197
Print ISSN 3007-3189
http://amresearchreview.com/index.php/Journal/about

perceptions of water to joint development opportunities, such as hydropower sharing and flood management. Such institutionalized cooperation could mitigate the risks of escalation while encouraging collective responsibility for water sustainability (Tanzeema & Faisal, 2001).

Diplomatic pathways also hold significant potential for sustainable water governance in South Asia. Confidence-building measures (CBMs), such as joint monitoring of river basins, exchange of technical experts, and third-party mediation, can gradually rebuild trust. International organizations like the World Bank and UN agencies could facilitate dialogue by acting as mediators or technical partners in disputed projects. Moreover, track-two diplomacy involving academics, NGOs, and local communities can create a parallel dialogue that depoliticizes water issues. By separating water cooperation from contentious political disputes, diplomacy can reframe water as a shared lifeline rather than a weapon of power. This approach would reduce the securitization of rivers and increase the likelihood of consensus-building (Dinar et al., 2013).

Finally, long-term resolution depends on integrating **climate adaptation and sustainable development policies** into water governance strategies. South Asia is one of the most climate-vulnerable regions, with glaciers melting at unprecedented rates and monsoon patterns becoming increasingly erratic. Cooperative policies that focus on joint climate resilience such as basin-wide early warning systems, sustainable irrigation technologies, and renewable energy integration can reduce competition over scarce resources. Linking water governance with the UN Sustainable Development Goals (SDGs) would provide both normative guidance and international support for cooperative efforts. By framing water diplomacy within the broader agenda of environmental security, states can ensure that hydro-politics becomes a driver of regional peace and resilience rather than conflict (Swain & Jägerskog, 2016).

Conclusion

The weaponization of water in South Asia underscores how natural resources, once symbols of life and prosperity, have become tools of power, rivalry, and strategic coercion. The cases of the Indus, Brahmaputra, and Kabul rivers highlight that unresolved disputes, coupled with population growth, climate change, and weak governance, are deepening mistrust among riparian states. Water has thus evolved into both a conflict driver and a security concern, directly affecting peace, stability, and regional development. Yet, the same rivers that divide can also unite. With institutional reforms, inclusive cooperation, and effective diplomacy, water can be transformed from a contested resource into a shared opportunity for sustainable growth. Establishing multilateral frameworks, depoliticizing hydro-politics, and integrating climate adaptation strategies remain essential for breaking the cycle of confrontation. Ultimately, the future of South Asia's peace and security depends on whether its states view water as a **weapon of conflict or a bridge for cooperation.** Choosing the latter path is not only a strategic necessity but also a moral responsibility to ensure the survival, prosperity, and harmony of millions who depend on these shared lifelines.

Findings

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 3, Issue 9 (2025)

Online ISSN 3007-3197
Print ISSN 3007-3189

http://amresearchreview.com/index.php/Journal/about

Water as a Strategic Instrument**,** Dominant riparian states such as India and China increasingly use control over transboundary rivers as tools of coercion, bargaining, and strategic leverage, elevating water from a developmental resource to a security concern.

Intensification of Disputes (2019–2025)**,** The Indo-Pakistan disputes over the Indus Waters Treaty, China–India tensions on the Brahmaputra, and Pakistan–Afghanistan disagreements over the Kabul River have intensified due to dam construction, unilateral projects, and lack of effective dispute resolution mechanisms.

Erosion of Interstate Trust**,** Hydro-politics has deepened mistrust among South Asian states, with water disputes spilling into broader geopolitical rivalries, thereby undermining opportunities for cooperation and regional integration.

Institutional Limitations, Existing treaties such as the Indus Waters Treaty, while historically significant, lack provisions to address contemporary challenges such as climate change, population growth, technological interventions, and shifting political dynamics.

Climate Change as a Conflict Multiplier, Glacial melt, erratic monsoon patterns, and increased flooding exacerbate scarcity and vulnerability, further fueling competition and securitization of water resources.

Missed Opportunities for Cooperation, Despite recurring tensions, water has untapped potential as a platform for confidence-building, joint development, and climate resilience, but political mistrust and unilateralism continue to block progress.

Recommendations

Revise and modernize existing treaties like the Indus Waters Treaty to address climate change, data sharing, and new water infrastructure challenges.

Establish a South Asian Water Council under SAARC or Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation. (BIMSTEC) to promote multilateral cooperation and joint river basin management.

Develop confidence-building measures (CBMs) such as joint monitoring, technical exchanges, and early-warning systems to reduce mistrust.

Integrate water governance into regional climate adaptation strategies to mitigate scarcity and disaster risks.

Promote track-two diplomacy through academia, NGOs, and local communities to depoliticize water issues and foster dialogue.

Leverage international mediators like the World Bank or UN to facilitate negotiations and provide technical expertise.

Encourage basin-wide projects in hydropower, irrigation efficiency, and flood management as shared benefits to replace zero-sum approaches.

Adopt integrated water resources management (IWRM) to balance agricultural, industrial, and domestic needs across borders.

References

Online ISSN 3007-3197
Print ISSN 3007-3189

Allan, J. A. (2001). The Middle East water question: Hydropolitics and the global economy. I.B. Tauris.

Biswas, A. K. (2011). Cooperation or conflict in transboundary water management: Case study of South Asia. Hydrological Sciences Journal, 56(4), 662–670.

Dinar, S., Dinar, A., McCaffrey, S., & McKinney, D. (2013). Bridges over water: Understanding transboundary water conflict, negotiation and cooperation (2nd ed.). World Scientific.

Gleick, P. H. (2014). Water, drought, climate change, and conflict in Syria. Weather, Climate, and Society, 6(3), 331–340.

Hussain, I. (2020). Water security in South Asia: Issues and policy recommendations. Journal of South Asian Studies, 8(2), 45–62.

Iyer, R. R. (2007). Towards water wisdom: Limits, justice, harmony. Sage Publications.

Jha, P. (2018). Battles over water: Hydro-politics in South Asia. Oxford University Press.

Khan, S. A., & Kazmi, S. H. (2018). Water insecurity and hydropolitics in South Asia: Emerging threats and challenges. Strategic Studies, 38(1), 67–88.

Mirumachi, N. (2015). Transboundary water politics in the developing world. Routledge.

Mustafa, D., Akhter, M., & Nasrallah, N. (2017). Understanding Pakistan's water-security nexus. Peaceworks, 126, 1–34. United States Institute of Peace.

Rahaman, M. M. (2012). Principles of transboundary water resources management and Ganges treaties: An analysis. International Journal of Water Resources Development, 28(3), 475–491.

Salman, S. M. A., & Uprety, K. (2003). Conflict and cooperation on South Asia's international rivers: A legal perspective. World Bank.

Swain, A. (2011). Challenges for water sharing in the Nile basin: Changing geo-politics and changing climate. Hydrological Sciences Journal, 56(4), 687–702.

Swain, A., & Jägerskog, A. (2016). Emerging security threats in the Middle East: The impact of climate change and globalization. Rowman & Littlefield.

Tanzeema, S., & Faisal, I. M. (2001). Sharing the Ganges: A critical analysis of the water sharing treaties. Water Policy, 3(1), 13–28.

Varis, O., Biswas, A. K., Tortajada, C., & Lundqvist, J. (2006). Megacities and water management. International Journal of Water Resources Development, 22(2), 377–394.

Warner, J., Mirumachi, N., & Farnum, R. (2017). Politics of the river basin: The case of the Mekong. International Journal of Water Governance, 5(1), 1–22.

Wolf, A. T. (1998). Conflict and cooperation along international waterways. Water Policy, 1(2), 251–265.

Wolf, A. T., Yoffe, S. B., & Giordano, M. (2003). International waters: Identifying basins at risk. Water Policy, 5(1), 29–60.

Wirsing, R. G. (2017). International conflict over water resources in Himalayan Asia. Palgrave Macmillan.

Zeitoun, M., & Warner, J. (2006). Hydro-hegemony: A framework for analysis of transboundary water conflicts. Water Policy, 8(5), 435–460.

Online ISSN 3007-3197
Print ISSN 3007-3189

Zeitoun, M., Mirumachi, N., & Warner, J. (2011). Transboundary water interaction II: The influence of "soft" power. International Environmental Agreements: Politics, Law and Economics, 11(2), 159–178.

Zawahri, N. A. (2009). India, Pakistan and cooperation along the Indus River system. Water Policy, 11(1), 1–20.

Zawahri, N. A., & Hensel, P. R. (2012). Where the grass is greener: Assessing the effect of international environmental agreements on river cooperation. International Studies Quarterly, 56(1), 85–97.

Zeitoun, M., Goulden, M., & Tickner, D. (2013). Current and future challenges facing transboundary river basin management. Wiley Interdisciplinary Reviews: Climate Change, 4(5), 331–349.