EDICIONES COMPLUTENSE

Geopolítica(s). Revista de Estudios sobre Espacio y Poder
ISSN: 2172-3958

ARTÍCULO

The Geopolitical Role of Water in the Former Armenia–Azerbaijan Conflict over Karabakh

Firuz Suleymanov
Head of International Affairs Office, Khazar University, Bakú (Azerbaiyán); Lecturer, Azerbaijan State Pedagogical University, Bakú (Azerbaiyán)
e-mail: fsuleymanov@khazar.org
ORCID: https://orcid.org/0000-0002-5247-1512

Darío Salinas Palacios
Research Associate, IFG Lab – Institut Français de Géopolitique, Université Paris 8 (Francia); CEO, Cassini Group Spain
e-mail: dario@cassini.group
ORCID: https://orcid.org/0000-0003-2064-2476

http://dx.doi.org/10.5209/geop.94926 Recibido: 06/03/2024 • Aceptado: 05/12/2025

Abstract. Water resources in the South Caucasus are unevenly distributed, and climate change, together with other anthropogenic pressures such as armed conflict, has intensified water-related challenges. While the former Armenia–Azerbaijan conflict has been widely studied, the role of water has remained comparatively understudied from a geopolitical perspective. This article examines how and why water, shaped by environmental conditions as well as socio-economic and cultural practices, functioned as a geopolitical factor in the former conflict over Karabakh. The analysis applies the French geopolitical reasoning approach developed by Yves Lacoste, focusing on multi-scalar processes (local, national, and regional), identifying spatial sets, and comparing competing territorial representations. The findings highlight the strategic importance of infrastructures such as the Sarsang reservoir, whose control and seasonal operation were closely tied to authority, security and representation. They also show how neighbouring powers, including Russia, Türkiye and Iran, shaped the opportunities and constraints for cooperation. Overall, the study demonstrates that water was not peripheral but an integral element of territorial rivalries and power strategies in the South Caucasus, situating Karabakh within wider hydropolitical dynamics.
Keywords. geopolitics; hydropolitics; water security; Karabakh; South Caucasus.

ES El papel geopolítico del agua en el antiguo conflicto entre Armenia y Azerbaiyán por Karabaj

Resumen. Los recursos hídricos del Cáucaso meridional están distribuidos de forma desigual, y el cambio climático, junto con otras presiones antrópicas como el conflicto armado, han intensificado los desafíos vinculados al agua. Aunque el antiguo conflicto entre Armenia y Azerbaiyán ha sido ampliamente estudiado, el papel del agua ha recibido una atención comparativamente menor desde una perspectiva geopolítica. Este artículo analiza cómo y por qué el agua —configurada tanto por las condiciones ambientales como por las prácticas socioeconómicas y culturales— funcionó como factor geopolítico en el conflicto por Karabaj. El análisis aplica el enfoque del razonamiento geopolítico francés desarrollado por Yves Lacoste, centrado en los procesos multiescalares (local, nacional y regional), la identificación de conjuntos espaciales y la compa-

ración de representaciones territoriales contrapuestas. Los resultados subrayan la importancia estratégica de infraestructuras como el embalse de Sarsang, cuyo control y operación estacional estuvieron estrechamente ligados a la autoridad, la seguridad y la representación del territorio. Asimismo, muestran cómo las potencias vecinas —Rusia, Turquía e Irán— condicionaron las posibilidades y los límites de la cooperación. En conjunto, el estudio demuestra que el agua no fue un elemento periférico, sino central en las rivalidades territoriales y las estrategias de poder en el Sur del Cáucaso, inscribiendo Karabaj en dinámicas hidropolíticas de mayor alcance.
Palabras clave. geopolítica; hidropolítica; seguridad hídrica; Karabaj; Cáucaso meridional.

PT O papel geopolítico da água no antigo conflito entre a Arménia e o Azerbaijão sobre o Karabaj

Resumo. Os recursos hídricos do Cáucaso meridional estão distribuídos de forma desigual, e as alterações climáticas, juntamente com outras pressões antropogénicas como o conflito armado, intensificaram os desafios específicos à água. Embora o antigo conflito entre a Arménia e o Azerbaijão tenha sido amplamente estudado, o papel da água recebeu uma atenção comparativamente menor numa perspetiva geopolítica. Este artigo analisa como e por que razão a água —configurada tanto pelas condições ambientais como pelas práticas socioeconómicas e culturais— funcionou como fator geopolítico no conflito de Karabaj. A análise aplica a abordagem do raciocínio geopolítico francês desenvolvido por Yves Lacoste, centrado nos processos multiescalares (local, nacional e regional), na identificação de conjuntos espaciais e na comparação de representações territoriais contrapostas. Os resultados fundamentam a importância estratégica de infraestruturas como o embalsamamento de Sarsang, cujo controlo e operação estacional estão intimamente ligados à autoridade, à segurança e à representação do território. Também mostra como as potências vizinhas —Rússia, Turquia e Irão— condicionaram as possibilidades e os limites da cooperação. Em conjunto, o estúdio demonstra que a água não era um elemento periférico, central nas rivalidades territoriais e nas estratégias de poder no Sul do Cáucaso, inscrevendo Karabaj em dinâmicas hidropolíticas de maior alcance.
Palavras-chave. geopolítica; hidropolítica; segurança hídrica; Karabaj; Cáucaso meridional.

How to cite. Suleymanova, F., y Salinas Palacios, D. (2026). The Geopolitical Role of Water in the Former Armenia–Azerbaijan Conflict over Karabakh. *Geopolítica(s). Revista de Estudios sobre Espacio y Poder*, *17*(1), 137-154

Introduction

Water scarcity and uneven distribution are long-standing issues in the South Caucasus, intensified in recent decades by the combined pressures of climate change, socio-economic development and political conflict (Rucevska, 2017; Maddocks, Young & Reig, 2015). Both Armenia and Azerbaijan depend heavily on river systems that traverse or originate in contested territories, with hydrological patterns and infrastructure shaping not only livelihoods and energy supply but also strategies of sovereignty and control (Wolf, 1998; O'Lear, 2018). The former Karabakh conflict, one of the most protracted disputes in the post-Soviet space, has generated extensive research on its political, military and socio-cultural dimensions (de Waal, 2016; Broers, 2021). Yet the geopolitical role of water in this conflict has remained comparatively understudied, even though access to and

control of water infrastructure visibly influenced both the escalation and management of tensions (Ahmadi *et al*., 2022; OSCE, 2016). Addressing this gap requires situating water as an analytical entry point into the rivalries that have shaped the region.

The chronology of the conflict underscores this importance. The first war (1992–1994) ended with Azerbaijan losing control of most areas in Karabakh, including the Sarsang reservoir on the upper Tartar River, which historically supplied irrigation to tens of thousands of hectares downstream in Azerbaijani territory (Ahmadi *et al*., 2022). The following «frozen» period (1994–2020) was marked by recurrent incidents around water releases, accusations of deliberate flooding or withholding, and continuing vulnerability in downstream regions (OSCE, 2016). The Second Karabakh War in 2020 altered the hydropolitical landscape: Azerbaijan regained territories and restored partial control over critical water infrastructure (Kuyumjian, 2021). Armenia, Azerbaijan, and Russia signed an agreement to end this on November 10, 2020[1]. On September 19–20, 2023, Azerbaijan restored its sovereignty over the Karabakh region. With the mediation of the United States of America, the Republic of Azerbaijan and the Republic of Armenia signed an Agreement on the Establishment of Peace and Interstate Relations on August 29, 2025[2]. Since then, the question of how to decouple water management from the former conflict has become essential to both local governance and regional diplomacy.

This study addresses the question of how water functioned as a geopolitical factor in the former conflict between Armenia and Azerbaijan. It situates water within the broader interplay among environmental conditions, territorial strategies and regional power rivalries, analysing how infrastructures and hydrological dynamics became embedded in claims to sovereignty, national security and identity. In doing so, the study fills an important gap by linking hydrological factors with geopolitical reasoning, an angle often overlooked in previous research.

The theoretical and methodological framework draws on the French school of geopolitics, particularly the geopolitical reasoning approach developed by Yves Lacoste. Rather than a prescriptive theory, Lacoste (2012; 2014) conceives geopolitics as a method of reasoning for analysing rivalries of power over space through three interrelated dimensions: (i) the identification of spatial sets (*ensembles spatiaux*), whether continuous or dispersed; (ii) the analysis of multi-scalar processes (*diatopos*), from the local level of villages and infrastructure to the regional and global arenas; and (iii) the study of contradictory territorial representations, in which actors construct competing narratives to legitimise their claims (Giblin, 2012; Loyer, 2019). Applied to the South Caucasus, this framework connects hydrological realities, infrastructural control and political discourses within a coherent analytical structure.

Within this framework, the Sarsang reservoir has functioned as more than a piece of hydraulic infrastructure: it anchors local and national strategic dynamics and embodies contradictory territorial representations. For Azerbaijan, the post-1994 loss of Sarsang symbolized vulnerability and dependency, fueling «hydro-terror» narratives and calls for international intervention (Rzayev, 2014; OSCE, 2016). By contrast, Armenian and local authorities have characterized their control of the reservoir in technical terms—emphasizing hydropower generation and community water supply—rather than as an instrument of coercion (OSCE, 2016; Ahmadi *et al*., 2022).

The regional context reinforces the multi-scalar nature of the conflict. Russia co-managed transboundary rivers such as the Samur with Azerbaijan, presenting itself as an arbiter even as it consolidated its security presence (German, 2012). Iran's approach to the Aras basin combined cooperative projects with suspicion of Türkiye's upstream developments (Omidi & Özdağ, 2023). Türkiye, through its Southeastern Anatolia Project (GAP) and bilateral agreements with Azerbaijan, positioned itself as a key partner in post-2020 reconstruction (Sakal, 2022). These examples show how external actors embedded local water disputes within broader geopolitical rivalries, complicating prospects for cooperation.

The structure of the article follows this multilevel logic. After reviewing the relevant literature and outlining Lacoste's methodological approach, the paper examines the role of water at three

1. Armenia, Azerbaijan and Russia sign Nagorno-Karabakh peace deal. See https://www.bbc.com/news/world-europe-54882564 (Accessed on 6 October 2025)

2. Joint Declaration by the President of Azerbaijan and Prime Minister of Armenia. See https://www.state.gov/wp-content/uploads/2025/08/2025JointDeclaration.AzerbaijanArmenia.pdf (Accessed on 7 October 2025).

interconnected scales. At the state level, it considers how the upstream–downstream positions of Armenia and Azerbaijan framed their hydropolitical vulnerabilities and strategies. At the territorial level, it analyses Karabakh and key infrastructures such as the Sarsang reservoir, showing how control and operation of water resources became integral to the conflict's dynamics. At the regional level, it assesses the influence of Russia, Türkiye and Iran on the hydropolitics of the conflict. The conclusion returns to the research question, highlighting how Lacoste's reasoning clarifies the links between environmental conditions, territorial rivalries and infrastructure, and reflecting on the implications for water governance and stability in the South Caucasus.

1. Literature Review

The relationship between water and conflict has long attracted scholarly attention. Early works (e.g., Gleick, 1993) framed water as both a source of tension and a potential catalyst for cooperation, emphasizing that hydrological scarcity can exacerbate rivalries but is rarely the sole cause of war. Wolf (1998) consolidated this perspective by showing that while outright «water wars» are rare, disputes over water allocation and infrastructure are frequent and usually embedded within broader political and territorial struggles. More recent contributions, particularly within environmental geopolitics, stress the need to examine how narratives, representations, and governance scales shape the meaning and management of water resources (O'Lear, 2018). This body of literature underscores that water is not an isolated physical factor; rather, it is embedded in sociopolitical processes linking local vulnerabilities with national strategies and international rivalries.

The South Caucasus has received less attention in these global water-conflict debates than regions like the Middle East or Central Asia, but a growing number of studies have begun to address its hydropolitics. For instance, Vener & Campana (2010) examined the hydro-strategy of the Kura–Aras River Basin, noting fragmented governance and competing claims among riparian states. Their work highlighted that transboundary rivers could serve as both shared lifelines and contested political spaces. Sakal (2022) shifted focus to Türkiye's regional water policies, underlining the risks of hydro-hegemony (dominance of upstream powers) and the influence of major upstream projects on downstream security in the South Caucasus. Hajihoseini *et al*. (2023) analyzed the Aras River basin, pointing to persistent tensions between conflict and cooperation in joint water management and showing how historical legacies shape current negotiations. In the context of Karabakh specifically, Ahmadi *et al*. (2023) provided one of the few direct studies on hydropolitics, documenting how control of infrastructure in Upper Karabakh became a tool of political leverage and security. Similarly, Zanatta & Alvi (2024) examined the securitization of water in the Karabakh conflict, illustrating how competing narratives cast water resources as security threats or assets. These studies demonstrate that water in this region is far from peripheral; it is deeply intertwined with sovereignty claims, national security, and territorial disputes.

Comparative research from other regions offers valuable insights that echo the South Caucasus experience. Studies on Ukraine's conflict, for example, have shown how the deliberate destruction of dams can be used as a weapon of war, highlighting the extreme vulnerability of water infrastructure in conflict zones (Vyshnevskyi *et al*., 2023). Analyses of the Nile Basin (Cascão, 2009; Tvedt, 2010) and the Euphrates–Tigris basin (Kibaroğlu & Scheumann, 2013) reinforce the argument that upstream–downstream asymmetries create structural tensions, with dams and water diversions becoming tools for asserting power. While these cases differ geographically, they exhibit dynamics similar to those in the South Caucasus: contested control of strategic reservoirs, divergent national narratives about water rights, and the intertwining of environmental insecurity with geopolitical rivalry.

Despite these contributions, scholarship on South Caucasus hydropolitics remains fragmented, and significant gaps persist. Most existing studies either examine water issues at the broad basin level (e.g., Vener & Campana, 2010; Hajihoseini *et al*., 2023) or focus on the policies of a single actor such as Türkiye (Sakal, 2022). Only a handful of works explicitly address Karabakh, and those tend to be descriptive case accounts rather than in-depth analytical studies (Ahmadi *et al*., 2023). Moreover, few researchers have applied a rigorous geopolitical framework to unders-

tand how water infrastructure, state and non-state actors, and competing narratives interact across multiple scales in this conflict. From this review, three key gaps can be identified. First, there is a lack of integrated analysis linking hydrological realities (e.g., water scarcity and climate impacts) and infrastructure (dams, reservoirs, irrigation systems) with the political strategies of Armenia and Azerbaijan as upstream and downstream states. Second, the influence of Russia, Türkiye, and Iran as regional powers on Karabakh's hydropolitics remains underexplored, even though these external actors have profoundly shaped the conflict's evolution. Third, concepts from critical geopolitical analysis—such as spatial sets, multi-scalar processes, and contradictory territorial representations—have yet to be operationalized in this context. Applying these concepts could reveal how water acquires symbolic and strategic significance beyond its material utility.

This study seeks to address the above gaps by combining insights from the hydropolitics literature with the analytical approach of the French school of geopolitics. Building on Lacoste's method of geopolitical reasoning (Lacoste, 2012; 2014) and related frameworks (Giblin, 2012; Loyer, 2019), the analysis connects water in Karabakh to broader power dynamics through three complementary lenses: (i) Identification of spatial sets: mapping the key water-related territorial units—for example, the Tartar River sub-basin, the Sarsang reservoir, and the downstream agricultural plains—to understand the spatial scope of the conflict. (ii) Multi-scalar analysis and stakeholder's strategies: examining how water issues link the local (village-level needs and infrastructure) with the national (Armenia and Azerbaijan state strategies) and further with the regional scale (the interests and interventions of neighbouring powers). (iii) Contradictory representations: analysing how competing geopolitical narratives contribute to the construction of geopolitical representations and give meaning to shared spaces and resources. In this study, representations are understood as operative frameworks through which actors interpret vulnerability, legitimacy, and authority. Consequently, infrastructures such as reservoirs acquire a dual function—material and symbolic—in the exercise of power.

By applying this multi-dimensional framework to Karabakh, the study not only contributes to the limited literature on South Caucasus hydropolitics but also demonstrates the value of Lacoste's geopolitical reasoning for understanding contemporary conflicts where environmental factors intersect with territorial power rivalries.

2. Theoretical and Methodological Framework

2.1. Geopolitical reasoning and the French school

The French school of geopolitics, primarily associated with Yves Lacoste, conceives of geopolitics not as a prescriptive theory but rather as a method of reasoning to analyse rivalries of power over space (Lacoste, 1993; 2012). This perspective emerged in the 1970s as a critical response to deterministic traditions that had linked geography with expansionist ideologies, particularly the *Geopolitik* of interwar Germany. Lacoste's contribution was to reclaim geography as a tool for understanding contemporary conflicts through detailed observation of territories and the strategies of actors competing for them. Unlike the classical Anglo-American school, which often sought universal models (e.g., Mackinder's «Heartland» or Spykman's «Rimland»), the French approach emphasises the study of conflicts in specific, often small, territories where power dynamics can be observed most clearly (Giblin, 2012).

Three interrelated concepts are central to this approach. First is the identification of spatial sets (*ensembles spatiaux*), which may be continuous or dispersed. These spatial units define the scope of a conflict and allow rivalries to be mapped (Lacoste, 1993). Second is the analysis of multi-scalar processes (*diatopos*), which emphasises that local disputes are never isolated but are instead connected to national, regional, and sometimes global scales (Loyer, 2019). This multilevel perspective echoes Braudel's historiography of long- and short-term temporalities applied to space: local incidents are nested within wider territorial configurations. Third is the study of

contradictory territorial representations—the discourses and narratives through which actors legitimise their claims to territory or resources (Lacoste, 2012). Such representations may rest on selective histories, symbolic maps, or emotive terms that portray water either as a source of security or as a weapon of threat.

This framework is particularly well suited to analysing water-related conflicts. As scholars of hydropolitics have emphasised, disputes over rivers and infrastructure are rarely about water alone; rather, they are about sovereignty, development, and identity projected onto water (Wolf, 1998; O'Lear, 2018). By integrating spatial observation with a multi-scalar perspective and the study of discursive representations, Lacoste's approach provides a systematic way to connect hydrological realities with geopolitical strategies.

2.2. Operationalisation for the Karabakh case

When applied to Karabakh, this framework moves beyond descriptive accounts of scarcity or infrastructure damage. It enables an interpretation of how water became embedded in the geopolitical rivalry between Armenia and Azerbaijan, and how regional actors influenced this dynamic.

At the level of spatial sets, three stand out. The first is the Tartar sub-basin, which includes the Sarsang reservoir and its downstream irrigation systems. Built in 1976 under Soviet Azerbaijan, Sarsang has a storage capacity of 560 million m^3 and historically irrigated around 100,000 hectares in six districts under Azerbaijani administration (Ahmadi *et al*., 2023; OSCE, 2016). Its strategic location at 700 metres above sea level made it both an economic lifeline and a potential instrument of pressure. The second spatial set is the broader Kura–Aras River Basin, of which the Tartar is a tributary. This basin shapes the hydrology of both Armenia and Azerbaijan and links them with Türkiye, Iran, and Georgia (Campana et al., 2013). The third is the South Caucasus regional space, where the interests of Russia, Türkiye, and Iran intersect and influence the management of transboundary waters (Sakal, 2022; Omidi & Özdağ, 2023). These three sets overlap: what happens at a single dam affects local communities, national water balances, and regional alignments simultaneously.

The multi-scalar dimension is equally visible. At the local level, control of canals and seasonal water releases directly affected farming and energy supply in frontline villages. At the national level, Armenia's upstream control allowed it to manage seasonal release schedules for hydropower generation and irrigation, while Azerbaijan's downstream dependence exposed it to hydrological shortages and constrained its agricultural and energy strategies (Ahmadi *et al.*, 2023). At the regional level, Russia's role as mediator, Türkiye's alliance with Baku, and Iran's management of the Aras basin added another layer of influence to the conflict (German, 2012; Sakal, 2022). Finally, at the international level, institutions such as the OSCE—through its 2016 fact-finding mission—highlighted water as part of the conflict's humanitarian and security agenda (OSCE, 2016). Analysing these levels together prevents the conflict from being reduced to either a local scarcity issue or a great-power rivalry. Instead, it reveals how all of these scales are interconnected.

2.3. Methodology and sources

Methodologically, this study employs a qualitative, document-based case study design. This choice reflects both the sensitivities around conducting fieldwork in contested territories and the need to triangulate heterogeneous sources. Following best practices in qualitative geopolitics (Dalby, 2010), the study draws on multiple categories of sources:

1. Official statements and policy documents from Armenian and Azerbaijani authorities that provide insight into state-level representations and strategies.
2. Reports by international organisations, notably the OSCE (2016) — which conducted a fact-finding mission on Sarsang — and the World Resources Institute (Maddocks *et al*., 2015) — which identifies Armenia and Azerbaijan as among the world's most water-stressed countries.
3. Secondary academic literature, including works on regional hydropolitics (Campana *et al*., 2013; Hajihoseini *et al*., 2023; Sakal, 2022) and on environmental geopolitics (O'Lear, 2018).

4. Press and media sources, both international and local, were used to trace how narratives circulated in real time; coverage from Azerbaijani, Armenian, Russian, Turkish, and Western outlets was cross-checked to minimise bias.
5. Technical data from hydrological agencies and climate assessments (when available) were used to contextualise claims about scarcity, precipitation decline, and infrastructure capacity.

The collected data were analysed using content analysis guided by the Lacostian framework. Documents were coded according to three main categories: (i) references to spatial sets (e.g., reservoirs, basins, regions); (ii) scalar framings (local, national, regional, international); and (iii) representations of water (as security, as weapon, as right, as development). Mapping served as a complementary tool to visualise overlaps among these categories, although emphasis remained on discursive and geopolitical interpretation.

The choice of a single-case study design is justified by the uniqueness of Karabakh as a territory where conflict, geography, and hydrology intersect. Case studies are particularly effective for tracing causal mechanisms and for illustrating how material infrastructures can be imbued with political meaning (George & Bennett, 2005). By combining multiple sources and focusing on a bounded territory, this approach yields a rich account that speaks to both regional hydropolitics and the broader literature on the geopolitics of resources.

2.4. Contribution of the framework

Integrating the French geopolitical approach with hydropolitical analysis contributes in two keyways. First, it offers a structured way to examine how water, beyond its role as a scarce resource, becomes a medium through which territorial rivalries are articulated. Concepts such as spatial sets and contradictory representations help capture symbolic and political dimensions that resource-focused analyses often miss. Second, it brings a multi-scalar perspective that connects local vulnerabilities to regional and international strategies, thereby avoiding reductionism. In doing so, the study addresses several gaps identified in the literature. It operationalises Lacoste's reasoning in a conflict that has rarely been analysed from this perspective, integrates discursive narratives with material infrastructure in the analysis, and situates the Karabakh case within the hydropolitics of the South Caucasus.

3. Upstream–Downstream Asymmetries in the Water Politics of Armenia and Azerbaijan

This basin (Figure 1) covers the entirety of Armenia's territory and about 70% of Azerbaijan's land area, which explains why changes in one part reverberate widely across the region (FAO Aquastat, 2009). Under Soviet planning, the Kura–Aras River Basin functioned as an integrated water–energy system: irrigation and hydropower were coordinated across republics, and large infrastructures were conceived as regional assets rather than strictly national ones. The dissolution of the USSR in 1991 ended that framework. Borders hardened, allocation rules collapsed, and infrastructure once treated as common was recast as an attribute of sovereignty (de Waal, 2016; Broers, 2021; Campana *et al*., 2013).

Water vulnerability is more pronounced in Azerbaijan. Only about 30% of its renewable water originates domestically; the remaining ~70% flows from upstream and midstream neighbours (primarily Armenia and Georgia) (Rucevska, 2017; Maddocks, Young & Reig, 2015). Per-capita water availability in Azerbaijan is around 1,000 m^3/year—roughly at the threshold of water stress—compared to about 2,500–3,000 m^3/year in Armenia (FAO Aquastat, 2020). This structural exposure is amplified by the composition of Azerbaijan's economy: nearly one million hectares are under irrigation, and agriculture accounts for over 70% of national water withdrawals (Ahmadov, 2020; FAO Aquastat, 2020). Crops like cotton, wheat, and vegetables in the Kura–Aras lowlands are particularly sensitive to fluctuations in supply, meaning upstream decisions—whether operational or political—have immediate consequences downstream. Armenia, by contrast, irrigates a

Figure 1. Map of the Kura (Mtkvari)–Aras river system across Armenia, Azerbaijan, Georgia, Iran and Türkiye

Source: Shannon (2010), Kurarivermap.jpg, *Wikimedia Commons*, https://commons.wikimedia.org/wiki/File:Kurarivermap.jpg. Background and river-course data from DEMIS Map Server. Licensed under CC BY-SA 4.0.

smaller area (~280,000 ha), but water is no less central to its needs: fruit and vegetable production in valleys such as the Ararat plain depends on reliable flows, and hydropower plants on the Bazarchay/Bargushad/Vorotan, Arpa, and Hrazdan/Zangi rivers provide roughly one-quarter to one-third of Armenia's electricity (IEA, 2021). In short, Azerbaijan's dependence on transboundary inflows creates a chronic vulnerability for its agriculture, while Armenia's control of upland water resources underpins its energy and food security.

Since independence, both governments have restructured water policy along national lines. In Armenia, the focus has been on consolidating hydropower capacity and rehabilitating irrigation in key areas (e.g. the Ararat plain) to bolster energy stability and food security. In Azerbaijan, large-scale canal repairs, new reservoirs and better reservoir management, plus efficiency programs, have been framed as part of a broader agenda of water security and rural development. The Mingachevir Reservoir—constructed in the 1950s on the Kura River with a massive storage capacity of about 15.7–16.0 km^3—remains the backbone of Azerbaijan's irrigation and power system. However, Mingachevir's performance ultimately depends on inflows governed by upstream hydrology and management, which Azerbaijan cannot fully control. Conversely, Armenia's leverage comes from its control of several headwaters and upland reservoirs in the Lesser Caucasus, combined with the strategic role of hydropower in its national energy mix. During the war in 2020, Armenia issued threats to target the Mingachevir hydropower station, an action that could have caused widespread flooding and severely disrupted Azerbaijan's electricity supply (Shaffer, 2022).

These differences in geographic position and resource use underpin divergent priorities, exposing an upstream–downstream asymmetry that has long fuelled bilateral tensions. For Azerbaijan, the key risks are seasonal water scarcity, drought, and operational uncertainty—all of which threaten irrigation across its extensive lowland plains. For Armenia, the central concerns involve securing sufficient flows for electricity generation and for highland agriculture, particularly since

the country has limited access to alternative regional energy sources. Notably, reservoirs situated in Karabakh (the most famous being Sarsang) sharpened Azerbaijani perceptions that water vulnerability could stem not only from climate variability or demand, but also from the political status of upstream territory. Armenian authorities, by contrast, have viewed those same upland infrastructures as essential for community livelihoods and domestic stability. In both cases, the day-to-day management of water became entangled with questions of legitimacy and territorial control.

The quantitative profile of the basin reinforces these contrasts. Estimates place the total area equipped for irrigation in the Kura–Aras between 2.0 and 2.5 million hectares, of which ≈45% lies in Azerbaijan, 14% in Georgia and 11% in Armenia; the remainder is divided between Iran (≈21%) and Türkiye (≈8%) (FAO Aquastat, 2009).

Coupled with the gap in per-capita water availability and the weight of agriculture in each economy, these figures point to unequal exposure to water shortages and different kinds of policy pressures. Azerbaijan must secure large-scale, lowland irrigation under highly variable inflows, whereas Armenia must balance hydropower reliability with irrigation needs in smaller, topographically constrained valleys.

Policy trajectories since the early 1990s reflect these realities. Armenian authorities prioritized refurbishment of hydropower facilities (including optimization of cascade systems) and targeted irrigation investments where returns were highest—most visibly in the fertile Ararat plain. They also pursued water pricing and institutional reforms to reduce losses and fund maintenance, though results have been uneven. Azerbaijan's modernization efforts focused on lining canals to reduce seepage, upgrading pump stations, finding alternative water resources and improving reservoir operations to smooth out seasonal water stress[3]. Efficiency measures (like improved irrigation technology) and rehabilitation of irrigation command areas aimed to increase the productivity per cubic meter of water. Both states have engaged in donor-supported projects to strengthen water monitoring and data systems. However, information asymmetries remain, complicating efforts at cooperative management of the basin.

Competing national narratives about these water issues soon emerged in international forums. In Azerbaijan's official discourse, deprivation of water flows and uncertainty of releases from upstream or midstream were framed as injustices against downstream communities and even as environmental harm needing redress. Armenia's counter-narrative framed the control of upland water resources as vital for protecting highland populations and achieving energy self-sufficiency, especially in a context where Armenia faces closed borders and limited options for diversifying its energy supply (German, 2012; Campana *et al*., 2013). They also help explain why even seemingly *technical* cooperation over water has proved difficult — allocations and reservoir release schedules are viewed through competing lenses of national security and rights.

At the wider basin scale, other regional players contribute to the context. Georgia, for instance, contributes significantly to Kura–Aras flows and serves as a transit country, adding another layer to the hydropolitical picture. Meanwhile, the interests of Russia, Türkiye, and Iran—each of which has stakes in transboundary rivers, canals, or border reservoirs—extend the water politics beyond the Armenian-Azerbaijani bilateral realm. For example, Russia's agreements with Azerbaijan on the Samur River, Türkiye's post-2020 support to Azerbaijan for irrigation and small hydropower projects in regained territories, and Iran's joint projects with Armenia and Azerbaijan along the Aras River all illustrate how external actors link water projects to broader agendas of transport, energy, and security (German, 2012; Sakal, 2022; Omidi & Özdağ, 2023). For Armenia and Azerbaijan, this regional setting both opens opportunities and imposes constraints: it creates avenues for investment and technology transfer from partners but also interlocks their domestic water management with larger geopolitical rivalries.

In Azerbaijan, Mingachevir's centrality to irrigation exemplifies the downstream dilemma: its operation and benefits depend on upstream conditions that the state cannot fully control. In Armenia, the reliability of hydropower and highland irrigation depends on managing headwaters and seasonal storage in rugged terrain. These structural constraints differ for each country, creating asymmetric incentives and risk exposures.

3. Use of alternative water sources in Azerbaijan to be increased. See https://report.az/infrastruktur/azerbaycanda-alternativ-su-menbelerinin-istifadesi-artirilacaq (Accessed on 6 October 2025).

Against this backdrop, the politics of water at the state level can be read as parallel struggles to reduce vulnerability under conditions of interdependence. Azerbaijan has increasingly framed water security as a national priority touching agriculture, energy, and even territorial policy. Armenia, for its part, links water-flow management to energy stability and the viability of its highland communities. Both have invested in domestic efficiency improvements and infrastructure upgrades; both have taken their water claims to international venues; and both operate under a basin geography that neither can change. In fact, the asymmetry is durable because it is rooted in geography before politics: it ultimately comes down to where the rivers rise and where the largest demands lie.

Taken together, these features set the stage for the local disputes to be examined next. They explain why control over specific infrastructures in Karabakh took on significance far beyond their immediate functions. In that upland enclave, a handful of reservoirs and rivers concentrated the effects of upstream–downstream dynamics, turning dam operations and water releases into matters of livelihoods, authority, and competing narratives of justice and survival. The following section turns to this local scale, where the national asymmetries described here took concrete form in the lives of communities and in the politics of everyday water use.

4. Karabakh as a Strategic Space for Water Security

The 2020 war in Karabakh—in which Azerbaijani forces regained large parts of the former disputed territory, including the Sugovushan (Madagiz) reservoir—shifted the hydropolitical balance of the South Caucasus. For the Azerbaijani government, recovering these water facilities was framed as restoring water security for downstream districts that had faced years of uncertainty. This reversal not only restored supply security but also underscored the strategic importance of upstream headwaters. The former Nagorno-Karabakh area received approximately 70% of its water from rivers originating in the Kalbajar and Lachin districts, both of which remained under Azerbaijani control after the 2020 ceasefire (OSCE, 2016).

For almost three decades prior to 2020, control of the upper Tartar River basin—including the crucial Sarsang reservoir—was held outside Azerbaijani authority. Built in 1976 within the Soviet planning system that integrated irrigation and energy across republics, Sarsang can store about 560 million m^3 of water (OSCE, 2016). Its network of canals was originally designed to deliver water to farmlands in the Azerbaijani lowlands. Historical accounts vary, but they indicate that Sarsang once supplied tens of thousands of hectares of downstream agricultural land across five or six districts (OSCE, 2016; Ahmadi *et al*., 2022). After the first Karabakh war of 1992–1994—once the cooperative Soviet-era management had vanished—those canals deteriorated, pumping stations went without upkeep, and water supply to the plains became irregular. In central Azerbaijan's lowlands, where precipitation is low and summers are dry, uncertainty about when and how much water would be released from Sarsang translated into reduced crop yields and higher risks for rural households. Azerbaijani officials at times accused Armenian authorities of deliberately mismanaging releases—releasing water in winter, causing flooding, and withholding it in summer when irrigation was critical.

The political weight attached to Sarsang became apparent internationally in 2016. Azerbaijan brought the issue to the Parliamentary Assembly of the Council of Europe, which in that year adopted Resolution 2085. This resolution condemned the humanitarian and environmental situation arising from Sarsang's condition and urged immediate international access to monitor the facility and its downstream canals (PACE, 2016). Also in 2016, an OSCE fact-finding mission visited the area and reported damaged and abandoned infrastructure, dismantled pipes, and high uncertainty for downstream farmers dependent on Sarsang's water (OSCE, 2016). Meanwhile, the opposite side continued to present the reservoir as a lifeline for the communities under their control—providing water for orchards and fields and generating hydropower in a rugged region with few alternatives. The Sarsang case thus vividly demonstrated how a single dam could be politicized: each side projected contrasting meanings onto what was, in essence, a piece of technical infrastructure.

Other water facilities in the area underscored the same point. The Sugovushan reservoir (called Madagiz during Armenian control) is a relatively small structure on the Tartar River, with a capacity of roughly 5–6 million m^3. Despite its modest scale compared to the giant Soviet-built dams on the Kura, location mattered. Sugovushan's water supplied nearby settlements and fed local irrigation canals. During the 2020 war, this reservoir changed hands, coming under Azerbaijani control. This «regaining» was heralded in Azerbaijan as *«recovering lost water»* for their communities, whereas Armenian accounts lamented the loss of access to this resource for upland villages formerly under their control (Ahmadi *et al*., 2022). In the Karabakh landscape, even small reservoirs like Sugovushan carried disproportionate significance because they sat at the critical junction between water-rich headwaters and the thirsty plains.

The sensitivity of water in Karabakh is rooted in physical geography as much as in politics. The highland areas of Karabakh receive on the order of 600–800 mm of precipitation annually, whereas the central lowlands of Azerbaijan often get less than 400 mm. Several tributaries of the Kura–Aras system rise in and around Karabakh—among them the Tartar, Khachinchay and Hakari rivers—before descending toward the Kura plains (FAO Aquastat, 2009; OSCE, 2016). In this sense, the region functioned as a kind of inland «water catchment» for Azerbaijan: an upland zone supplying headwaters and providing seasonal flow regulation that feed downstream canals and small hydropower stations[4]. In a country already facing water stress, the control of these headwater areas magnified their strategic value. When such points of control are contested or under divided authority, even routine operational decisions (how much water to release, and when) acquire a political charge far beyond their technical significance.

For local populations on both sides, the consequences of these water dynamics were immediate and tangible. In the downstream Azerbaijani districts that could no longer count on regular releases from the uplands, farmers had to rely on groundwater pumping or adopt low-intensity irrigation, often resulting in reduced productivity and heightened vulnerability to drought years

On the other side, communities with access to Sarsang's water—and the electricity from its hydropower plant—benefited from a reliable buffer for orchards, vineyards, mixed farming, and herding in an otherwise harsh environment. Agriculture and pastoralism remained the backbone of the upland economy, so this asymmetry in water access—adequate supply on one side of the ceasefire line, deprivation on the other—fed into mutually reinforcing narratives of grievance. Formerly each community felt wronged: Azerbaijanis saw their rights to water denied, and Armenians viewed any limitation on their water use as an existential threat to their mountain communities.

When open conflict resumed in 2020, these narratives came to a head. Both governments accused the other of targeting water facilities during the fighting. Armenian officials warned that Azerbaijani strikes against dams or hydropower stations risked ecological disaster (for instance, a breach of a dam could flood large areas). Azerbaijani authorities, in turn, framed their military advances as directly linked to restoring water supply to the plains — effectively portraying the retaking of reservoirs as a strategic victory for water security (Ahmadi *et al*., 2022). Analysts have noted that this back-and-forth was part of a broader securitization of water in the conflict. Water itself did not *cause* the war, but it was persistently framed as either a threat or a remedy, depending on one's vantage point (Zanatta & Alvi, 2024; Pennisi, 2024). In other words, water infrastructure became another front on which the conflict was justified and interpreted.

Historical context helps explain why Karabakh's water infrastructure became so fraught. In 1923, the Soviet Union established the Nagorno-Karabakh Autonomous Oblast within the Azerbaijan SSR. As noted, on the eve of the USSR's collapse, the region's population was roughly 75% Armenian and 25% Azerbaijani (de Waal, 2016; Broers, 2021). Under the Soviet economic system, irrigation and power infrastructure were developed for a regional (union-wide) economy. Installations like the Sarsang reservoir were designed to serve agriculture irrespective of internal administrative borders—water could be stored in one republic and used in another, and this was not controversial at the time. However, when those internal lines hardened into international borders in 1991, and war erupted, the very same dams and canals that once symbolized cooperation turned into contested assets. The change was not only institutional (who has legal control) but also

4. Total volume of water resources in Karabakh announced. See https://banker.az/qarabagin-umumi-su-ehtiyatlarinin-h%C9%99cmi-aciqlanib/ (Accessed on 6 October 2025).

perceptual: communities and political leaders began to see water not as a shared service but as a potential weapon or bargaining chip, a resource through which each side could claim injustice or demand rights. Water became intertwined with each side's sense of territorial sovereignty and historical grievance.

The end of the Second Karabakh War in 2020 was not the final chapter in this saga. In September 2023, conflict tensions rose again, resulting in the full restoration of control over Karabakh by Azerbaijan. This shift triggered the mass displacement of almost all the remaining Armenian population—an estimated 90,000–100,000 people—from the territory. Since then, Azerbaijani authorities have moved swiftly to integrate Karabakh's water infrastructure into national development plans. Reservoir operations, canal rehabilitation, and small hydropower projects in Karabakh (now often termed *Eastern Zangezur* by Azerbaijani officials) are being framed as elements of post-conflict reconstruction and economic revival. By 2025, the nature of uncertainty around water in this region has changed: it is no longer about negotiating releases across a frontline, but about the timeline, financing, and priorities for rebuilding and operating these systems under a sovereign state's authority. In essence, water management in Karabakh is transitioning to a domestic governance challenge within Azerbaijan, involving decisions on investment and maintenance in a post-conflict setting. The 2020 war in Karabakh, when Azerbaijani forces regained large parts of the former disputed territory together with infrastructures such as the Sugovushan reservoir, shifted the hydropolitical balance of the South Caucasus

None of this is to suggest that water was the *cause* of the conflict between Armenia and Azerbaijan. None of this is to suggest that water was the root cause of the Armenia–Azerbaijan conflict, which stemmed from political and ethnic tensions. However, the analysis demonstrates that water management decisions—such as reservoir release schedules and canal controls—both reflected and reinforced territorial rivalries. By shaping the security calculations of states and the livelihoods of local communities, water infrastructures became integral to the contest over Nagorno-Karabakh rather than peripheral to it.

From this local vantage point, the link to the wider argument becomes clear. The same upstream–downstream asymmetries that we observed at the state level found concrete expression in a handful of Karabakh's reservoirs and canals. Those local water points, in turn, were closely watched and at times leveraged by neighbouring powers. The next section follows this thread to the regional scale, examining how Russia, Türkiye, and Iran incorporated water projects into their broader agendas of security, influence, and alliance-building in the South Caucasus.

5. Beyond Water: Regional Geopolitical Dynamics in the South Caucasus

When we zoom out to the involvement of neighbouring powers, the patterns observed at state and local levels take on new dimensions. Russia, Türkiye, and Iran did not engage in the South Caucasus solely through water issues. Rather, rivers, reservoirs, and cross-border water projects became part of their broader geopolitical calculations regarding security, trade corridors, and regional influence. In other words, hydropolitics in this context has functioned less as a stand-alone agenda and more as one medium of power projection and cooperation among others.

The Russian state's approach to regional water and infrastructure reflects both historical continuity and a strategic intent to remain a principal broker. The legacy of centrally managed Soviet water–energy systems—exemplified by interstate coordination of the Kura–Aras and Samur rivers—created an expectation among local elites and in Moscow that Russian agencies would remain indispensable for cross-border water arrangements. After 1991, the Russian government reasserted this role by co-chairing the OSCE Minsk Group to mediate the Karabakh conflict, maintaining a military presence in Armenia (later supplemented by a peacekeeping contingent in Karabakh after 2020), and negotiating bilateral river-management regimes. As co-chair of the Minsk Group, the Russian authorities positioned themselves as vital to any conflict settlement, a status reinforced by the deployment of peacekeepers following the 2020 war. In parallel, a 2010 agreement between the Russian and Azerbaijani governments established a joint commission to measure, allocate, and seasonally regulate the Samur River's flows without altering its hydrology,

thereby institutionalizing routine water-management decisions under shared oversight (German, 2012). In addition, Russian activities are also having a significant impact on the Volga River, which threatens the water level of the Caspian Sea and the region's ecosystem[5]. In effect, technical water management and political leverage were kept in the same loop, bolstering Russia's influence in the region.

Türkiye's trajectory in regional hydropolitics has been more overtly ambitious and closely tied to its alliance with Azerbaijan. The long-standing bonds between Türkiye and Azerbaijan—cultural affinity, economic links, and military partnership—became even stronger after Azerbaijan's victory in 2020. Türkiye played a significant support role during that war, and afterward Turkish involvement moved into reconstruction efforts. Turkish authorities backed programs that paired new transport and energy corridors with water-related projects. These included rehabilitation of irrigation networks and canals, the refurbishment or construction of small hydropower plants in the territories regained by Azerbaijan, and technical cooperation on modernizing water distribution systems (Sakal, 2022). Domestically, Türkiye framed this as helping a brotherly nation recover, and regionally it was cast as an extension of the "one nation, two states" motto that highlights Turkish-Azerbaijani unity. This approach effectively embedded water into a broader agenda of economic integration and territorial consolidation in the South Caucasus. On the ground, the tangible outcomes have been irrigation projects restoring agriculture in former war-torn districts and run-of-river hydropower stations to electrify resettled communities. For Armenia, however, Türkiye's closed border (due to the long-standing political rift and lack of diplomatic relations) and its exclusion from these Turkish-Azerbaijani initiatives meant that Armenia remained isolated from much of the region's infrastructure investment and technology exchange that Türkiye was driving till recent normalizing process between states.

Iran's policy in the South Caucasus water arena has been a mix of pragmatic cooperation and wary hedging. Geography dictates that Iran's core interests lie along the Aras River, which it shares with both Armenia and Azerbaijan. For decades, Iran has promoted joint development of water infrastructure on the Aras as a means of securing water supplies and energy (hydropower) while fostering goodwill with its northern neighbours. Most recently, Iranian and Azerbaijani authorities have cooperated on the Khudafarin and Giz Galasi dam projects, which were brought online in stages between 2022 and 2024 (Omidi & Özdağ, 2023). These two dams, straddling the Iran-Azerbaijan border, are designed for irrigation and hydropower generation, with the benefits shared by both countries (for instance, irrigating farms on both sides and splitting electricity output). Tehran presented these projects as win-win examples of neighbourly collaboration—added water storage and power capacity for users on both banks, under a framework of predictable water sharing on the Aras. On the other hand, mining operations in southern Armenia are polluting the Aras River, raising significant environmental concerns in neighbouring Iran[6]. As a result, Iran and Armenia have agreed to jointly monitor and reduce pollution levels in the Aras River, aiming to protect the river's ecosystem[7].

At the same time, Iran has been increasingly anxious about being strategically outflanked in the Caucasus. Turkish influence in Azerbaijan after 2020 expanded rapidly. Iranian officials have voiced unease that these developments could diminish Iran's own influence or even pose security concerns on its northwest frontier. Thus, Iran's discourse on regional water cooperation has been dual: enthusiastic cooperation when it secures tangible gains and keeps Iran relevant (e.g., joint dams where Iran is a partner), but caution or even veiled pushback when third-party influence (Turkish or Israeli) seems to encroach on what Iran views as its sphere.

Looking across these three external actors, water per se is rarely the primary driver—it serves as an instrument intertwined with larger strategic goals. Russia's insistence on joint river management and its peacekeeper presence bolstered its claim to being the central mediator in both the

5. The Caspian Sea is drying up, and Kazakhstan asks Russia to collaborate in managing the Volga River. See https://www.renewablematter.eu/en/caspian-sea-drying-up-kazakhstan-russia-volga-river (Accessed on 7 October 2025).
6. Armenia Confirms Iran's Concerns about Polluting the Araxes River, Commits to a Clean-up. See https://www.civilnet.am/en/news/382625/armenia-confirms-irans-concerns-about-polluting-the-araxes-river-commits-to-a-clean-up/ (Accessed on 7 October 2025).
7. Iran, Armenia to monitor and diminish pollution in Aras River. See https://iranpress.com/content/238487/iran-armenia-monitor-and-diminish-pollution-aras-river (Accessed on 7 October 2025).

Karabakh conflict and broader regional disputes. Türkiye's water and reconstruction projects reinforced its alliance with Azerbaijan and its vision of a Turkic corridor across the Caspian. Iran's joint dam-building on the Aras delivered developmental benefits while also serving as physical anchors for Iranian influence at a time when rival powers were gaining ground. Although these engagements did not alter the region's underlying hydrological asymmetry—Armenia's predominance in the headwaters and Azerbaijan downstream—they significantly redefined the diplomatic options and constraints for both countries. With outside partners, investments in new canals, modern irrigation systems, and hydropower installations became especially critical for restoring agriculture and electrification in territories Azerbaijan restored in 2020. Yet cooperation with major powers often involved political conditionalities: Azerbaijan's deep coordination with Ankara has reinforced its Caspian–Caucasus connectivity agenda, even amid recent trilateral agreements on joint water cooperation with Armenia and Türkiye, while Armenia's reliance on Tehran and Moscow for key infrastructure projects has similarly shaped its diplomatic manoeuvring around shared resource management.

The regional dimension is also where corridor politics (road, rail, pipeline routes) intersect most visibly with hydropolitics. The South Caucasus is crisscrossed by transport and energy corridors that Russia, Türkiye, and Iran all care about—from Russia's north–south routes through Armenia/Azerbaijan, to Türkiye's east–west links into Central Asia, to Iran's interests in transit through Armenia or Azerbaijan. These corridors often run through the same border areas where key rivers flow and where irrigation canals or dams are located. For Russian planners, keeping a hand in any east–west or north–south linkage—whether a pipeline, a railway, or indeed a river—is part of a broader strategy of maintaining influence (German, 2012). For Iranian officials, the Aras River dams are more than just cubic meters of water or megawatts of power—they are strategic footholds at a moment when Tehran is anxious about encirclement (Omidi & Özdağ, 2023). This perspective explains why relatively small infrastructure elements — a border weir here, a flow monitoring station there, a minor hydropower plant—can attract outsized attention. If one looked only at their economic value, these installations might seem minor, but in a geopolitical context, they are pieces on a larger chessboard.

For Armenia and Azerbaijan, the influence of these larger neighbours has been ambivalent. Rather than dictating outcomes, external powers have defined the parameters within which both governments have shaped their own decisions. By 2025, the regional configuration has evolved compared to a decade earlier. Russia's direct role (for example, through peacekeepers in Karabakh) has diminished after the 2023 events; Turkish-Azerbaijani cooperation on post-war infrastructure has solidified into long-term projects. What persists is the fundamental logic that local water infrastructure is tied to wider strategic agendas. From a practical standpoint, any arrangements the Caucasus countries make on sharing reservoirs or exchanging data are more likely to last if they are nested within the partnerships that include these powerful neighbours. For example, a Samur River commission (Russia-Azerbaijan) in the north or an Aras River cooperation (Iran with Azerbaijan/Armenia) provides a stable umbrella under which technical agreements can function, because those frameworks align with the interests of the bigger sponsor-states.

For analysts, one takeaway is that «control» in the South Caucasus water context cannot be measured by dam ownership alone. True control must be understood by looking at the web of security arrangements, economic corridors, and development policies that surround the water issues. Seemingly small hydraulic decisions (like how to time releases from a reservoir) can have much larger significance because they are tied into questions of alliance, influence, and regional stability.

Placing this regional layer back into our multi-scalar analysis, we can see how it ties all the strands together. The disputes in Karabakh over water releases and canal maintenance drew their intensity from the larger upstream–downstream asymmetry at the state level. Those state-level asymmetries, in turn, gained wider traction as neighbouring governments took an interest—sometimes openly, sometimes behind the scenes—in the outcome of these water disputes. Understanding the hydropolitics of the South Caucasus, therefore, requires following the chain from headwaters and plains to national capitals, to bilateral border commissions, and even to great-power negotiations, and then back again.

In conclusion (as the next section will elaborate), water operated as a geopolitical factor in the conflict between Armenia and Azerbaijan by *amplifying* the interdependencies and insecurities between them, and a geographically informed approach (following Yves Lacoste's reasoning, as used in this study) helps illuminate those links between environmental realities, infrastructure control, and power rivalries. The conclusion will directly address how these insights deepen our understanding of conflict and reconstruction in this complex region.

Conclusion

The conflict between Armenia and Azerbaijan over Karabakh has usually been analysed through political, military or ethnic lenses. Yet the control and use of water resources show that hydrology and geopolitics are deeply intertwined in this region. The uneven geography of the Kura–Aras basin has long structured upstream–downstream asymmetries: Armenia controls part of the headwaters and depends heavily on hydropower, while Azerbaijan relies on extensive irrigation in its lowlands and is therefore exposed to variability in flows. These differences help explain why water has consistently been embedded in national security discourses, not only as a technical issue but as a matter of sovereignty and survival.

At the territorial scale, infrastructures in and around Karabakh embodied these asymmetries. The Sarsang reservoir, conceived under Soviet planning as part of a regional water–energy exchange, became after 1991 a contested asset that each side presented either as a lifeline or as a threat. Its operation affected agricultural yields, electricity supply and the everyday lives of communities upstream and downstream. Smaller works, such as Sugovushan, also acquired symbolic weight far beyond their storage capacity, showing how territorial disputes can invest even modest hydraulic structures with political meaning. These dynamics confirm that in disputed settings water infrastructures are never neutral: they are simultaneously economic assets, strategic nodes and instruments of legitimacy.

The regional context magnified this situation. Russia's role as mediator and security actor, Türkiye's strategic alliance with Azerbaijan and Iran's concern with its border rivers ensured that water was folded into broader geopolitical agendas. Joint commissions, dam projects and technical agreements were never only about allocation or efficiency; they also anchored influence and reflected wider rivalries. The South Caucasus is thus not an isolated case but part of a broader pattern in which transboundary basins function as both shared lifelines and contested political spaces.

From this perspective, water was not the origin of the Karabakh conflict, but neither was it peripheral. It amplified existing vulnerabilities, provided leverage in negotiations and struggles over representation, and shaped the daily experience of scarcity or sufficiency for thousands of people. Analysing the conflict only through identity or territory obscures how access to and control of rivers and reservoirs contributed to its persistence and to the ways in which both states narrated security and injustice.

Beyond the empirical findings, the case also illustrates the analytical value of Lacoste's geopolitical reasoning for political geography more broadly. By treating spatial sets, scales and representations as interconnected dimensions, this approach offers a systematic way to link material infrastructures with power rivalries and with the narratives that give them meaning. In this article, applying Lacoste's method to water in the South Caucasus has made it possible to trace how a handful of reservoirs connect headwaters to plains, local livelihoods to national strategies and regional projects to competing geopolitical visions. The same logic could be mobilised to study other resource conflicts, border regions or strategic infrastructures, encouraging political geographers to read maps, institutions and discourses together rather than in isolation.

The future of the South Caucasus will depend on how Armenia, Azerbaijan and their neighbours manage the intersection of water, energy and territory. Climate change, demographic pressures and economic transformation will only heighten the importance of reliable flows and resilient infrastructures. Strengthening basin-wide mechanisms for monitoring, data exchange and joint maintenance could reduce accusations and narrow the scope for securitisation. More

broadly, embedding water cooperation in regional diplomacy would allow these resources to act not as fault lines but as starting points for dialogue.

Ultimately, the case of Karabakh illustrates that water is both material and symbolic: a resource essential to agriculture and energy, and a representation mobilised in struggles over sovereignty. Recognising this duality is indispensable for understanding the geopolitics of the South Caucasus, and it is also a condition for imagining more stable forms of cooperation. Governance of transboundary rivers will remain complex but situating it within a geopolitical framework can provide the clarity needed to support both analysis and practical diplomacy.

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