Hungarian Water Management Expertise and the Organization of Turkic States

Hugo Martin

TURKIC-WESTERN ENGAGEMENT INITIATIVE
TWEI

DANUBE
INSTITUTE

Author: Hugo Martin

Designed by: Max Keating

December 2025

Covers: Designed by Max Keating

Image: Fountain in the Old City of Baku, from Wikimedia Commons.

DANUBE
INSTITUTE

Contents

DANUBE
INSTITUTE

About the Danube Institute

The Danube Institute, established in 2013 by the Batthyány Lajos Foundation in Budapest, serves as a hub for the exchange of ideas and individuals within Central Europe and between Central Europe, other parts of Europe, and the English-speaking world. Rooted in a commitment to respectful conservatism in cultural, religious, and social life, the Institute also upholds the broad classical liberal tradition in economics and a realistic Atlanticism in national security policy. These guiding principles are complemented by a dedication to exploring the interplay between democracy and patriotism, emphasizing the nation-state as the cornerstone of democratic governance and international cooperation.

Through research, analysis, publication, debate, and scholarly exchanges, the Danube Institute engages with center-right intellectuals, political leaders, and public-spirited citizens, while also fostering dialogue with counterparts on the democratic center-left. Its activities include establishing and supporting research groups, facilitating international conferences and fellowships, and encouraging youth participation in scholarly and political discourse. By drawing upon the expertise of leading minds across national boundaries, the Institute aims to contribute to the development of democratic societies grounded in national identity and civic engagement.

About the Turkic-Western Engagement Initiative

The Danube Institute's Turkic-Western Engagement Initiative (TWEI) is a dedicated platform to deepen understanding and foster strategic coordination between the Turkic world and the West. Rooted in Hungary's unique position as the only EU and NATO member state with institutional ties to the Organization of Turkic States, TWEI examines the growing geopolitical and economic significance of the Turkic region—from energy corridors and critical mineral reserves to industrial development, and regional security trends. By regularly convening experts, policymakers, and scholars from OTS countries and the West, TWEI works to identify areas where mutual interests can foster lasting strategic cooperation.

TWEI includes projects such as its annual flagship Turkic-Western Geopolitical Dialogue Conference, Turkic Silk Road Internship Program, research projects on Hungarian and Western Engagement with the Turkic world, and the linking of Turkic and Western think tanks. As the landscape of global politics shifts and the role of the Turkic world expands, the Turkic-Western Engagement Initiative positions the Danube Institute and Hungary as a whole as a central convening point where ideas are exchanged, partnerships are formed, and practical solutions are developed.

About the Author

After completing intensive French humanities and literature higher school preparatory courses hypokhâgne-khâgne, then an undergraduate degree in International Relations, Hugo Martin graduated in International and European Governance from the Free University of Brussels in 2024. His research interests include the Francosphere, specifically Quebec, and Europe-China relations, although the bulk of his research at the Danube Institute has concerned Hungarian matters. He has been involved in diplomatic student circles in France, as a former member first of the United Nations Inter-University Committee of Paris (CINUP), then of the French Federation for Diplomacy and the United Nations (FDNU), mainly participating in and organizing public speaking contests. He is also a recipient of the Young Francophone Ambassadors (JAF) program, whose aim is to give a voice to French-speaking youths around the world. He is finally associated with the French chapter of Republicans Overseas, an RNC-affiliated organization for U. S. Republicans living abroad.

Hungarian Water Management Expertise and the Organization of Turkic States

Hugo Martin

Abstract

Hungarian cooperation with the Organization of Turkic States is founded on a variety of subjects, with water management perhaps being one of the most significant. Specifically, this problem appears across Central Asia, where environmental and security concerns about countries' water supplies pose a critical challenge to the region. Hungary, owing to its own water supply vulnerabilities, has developed internationally renowned expertise in this field. Consequently, Hungary is uniquely situated to assist member states of the Organization of Turkic States on this issue. In practice, water diplomacy has deepened Hungarian cooperation with the Turkic World, and fostered positive diplomatic relations with the countries of Central Asia.

Introduction

In the margins of the 5th Geopolitical Summit of the Danube Institute, water management was emphasized as a major axis of cooperation between Hungary and the Organization of Turkic States (OTS) by significant representatives of OTS member states and of the OTS itself.

Although Hungary is only an observer member of the OTS, its track record of international cooperation in water management makes it a significant player towards addressing the challenges of the OTS pertaining to water management. The purpose of the present research paper is to synthesize the material indicating that Hungary's attested international expertise in water management can and will translate into ever more efficient cooperation in this field between Hungary and the rest of the OTS member states.

It goes over the international recognition of Hungary in hydraulic cooperation, the main water management challenges currently faced by the OTS, proof that there has been an enduring Hungarian interest in OTS water management issues in the past decades, OTS member state recognition of Hungary's capabilities when it comes to hydraulic cooperation, and finally, the current state of the OTS Drought Prevention Institute, which is based in Budapest.

International Recognition of Hungary in Hydraulic Cooperation

In a 2025 study[1] titled 'Role of Bilateral Memoranda of Understanding in the Hungarian Water Diplomacy' and published in the *Hungarian Journal of Hydrology*, Bálint Rózsa provides a detailed examination of Hungary's expanding international role in water-related cooperation. Rózsa analyzed over 50 bilateral Memoranda of Understanding signed between 2013 and 2024 and situated them within Hungary's historical water governance practices and its broader foreign policy orientation. This study highlighted how these non-binding agreements serve as political, technical and economic instruments that enhance Hungary's visibility and credibility in global hydraulic cooperation.

Hungary's international recognition in hydraulic cooperation is closely tied to its hydrological vulnerability; approximately 95% of its surface waters originate from outside its borders, making cross-border coordination unavoidable. As Rózsa writes, this structural dependency helped shape Hungary's longstanding commitment to transboundary water governance and contributed to its early accession to both the UN Watercourses Convention and the UNECE Water Convention, establishing credibility in promoting equitable use and harm prevention. He further notes that Hungary's international engagement in water management has historical depth, tracing back to VITUKI's overseas engineering projects and professional cooperation initiatives throughout Africa and the Middle East, which embedded Hungarian expertise in global hydraulic practice.

According to Rózsa, Hungary's global visibility in water diplomacy increased significantly through the Budapest Water Summits of 2013, 2016, and 2019, which brought together state leaders, international organizations and technical experts under UN involvement. These events positioned Hungary at the center of global discussions on water security and contributed to elevating clean water and sanitation as Sustainable Development Goal 6. As Rózsa writes, the summits also served as diplomatic catalysts, creating concentrated periods in which multiple water cooperation MoUs were signed. He adds that the subsequent Planet Budapest sustainability expos continued to reinforce Hungary's narrative identity as a knowledge-exporting water diplomacy actor, even when water was not the lead theme.

Beyond these broad strokes, many of the countries highlighted in the previous illustration have expressed publicized satisfaction with Hungarian water cooperation.

On 9 March 2020,[2] Abdelkader Amara, then the Moroccan Minister of Equipment, Transport, Logistics and Water, visited several water and road infrastructure projects in Hungarian cities. This visit notably focused on 'water management, flood and drought forecasting and protection, combating dam siltation, managing hydraulic infrastructure and freight transport', demonstrating the versatility of Hungary in the different facets of hydraulic cooperation is recognized by its partner countries. This visit was also part of the implementation of a bilateral agreement signed on 5th October 1990 between Hungary and Morocco, emphasizing Hungary's ability to convince partner countries of its long-term competence in hydraulic cooperation.

A €42 million tied-aid water management project[3] was agreed on in 2019 between Hungary and Cape Verde. It involved the installation of desalination systems to produce irrigation water from seawater, supported by a solar energy park that will become the second-largest solar facility in Cape Verde. The first phase began in February 2023, and the initial desalination equipment will be delivered in September 2024, with full project completion expected by September 2028. The investment is accompanied by long-term educational cooperation through the Stipendium Hungaricum, which allocates 20 student places per year, linking water infrastructure development with sustained professional exchange.

In the 2024 Protocol[4] of the 35th Session of the Romanian-Hungarian Hydrotechnical Commission, Romania and Hungary reaffirmed their cooperation in managing shared rivers, groundwater flood-control systems and water-quality monitoring. The Protocol reviewed the work of joint subcommissions on water quality, hydrometeorology and flood protection, confirms continued real-time data exchange and coordinated flood response, and outlined updates to mapping, monitoring networks and emergency procedures. The Commission's durability across thirty-five sessions shows that Hungary's hydraulic institutions are trusted partners in cross-border water governance. More broadly, Romania's reliance on Hungarian flood forecasting and basin-management expertise demonstrates both cooperation and recognition of Hungary's established competence in regional water management.

Also in 2024,[5] the Dominican Republic's National Institute of Hydraulic Resources (INDRHI) signed a two-year

bilateral cooperation program with Hungary, led by Péter Kovács, who has served his country as EU Water Director. The agreement focuses on joint solutions to water management challenges, including climate adaptation, groundwater administration, dam operations and technical training. INDRHI highlighted that Hungary was selected as a partner because of its institutional experience in dam systems and regional water directorates, while Hungary emphasized facing similar drought pressures. The visit included technical field inspections and planning sessions. This cooperation illustrates that Hungary's hydraulic governance capabilities are internationally acknowledged and actively sought after even across oceans.

Upcoming endeavors also signal continued and reciprocal international interest in Hungarian water cooperation. For instance, from 24-28 February 2026,[6] the Hungarian Water Partnership (HWP) will host senior water sector delegates from across Africa for a four-day technical and professional program in Budapest. The visit will include technology site tours, workshops, and meetings with Hungarian water industry experts. On 27 February, participants will attend The Future of Water International Conference at Planet Budapest 2026, featuring contributions from Hungarian and international associations, alongside platforms such as GWOPA, ASEM Water, EWA, and GWP. Key themes include drinking water purification, wastewater and sludge treatment, non-revenue water reduction, smart monitoring systems, rainwater reuse and global implementation case studies across multiple regions.

Water Management Challenges for the OTS

The main water management challenges faced by the OTS have been summarized aptly by Divandernegi in a February 2025 article.[7]

Kyrgyzstan, where 41% of Central Asia's water resources (approximately 45 km^3) originate, is allowed to use only 11 billion m^3, or 25%, of its own water under the 1992 Almaty Agreement governing regional water management. This imbalance has generated recurring crises with Uzbekistan, whose agriculture heavily depends on water from the Sirdarya and Amu Darya rivers. Water-energy trade-offs, such as Kyrgyzstan needing electricity imports and Uzbekistan needing water, have repeatedly triggered conflict. Additionally, the ethnically mixed Fergana Valley, shared by Uzbekistan, Kyrgyzstan and Tajikistan, has witnessed repeated border clashes, further weakening regional cohesion.

But as reported in a March 2025 *SpecialEurasia* article,[8] huge progress was made towards putting a definitive end to the issue through the three-way Khujand Declaration,[9] which was preceded on the one hand by an agreement to increase trade volumes to $500 million and accelerate regional energy projects like CASA-1000 between the Tajik and Kyrgyz presidents and the other hand by such mutually beneficial concessions as the cession of the village of Dostuk to Tajikistan, which 'facilitate[d] the connection between Tajikistan's Vorukh exclave and its main territory.'

In the energy sphere, disputes between Azerbaijan and Turkmenistan over Caspian Sea fields, especially Kapaz/Serdar, persisted throughout the 1990s and 2000s. This was one factor in delaying key projects such as the Trans-Caspian Pipeline (TCP). It is important to add that the major factor stalling this project was Russian and Iranian tampering regarding the use of the Caspian Sea, which is a lingering issue to this day. Nevertheless, significant progress was made when, in 2021,[10] an agreement was reached on the Dostluk offshore gas field between the two countries.

Although the 2018 Convention on the Legal Status of the Caspian Sea clarified some issues, it did not fully resolve resource allocation conflicts. In the last 3-4 years, Türkiye has been pushing diplomatically to open the Transcapian pipeline, despite geopolitical tensions with Russia and Iran over the use of the Caspian Sea. A very useful step towards this end was taken when, as per a Caspian Policy report quoted in an April 2024 *Hungarian Conservative* article[11] by Ibrahim Mammadov, Head of the Turkic-Western Engagement Initiative at the Danube Institute, in 2024, Hungary became the first European country to sign a natural gas import deal with Turkmenistan.

Amudarya by Nukus, Uzbekistan. (Wikimedia Commons/Petar Milošević)

Early Hungarian Interest in OTS Water Management Issues

Dr. Ferenc Ágó is a Hungarian regional analyst known for his extended field research in Central Asia, where he spent four years conducting hydro-political and socio-economic studies. During this period, he regularly consulted local ministries, academic centers, and Russian- and Kazakh-language press sources, providing Hungary with first-hand regional intelligence at a time when few European analysts operated on the ground. He later published on water-sharing and interstate stability in journals such as *Tér és Társadalom*, contributing empirical analysis of the Amu Darya-Syr Darya basin. His work remains cited in Hungarian water security and foreign policy discourse, especially as Hungary expands cooperation across Central Asia and the Turkic world.

In 2007, Dr. Ágó titled his doctoral thesis[12] 'the Central Asian Integration and the Region's Water Management Problem'. His research demonstrates that Hungarian academic engagement with Central Asian water governance preceded and anticipated later regional institutional frameworks, including what would become the Turkic Council in 2010. His work shows long-term and policy-relevant analysis of the region's hydro-political dynamics. Dr. Ágó analyzed the region at a time when the post-Soviet order was still forming and water management was emerging as a core security issue. As he states, the newly independent states were 'left absolutely on their own with their regional, ethnical, religious and interstate tensions'.

A key indicator of Dr. Ágó early and substantial contribution is the depth of his field-based research conducted directly in Central Asia over several years. Rather than relying solely on secondary sources, he embedded himself in the region to observe political and social dynamics surrounding water governance firsthand. He explains that his dissertation drew on '4 years of local researching in Central Asia,' during which he accessed governmental archives, strategic research institutes and local media. He emphasizes that he 'could attend the local strategic institutions in Bishkek and Almaty' and regularly followed Kazakh and Russian press, demonstrating a long-standing, immersive Hungarian scholarly presence.

A second major indication of Ágó's early and insightful engagement is his recognition that water in Central Asia is a core security variable, arguing that environmental and resource pressures shape political stability. As he writes, 'sweet water is a basic need, it unites the ecological, economical and social activities' in the region. He warns that 'irrational water sharing and water use in the region can result in a severe social, economical and ecological degradation which potentially means a local and/or interstate conflict.' By linking hydrology to security, Ágó anticipated the strategic language now used in OTS and regional water diplomacy.

A third notable contribution is Ágó's early articulation of the water-energy exchange dilemma between upstream and downstream Central Asian states. He explains that Kyrgyzstan and Tajikistan, 'the upstream countries are the decision makers in water management primarily who can use the water for energy production in winter', while Uzbekistan, Kazakhstan and Turkmenistan depend on the same water 'for irrigation in summer', making the two demands 'obviously incompatible with each other'. He notes that the states attempted to resolve this through 'an energy consortium which is based on the trade with water and energy', predating, and conceptually aligning with, the cooperation logic later pursued within Turkic and broader regional diplomatic structures.

OTS Member State Recognition of Hungarian Hydraulic Cooperation

The recognition of Hungarian expertise in water management has been acknowledged by every OTS member state.

Azerbaijan

As per a January 2013 publication[13] by AZƏRTAC, Azerbaijani's recognition of Hungary's advanced expertise in water and sewerage management was acknowledged through the official meeting between Azərsu, the United Water Supply Service for Major Cities of Azerbaijan, and the Hungarian 'Water Business Cluster', led by Budapest Water Utility director and cluster secretary-general Csaba Harangi. Azerbaijan highlighted its ongoing large-scale national water-infrastructure program, such as major drinking-water, sewerage and storm-water projects ordered by President Ilham Aliyev, implemented using the world's latest technologies, demonstrating why foreign technical experience is valuable.

Azerbaijan noted that many of its projects were financed through state budget investment and over 10 international credit-funded projects, and that it actively studies the experience of countries with successfully modernized systems. Hungary was singled out because both states once operated under the socialist system and share similar legacy infrastructure challenges. This made Hungary's modernization experience directly relevant.

Harangi emphasized that since the 1990s, Budapest had completely renewed its outdated water-supply and sewerage technologies, an achievement Azerbaijan viewed as a model. Hungary's company expressed readiness to participate in Azerbaijani projects and brought demonstrated international capacity, having completed major water-engineering works in Nizhny Novgorod, Samara and Saransk.

Azərsu further recognized Hungarian competence by inviting Water Business Cluster to upcoming tenders, including major works such as over 200 km of tunnel-type wastewater collectors on the Absheron Peninsula and more than 45 wastewater-treatment plants in the regions. The Hungarian delegation's technical visits to the Ceyranbatan ultrafiltration plant, storm-water collector works in Khirdalan, and the new central laboratory underscore Azerbaijan's openness to Hungarian expertise.

At the 2025 Baku Water Week,[14] Hungary publicly highlighted its expanding partnership with Azerbaijan in water management. Speaking at the Caspian Water Innovation Forum, Hungarian Ambassador Tamás Torma emphasized that Hungary has prioritized water diplomacy and innovation since 2010, accumulating strong expertise in groundwater mapping, treatment systems, reuse technologies and drought prevention. He noted successful cooperation between Azerbaijani agencies and leading Hungarian institutions, including the Hungarian Water Authority and the Institute for Drought Prevention under the Organization of Turkic States (OTS). The signing of a new memorandum of understanding further demonstrates that Azerbaijan recognizes and actively seeks Hungarian hydraulic knowledge, affirming Hungary's regional leadership in water governance.

Kazakhstan

As can be read in a September 2025 *Kazinform* article,[15] Kazakhstan's launch of a dual-degree master's program in partnership with Hungary stands as clear evidence of the country's formal recognition of Hungary's advanced expertise in water management and water diplomacy. The initiative is jointly developed by the Kazakh National University of Water Management and Irrigation (KazNUVHI) and Hungary's Corvinus University, one of Central Europe's leading institutions in governance, economics and resource-management disciplines. By selecting a Hungarian university as its primary academic partner, Kazakhstan signals confidence in Hungary's intellectual, methodological and institutional leadership in modern water governance.

The program's focus on water diplomacy, a specialized field requiring sophisticated knowledge of transboundary water negotiation, international law, and benefit-sharing mechanisms, further reflects Kazakh acknowledgment of Hungary's capabilities. Budapest has built an international reputation through its Budapest Water Summit series and long-standing European expertise in integrated water-resource management. Kazakhstan's decision to embed Hungarian curricula directly into a dual-degree structure is a tangible indicator of recognition.

Additional proof emerges from the European Union's decision in August 2024 to award a €60,000 Erasmus

Mundus Design Measure grant to a consortium that includes the Hungarian partner. The project aims to design a fully integrated joint master's curriculum in water management and diplomacy, which, pending approval, would receive a six-year, €5 million Erasmus budget. Kazakhstan's participation in a consortium where Hungarian expertise helps shape the academic framework illustrates trust in Hungary's leadership role.

The first consortium meeting will take place in Budapest, reinforcing Hungary's position as the intellectual and organizational hub of the initiative. The proposal to establish a Joint Center for Water Resources Management and Water Diplomacy, headquartered in Taraz but co-developed with Hungarian input, further shows Kazakhstan's intent to institutionalize Hungarian methodological influence.

Kazakhstan's broader reforms underscore this recognition: the Minister reports 2,500 students enrolled in water specialties, with practical training numbers rising from 82 students in 2024 to 450 in 2025, many of whom will now study under Hungarian co-designed programs. The establishment of specialized scientific schools at KazNUVHI likewise reflects Kazakhstan's ambition to absorb and adapt Hungarian and European water-governance models.

Türkiye

As can be read in an August 2020 *Suveçevre* article,[16] Türkiye's clear recognition of Hungary's advanced water-management expertise by highlighting the presence, capabilities, and technological leadership of Hungarian firms actively collaborating with Turkish public authorities and companies. Türkiye's acknowledgment begins with the explicit statement that Hungary already maintains ongoing cooperation with Turkish municipalities, public agencies and private-sector partners—an indication that Hungarian know-how is both valued and sought after in Türkiye.

This recognition is institutionalized through the role of HEPA Türkiye, the Turkish office of the Hungarian Export Promotion Agency, which offers free consultancy to Turkish companies interested in adopting Hungarian water technologies. The existence of a dedicated advisory body operating in Türkiye to facilitate Hungarian technology transfer reflects bilateral confidence in Hungary's expertise.

The text prominently features the remarks of HEPA Türkiye General Manager Fikret Nas, who emphasizes that Hungary's water-management competence stems from centuries of hydrological challenges—floods, limited freshwater sources and the need to manage the Danube River, which has influenced regional culture, politics and engineering tradition. Nas openly asserts that Hungary has become 'very advanced in water management,' particularly in innovative water-treatment technologies, where Hungarian know-how is 'world-class.' His comments indicate that Turkish stakeholders actively endorse Hungarian leadership in this field. Türkiye's recognition is reinforced by its openness to a wide range of Hungarian technologies:

> *(1) Water & Soil's Water Retainer, which can reduce irrigation frequency by 50%;*
>
> *(2) Waterscope's AI-based Sensors2Net system for real-time water-quality monitoring;*
>
> *(3) Pureco's drinking-water and wastewater-treatment systems used globally;*
>
> *(4) Hidrofilt's containerized purification units capable of converting wastewater into drinking water, relevant for Türkiye's earthquake-risk zones;*
>
> *(5) And Moon42's WaterGuard, a smart leak-detection solution for large water networks.*

These technologies directly address Türkiye's long-standing challenges, including irrigation efficiency, water losses, pollution control and disaster resilience, which in turn explains why Turkish companies and authorities consider Hungarian solutions credible and attractive.

Turkmenistan

As reported by the *Turkmenistan State News Agency* in June 2023,[17] the talks between President Serdar Berdimuhamedov and Prime Minister Viktor Orbán clearly demonstrated Turkmenistan's official recognition of Hungary's competence in water-resources management. This recognition was most explicitly reflected in the signing of a Memorandum of Understanding on cooperation in water-resources management between Turkmenistan's State Committee for Water Resources and Hungary's Ministry of Internal Affairs. The decision to formalize cooperation with precisely this ministry was itself an acknowledgment of Hungary's expertise in the field.

Turkmenistan included water management among the priority economic sectors in which it seeks intensified bilateral cooperation, alongside energy, transport, agriculture, and industry. This showed that Ashgabat saw Hungarian experience and technology as directly relevant to Turkmen water challenges such as irrigation efficiency, sustainable use of water in agriculture, desalination, hydrotechnical safety and climate-related pressures.

President Berdimuhamedov's proposals during the expanded-format talks furthered demonstrate recognition. When listing the most promising sectors for long-term partnership, he explicitly named water management and investment activities as key areas where Hungary's capabilities could benefit Turkmenistan. The Turkmen side expresses readiness to develop 'specific proposals' for cooperation, a sign that they saw Hungarian solutions as practical and applicable.

The broader diplomatic context also reinforced this acknowledgment: Hungary was described as a technologically developed state with strong industrial and engineering competencies. Water-management agreements were placed on equal footing with high-value cooperation areas such as energy and hydrogen production, an indication that Turkmenistan considered water governance to be a strategic domain in which Hungarian expertise carries weight.

The Memorandum of Understanding on water management, signed during a ceremony alongside major agreements in diplomacy, metrology, education, tourism and investment protection, confirmed Turkmenistan's view of Hungary as a trusted, capable partner whose water-sector knowledge is valuable for national development. Hungary's reputation as a constructive contributor to UN sustainable-development initiatives further supported Turkmenistan's confidence in Hungarian hydrological competence.

Uzbekistan

As reported in October 2023 in the news section of the website of the Uzbek government,[18] a meeting between Uzbekistan's Minister of Water Management Shavkat Khamrayev and Hungary's newly appointed Ambassador József Rózsa underscored Uzbekistan's explicit recognition of Hungary's advanced competencies in water governance. Hungary, described as one of Uzbekistan's most important partners in Central Europe, was highlighted as a rapidly developing agro-industrial state with strong historical and institutional links to Uzbekistan. Crucially, cooperation in water management was identified as a priority area within the broader bilateral relationship.

Uzbekistan emphasized Hungary's value by establishing a Hungarian-Uzbek Joint Expert Group on Water Resources Management, designed to institutionalize technical exchange. In April 2023, a Hungarian delegation led by Péter Kovács, Director of the Water Resources Department of Hungary's Ministry of Interior, visited Uzbekistan, resulting in a 2023–2025 action plan for deepened cooperation.

Uzbekistan also acknowledged Hungary's educational and research capacity in the water sector. Partnerships were launched between Hungarian water-management training institutions and Uzbekistan's research bodies, most notably the signing of a memorandum between Uzbekistan's Irrigation and Water Problems Research Institute and the Hungarian University of Agriculture and Life Sciences (MATE).

During the discussion, Uzbekistan briefed the ambassador on ongoing national reforms, such as the digitization of the water sector and introduction of water-saving technologies, areas where Hungary's technical expertise and experience are expected to support Uzbekistan's modernization efforts.

In May 2024,[19] Hungary showed interest in participating in water sector projects in Uzbekistan. During a meeting between Hungarian Water Cluster Executive Director Csaba Haranga and Uzbekistan's Ambassador Oybek Shahavdinov, both sides expressed readiness to arrange further negotiations with relevant Uzbek institutions. The Hungarian Water Cluster, established in 2008, unites around 30 companies in the water industry with a combined revenue exceeding €150 million, aiming to expand into international markets. Uzbekistan, which is promoting water conservation in Central Asia, is planning a new water management system to improve efficiency and transparency, maintain a unified national water balance and introduce market-based mechanisms for sustainable water use.

Any actor that deals with water management in or within the OTS would thus do well to signal awareness of Hungarian expertise as a noteworthy factor.

Assessment of the OTS Drought Prevention Institute

The Drought Prevention Institute (DPI) is Hungary's flagship entity when it comes to state-of-the-art water management in the OTS.

The DPI of the OTS was established in Budapest following an agreement signed at the Samarkand OTS Summit in November 2022.[20] Hungarian Foreign Minister Péter Szijjártó had emphasized that drought and water scarcity were shared strategic challenges across the Turkic region and that Hungarian water-management technologies can offer practical solutions. The Institute was founded to promote joint research, early warning systems, training and technology transfer in drought resilience. A the time, Hungary's role was welcomed by OTS members, reflecting increasing economic and diplomatic ties, with trade between Hungary and Turkic states exceeding $4.5 billion, and recognizing Hungary as a technical contributor in regional water governance.

In August 2024,[21] the OTS Drought Prevention Institute conducted a field assessment in the drought-affected Fergana/Batken region, examining irrigation losses and groundwater stress and engaging local authorities to identify practical needs. In April 2025,[22] its Board met in Budapest to establish governance procedures, shared monitoring standards and project evaluation criteria, translating political intent into operational structure. In July 2025,[23] the Institute issued its first call for project proposals across OTS member states, targeting drought-resilient agriculture, efficient water use and afforestation. This sequence indicates initial steps toward operationalization, although the Institute remains in an early developmental phase, with activities focused more on assessment and coordination than on fully implemented drought-response programs.

Between its establishment at the Samarkand Summit in November 2022 and its first field mission in August 2024, the OTS Drought Prevention Institute underwent a foundational institutional phase. During 2023, Budapest was formally confirmed as the host location, and Hungary assumed responsibility for administrative coordination and liaison with the OTS Secretariat. The Institute's mandate was refined to emphasize drought monitoring, early warning systems and knowledge transfer rather than direct infrastructure financing. This period also involved identifying expert contributions from Hungarian water agencies and negotiating technical secondments from Central Asian partners. These steps provided organizational stability and shared ownership before operational activities began.

Hungary's hosting of the OTS Representation Office and DPI, alongside the appointment of Balázs Hendrich as Executive Head, ensures continuity and coordination with EU institutions. This positioning enables technical dialogue, access to European funding mechanisms and alignment with relevant governance standards. These efforts highlight how shared challenges, including water scarcity and cross-border sustainability pressures, require cooperation beyond national boundaries. In doing so, Hungary helps strengthen regional resilience and deepen OTS-EU connectivity.

Conclusion

Hungarian expertise in water management is attested and universally recognized among all of the very many countries which have benefited from it. Every member state of the OTS, as relayed by governments and major outlets, has had public and private sector actors express great satisfaction with what Hungary has provided to them in this regard.

The establishment of the Drought Prevention Institute has been instrumental towards deepening these ties and integrating Hungarian water management more perfectly with the other OTS member states. After a few years of surveying and conducting feasibility studies, it can now be considered operational as an instrumental part of Hungary providing the most adequate water management services it can within the framework of the OTS, for its own benefit both as an OTS and EU member state, and thereby, for the benefit of both, individually and in their relations with one another.

Another aspect, which was not covered in this study because it is tangential, but which could prove critical in the near future, is the issue of the projected Qosh Tepa dam on the Amu Darya that has been built by the Afghan government since March 2022.[24] 'Once completed in 2028, it would divert 17 trillion cubic meters of water from the Amu Darya to irrigate 500,000 hectares of agricultural land, spread across the provinces of Balkh, Jozjan and Faryab, in northern Afghanistan.' As part of the Hungarian state's doctrine of connectivity, as formulated by Balázs Orbán, Political Director of the Prime Minister, Hungary could propose its expertise to the Afghan state with a mindset of contributing to regional stability by finding a workable compromise for all parties involved.

References

[1] Rózsa, B. (2025). 'Role of bilateral Memoranda of Understanding in the Hungarian water diplomacy'. *Hungarian Journal of Hydrology*, 105(1EN), 31–52. https://real.mtak.hu/221554/1/19312-Cikkszovege-79511-1-10-20250722.pdf

[2] *MAP Express*, « Maroc-Hongrie: Pour le renforcement de la coopération en matière de gestion des infrastructures hydrauliques et routières », 10 March 2020. https://www.mapexpress.ma/actualite/activite-gouvernementale/maroc-hongrie-renforcement-cooperation-en-matiere-gestion-infrastructures-hydrauliques-routieres/

[3] Emília Fábián, 'Aprofundar a cooperação entre Cabo Verde e a Hungria', *Expresso das Ilhas*, 20 August 2024 https://expressodasilhas.cv/opiniao/2024/08/20/aprofundar-a-cooperacao-entre-cabo-verde-e-a-hungria/92904

[4] Romania & Hungary. (2024, May 30). *Protocol of the 35th Session of the Romanian–Hungarian Hydrotechnical Commission* (Monitorul Oficial No. 884 bis, 3 September 2024) https://legislatie.just.ro/Public/DetaliiDocument/288096

[5] *RC Noticias*, 'INDRHI and Hungarian water delegation agree on work program for bilateral cooperation on water issues', 12 September 2025. https://robertocavada.com/nacionales/2025/09/12/indrhi-y-delegacion-hidrica-de-hungria-acuerdan-programa-de-trabajo-para-la-cooperacion-bilateral-en-temas-de-agua/

[6] Hungarian Water Partnership, 'AfWASA-HWP Global Water and Sanitation Connect 2026' https://www.hungarianwaterpartnership.hu/events/afwasa-hwp-global-water-and-sanitation-connect-2026

[7] *Divandernegi*, 'Difficulties and Crisis Periods for Unity and Cooperation Between the States of the Turkic World', 15 February 2025. https://www.divandernegi.com.tr/2025/02/15/turk-dunyasi-devletleri-arasindaki-birlik-ve-is-birligine-yonelik-zorluklar-ve-kriz-donemleri/

[8] *SpecialEurasia*, 'Tajikistan, Uzbekistan and Kyrgyzstan's Leaders Signed a Historical Agreement in Khujand', 31 March 2025. https://www.specialeurasia.com/2025/03/31/khujand-declaration-central-asia/

[9] *SpecialEurasia*, 'Intelligence Briefing: Kyrgyzstan-Tajikistan Border Agreement', 18 March 2025 https://www.specialeurasia.com/2025/03/18/tajik-kyryz-border-agreement/

[10] *TurkmenPortal*, 'Turkmenistan and Azerbaijan held another round of negotiations on the development of the Dostluk field', 27 January 2022. https://www.turkmenportal.com/en/news/43744-turkmenistan-we-azerbayjan-dostluk-yatagyny-ozleshdirmek-boyuncha-dordunji-mejlisi-gechirdi

[11] Ibrahim Mammadov, 'Meaningful Turkic Alternative to Hungarian Russian Gas Imports Emerges This April', *Hungarian Conservative*, 2 April 2024. https://www.hungarianconservative.com/articles/politics/turkish-gas-imports_hungary_eastern-opening_kazakhstan_turkmenistan_diversification/

[12] Ágó, F. (2007). *The Central Asian integration and the region's water management problem* (Doctoral dissertation). University of Pécs, Doctoral School of Earth Sciences.

[13] *AZƏRTAC*, 'Macarıstanın "Water Business Cluster" şirkəti Azərbaycanda su və kanalizasiya layihələrində iştirak etməkdə maraqlıdır', 17 January 2013. https://azertag.az/xeber/macaristanin_water_business_cluster_sirketi_azerbaycanda_su_ve_kanalizasiya_layihelerinde_istirak_etmekde_maraqlidir-19077

[14] *Trend News Agency*, 'Azerbaijan's Baku Water Week concludes with inspiring talks and bold solutions', 12 September 2025. https://www.trend.az/azerbaijan/business/4089793.html

[15] Kazinform, 'Казахстан и Венгрия будут готовить специалистов в сфере водной дипломатии', 11 September 2025. https://www.inform.kz/ru/kazahstan-ivengriya-budut-gotovit-spetsialistov-vsfere-vodnoy-diplomatii-a3381d

[16] *Suveçevre*, 'Macaristan Suda Global Bir Güç', 07 August 2020. https://www.suvecevre.com/yayin/944/macaristan-suda-global-bir-guc_27015.html

[17] *Turkmenistan State News Agency*, 'A new impetus was given to the priority areas of Turkmen-Hungarian cooperation', 09 June 2023. https://tdh.gov.tm/ru/post/36284/pridan-novyj-impuls-prioritetnym-napravleniyam-turkmeno-vengerskogo-vzaimodejstviya

[18] *Uzbek Government*, 'Suv xo'jaligi vaziri Vengriya elchisi bilan uchrashdi', 04 October 2023 https://gov.uz/oz/news/view/3027

[19] Daryo, 'Венгрия заинтересована в реализации проектов в водном секторе Узбекистана', 15 May 2024 https://daryo.uz/ru/2024/05/15/hungary-water-uzbekistan/

[20] *Világgazdaság*, 'Aszálymegelőzési intézetet hoznak létre Budapesten', 11 November 2022 https://www.vg.hu/kozelet/2022/11/aszalymegelozesi-intezetet-hoznak-letre-budapesten

[21] *Hungarian Export Promotion Agency*, 'Hungary helps in drought prevention in Central Asia', 9 December 2024 https://hepa.hu/en/news/a-new-milestone-for-the-drought-prevention-institute

[22] *Organization of Turkic States,* Drought Prevention Institute of the Organization of Turkic States held its Board meeting in Budapest, 30 April 2025. https://www.turkicstates.org/en/news/drought-prevention-institute-of-the-organization-of-turkic-states-held-its-next-board-meeting-in-budapest

[23] *Hungarian Export Promotion Agency*, 'A New Milestone for the Drought Prevention Institute', 7 April 2025, https://hepa.hu/en/news/a-new-milestone-for-the-drought-prevention-institute

[24] Michaël Lévystone, *Asie centrale. Le réveil* (2024), Armand Colin, p.220