Global Neighbours Insights | No. 2

CROSS-BORDER ISSUES AND COOPERATION IN CENTRAL ASIA

Investment and Development Opportunities

By Dr. Sergei Yazvenko & Dr. Dinara Muzafarova

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The European Forum on China, Asia & Beyond

ABOUT THE SERIES

“Global Neighbours Insights” is a publication series introduced by the Vienna-based think tank Global Neighbours. The series seeks to provide balanced analyses and considered perspectives on international relations, global policy trends, and regional developments. With the aim of fostering mutual understanding across borders, it aspires to serve as a constructive resource for policymakers, business leaders, academics, and globally engaged citizens.

ABOUT THE AUTHORS

Prof. Sergei Yazvenko, PhD, is an ecologist and environmental scientist with more than 35 years of international research and consulting experience across North America, Europe, Central Asia, and the Arctic. He has authored over 70 technical reports and 30 peer-reviewed publications, taught extensively at universities in Uzbekistan, Russia, and China, and led major biodiversity, climate, and ecosystem-monitoring programs for governments and global corporations. His expertise spans terrestrial and marine ecology, environmental assessment, and long-term ecosystem change.

Dr. Dinara Muzafarova, associate professor at the International Agriculture University partnered with the Royal Agricultural University (UK), brings over 18 years of international project experience with Rutgers University, GIZ, ICARDA-CAC, and the Agricultural University of Athens. Holding a PhD degree in agricultural sciences, she focuses on sustainable farm management, plant protection, and climate adaptation. She has published 16 scientific articles and holds two database-related patents, expertise directly relevant to agri-business and innovation.

International Agriculture University (IAU.uz)
University street 2, Kibray, Tashkent
Uzbekistan 111200

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Executive Summary

Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan) is at a stage of intense geopolitical and economic transformation, which strategically positions it as a crucial nexus of Eurasian trade, resources development, and energy flow. This vast region abundant in natural resources, including enormous hydrocarbon, mineral, and hydroelectric potential, offers compelling opportunities for global investments, especially in projects focused on solving important cross-border issues.

Investment Imperative: Stability and Cooperation

The strong investment case for Central Asia is based on a fundamental change towards a better regional cooperation and broad pro-market reforms put in place across all five states. This collaboration is creating significant collective benefits that aim to increase overall economic resiliency and competitiveness. The region is the hub for the development of major transcontinental infrastructure – most critically, the Central Trans-Caspian Network (Middle Corridor) – which offers a critical, sustainable and increasingly attractive land-based alternative for the trade between Asia and Europe, especially with the recent geopolitical instability. The estimated potential of this corridor is profound: if the improvements can be made in investment and policies, the volume of container cargo can be increased nearly seven-fold. In addition, governments are institutionalizing a green transition with ambitious national development strategies, which link future growth models to climate resilience and sustainable resource stewardship to attract long-term, responsible development finance.

Kazakhstan and Uzbekistan: The Regional Investment Anchors

Uzbekistan and Kazakhstan have become the region's natural investment anchors. Their growing markets, diversified economies, and key transport corridors draw in capital and help steady growth across Central Asia. Kazakhstan is the largest economy in the region (GDP $290 billion) and a middle-income country with per capita GDP of over $14,000. Uzbekistan's economy is smaller (GDP $120 billion, per capita GDP about $3500) but the country grows fast and aims to join the ranks of countries with middle incomes by the end of the decade, with quantifiable targets that show remarkable ambition:

- GDP Target: Growth of GDP to $160 billion.
- FDI Mobilization: To attract $110 billion in Foreign Direct Investment (FDI), and $30 billion through Public-Private Partnerships (PPPs).
- Green Energy Commitment: Raising the share of renewable energy in the mix of consumption to 40 percent.

Uzbekistan's government is splitting state monopolies and implementing broad privatization, upgrading legal protection for investors, making Uzbekistan increasingly attractive as a hub for foreign capital to access the entire Central Asian market. The creation of the Centre for Investors eases processes of obtaining visas, permits and land procurement. And the building of a large new airport projected to be opened by 2030 with a capacity of nearly 20 million passengers a year will make Uzbekistan one of the main transportation and economic hubs in the region.

High Impact Investment Opportunities:

Investment capital is needed to solve seven systemic cross-border issues transformed into shared economic gains:

1. Transboundary Water Management: Mitigating disputes caused by climate-induced water scarcity and upstream/downstream rivalry through integrated water-energy management and investments in efficiency.

2. Border Stability and Demarcation: Investing in cooperative mechanisms and infrastructure modernization to convert disputed and under-developed border areas, especially in Ferghana Valley into centers for local economic cooperation.

3. Aral Sea Rehabilitation: Financing large-scale ecological innovation and land restoration projects in the Aral Sea basin to combat transboundary dust storms and protect public health.

4. Energy Sector Integration: Speeding up the harmonization of the Central Asian Power System (CAPS) including investments in grid modernization, digital grid control systems and renewable energy to stabilize seasonal fluctuations.

5. Trade Barriers and Customs: Funding "soft connectivity" reforms such as implementing e-TIR/e-CMR, unified customs clearance and risk-based inspections; to drastically reduce the costs and length of delays that they currently pose to cross-border trade.

6. Logistics, Connectivity and Trade Pathways: Investing in the physical infrastructure of the Middle Corridor, rail line constructions (such as China-Kyrgyzstan-Uzbekistan railway), logistics centers, and the development of routes from the south to the oceanic ports (Uzbekistan-Afghanistan-Iran rail link), as a means of overcoming the land-locked position of Central Asia.

7. Biodiversity Conservation: Supporting conservation-related activities that preserve important ecosystems, especially river conservation and mountain glaciers which are threatened by fragmentation, pollution, human activities, and climate change.

By investing capital in these cooperative cross-border efforts, international investors will become valuable partners in the transformation of Central Asia into a connected, stable and wealthy geoeconomic center, with an ambitious reformist trajectory at its core.

Recognizing the region's rising potential, the November 2025 C5 + 1 Summit in Washington marked a milestone as the U.S. and five Central Asian leaders signed deals exceeding US $25 billion, backed by US $100 billion in long-term pledges. Uzbekistan gained US $34.5 billion and Kazakhstan US $17 billion in investments spanning energy, minerals, infrastructure, and technology – underscoring a major U.S. turn toward strengthened engagement with Central Asia.

Introduction: Central Asia at a Crossroads

Central Asia – including Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan – is strategically positioned at the center of Eurasia between major global economies: China, Russia and India. The legacy of shared infrastructure and centrally planned resource management since the Soviet Union resulted in immediate cross-border dependencies and, oftentimes, interstate rivalries, especially regarding water and energy. However, recent years have seen a pragmatic and powerful resurgence of regional cooperation turning intractable disputes into opportunities for a synergistic long-term development.

This paper focuses on providing a detailed overview for public audiences, academics, business leaders and international investors as to why Central Asia has become a relevant destination for investment capital. The regional imperatives behind this developing trend are very clear to help achieve collective economic goals, increase cooperation as a critical Eurasian trade corridor and proactively build resilience against the increasing threat of climate change. Only through concerted, cross-border approaches – commonly articulated in the multi-sectoral Nexus approach – will these risks be mitigated and the major collective economic benefits achieved.

The central thesis advanced here is that pressing cross-border challenges in the environmental, water, and economic domains represent powerful drivers of future return on investment. Targeted funding in these areas from modernization of trans-Eurasian rail links to innovative desert restoration technologies – both supports sustainable development goals and is directly linked to sustainable regional development and security of investment.

Section 1: Critical Cross-border Issues and Areas of Cooperation

Central Asia's unique geographic and geopolitical realities mean that sustainable development depends on proper management of transboundary, common resources and resolution of long-standing border tensions. The following seven issues represent the most pressing challenges that, through cooperation, turn into great economic and social opportunities for investment (Karthe et al., 2014; UNECE, 2024).

Issue 1: Transboundary Water Scarcity and Allocation Disputes (Environmental/Economic)

The fundamental threat to Central Asian stability and economic viability is the scarcity and uneven distribution of water which is being made worse by population growth, climate change and imminent reduction of water supply caused by the new irrigation canal in Afghanistan (Qosh-Tepa). In a region marked by arid and semi-arid climates and scarce water supplies, the risk of fresh water shortages is mounting. Rising average temperatures since the late 19th century have accelerated glacier loss, with volumes shrinking by about 30% in the last fifty years. As these glaciers constitute the main water source for the Aral Sea basin, their decline poses a critical challenge to regional sustainability. (Karthe et al., 2014; Liu et al., 2020; Mussatayev et al., 2024).

The leading cause of tension is the conflicting priorities of the riparian states (UNECE, 2024).

- Upstream Riparians (Kyrgyzstan and Tajikistan): Two mountainous countries with control over the headwaters of the major rivers (Amu Darya and Syr Darya), they are more interested in storing water in summer for producing hydropower in winter, when the national energy demand peaks. Hydropower is dependent upon big storage facilities, which is often a source of tension regarding the allocation of water resources with downstream countries (De Keyser et al., 2026).

- Downstream Riparians (Kazakhstan, Turkmenistan, and Uzbekistan): These countries are located in the plains and arid lowlands and highly depend on the summer water discharges to irrigated agricultural lands, which represent around 80% of Central Asia's total water (Kim & Hong, 2017; OECD, 2022).

The conflict is acute: downstream countries need releases of water in the summertime, in direct conflict with the needs of the upstream countries for winter-time power generation. Water consumption in the region is projected to increase by ~40-50% by 2040, which can triple water shortages by 2050 if no drastic action is taken (Mussatayev et al., 2024). Furthermore, the shortage of water worsens the ecological situation in the Aral Sea. Addressing these challenges requires regional approach transcending national interests, which are currently the priorities of each country, and the need for coordinated water policy. Future strategies should focus on water efficient agriculture and maximum water conservation through modern irrigation technologies (Amirgaliev et al., 2022; Liu et al., 2020).

Issue 2: Border Disputes and Demarcation (Security/Governance)

The unresolved status of many internal borders – a complicated legacy of the Soviet Union's Administrative and National delineation processes in the 1920s and 1930s – is a persistent threat to regional security and investment stability (Mamatova, 2018; United Nations, 2021). The administrative borders drawn under the Soviet regime with no concern of the people living there ended up as actual political boundaries after independence, which resulted in regional tensions and conflicts, especially in densely populated multiethnic areas such as the Ferghana Valley (Mamatova, 2018).

- Conflict Dynamics: Disputes often arise from the common resources, especially water and land, and affect the life of the border communities whose livelihoods are based on agriculture and cattle breeding. These battles are heightened by the increased use of checkpoints and militarization by governments in the name of state-building - which impacts the everyday interaction and economic practices of local populations (United Nations, 2021).

- High Conflict Risk: The severity of these tensions is demonstrated by the fact that between 2012 and 2022, 144 conflicts occurred between Kyrgyzstan and Tajikistan, and the most common cause is water. The dispute over the Golovnoy water intake facility in 2021 which was the claim of both Tajik and Kyrgyz is just one example of how shared infrastructure can cause disputes between countries (UNECE, 2024).

- Cooperative Solutions: Although these challenges are considerable, recent political initiatives demonstrate efforts to find solutions. Notably, negotiations between Uzbekistan and Kyrgyzstan to ratify an agreement on joint management of the Kempir-Abad (Andijan) reservoir and certain border segments illustrate how dialogue can effectively resolve long-standing territorial and water management disputes. Uzbekistan – realizing the danger of conflict escalation – has turned to positive dialogue for reducing conflicts (Mirziyoyev, 2025). Recent agreements have helped ease long-standing borders and water tensions across Central Asia. Uzbekistan and Kazakhstan completed their border demarcation process for their shared border (2024). Uzbekistan, Kyrgyzstan and Tajikistan established mutual agreement concerning their shared border point, which resolved a long-standing border dispute (2025). The governments of the region established new water distribution plans for Syr-Darya and Amu-Darya rivers, which created a stable system for shared river management and allocation of water (2025). These agreements and many others demonstrate a new spirit of friendship and goodwill in the region.

Issue 3: Environmental Degradation and the Aral Sea Catastrophe (Environmental/Social)

The desiccation of the Aral Sea is one of the largest environmental disasters in the world, which results from massive water diversion from the Amu Darya and Syr Darya rivers for industrial scale, water-intensive agriculture, especially cotton monoculture, during the late Soviet period and after that (Karthe et al., 2014).

- Scale of Disaster: The surface area of the Aral Sea has shrunk more than ten times from 67,500 km² in 1960 to 6,700 km² by 2009 (Micklin et al., 2020). The volume of water was reduced 14 times and the salinity of water has increased 25 times, more than the salinity of the world's oceans, and keeps rising. The lake ecosystem collapsed, all fish died, and only one species of shrimp still survives in this hypersaline water.

- Transboundary Consequences: The exposed seabed has turned into a salt-sand desert ("Aral-Kum") with the area of over 5.5 million hectares in Uzbekistan and Kazakhstan. This dry sea bed produces powerful dust and salt storms, sending more than 75 million tons of toxic sand and salt into the air every year, which is then transported thousands of kilometers across the region. Traces of this salty dust have been detected in India, Japan, France and the Arctic Ocean (World Bank, 2022).

- Health and Livelihood Impacts: This environmental degradation directly affects the well-being of millions of people, causing high rates of respiratory and cardiovascular diseases, loss of livelihoods of an estimated 40.000 - 60.000 fishermen and acute poverty in many rural communities, especially Karakalpakstan and Khorezm (World Bank, 2022).

- Responsible Leadership: Uzbekistan proposed to declare the Aral Sea region a Zone of Environmental Innovation and Technologies by a UN General Assembly. Mitigation efforts involve large-scale afforestation of dried seabed with drought and salt tolerant tree species such as saxaul, with the goal of stabilizing the dust and restoring ecological functions, a highly cost-effective strategy (Mirziyoyev, 2025).

Issue 4: Energy Coordination and Hydropower (Energy/Economic)

Energy coordination is an important cross-border issue that is closely linked to water availability and the legacy of the Soviet centralized power system (CAPS). The energy mixes of the Central Asian countries are very asymmetrical (Figure 1): upstream countries (Kyrgyzstan and Tajikistan) rely on hydropower for approximately 90% of their electricity generation, while downstream, resource-rich countries (Kazakhstan, Turkmenistan, and Uzbekistan) primarily use coal, oil and gas (De Keyser et al., 2026).

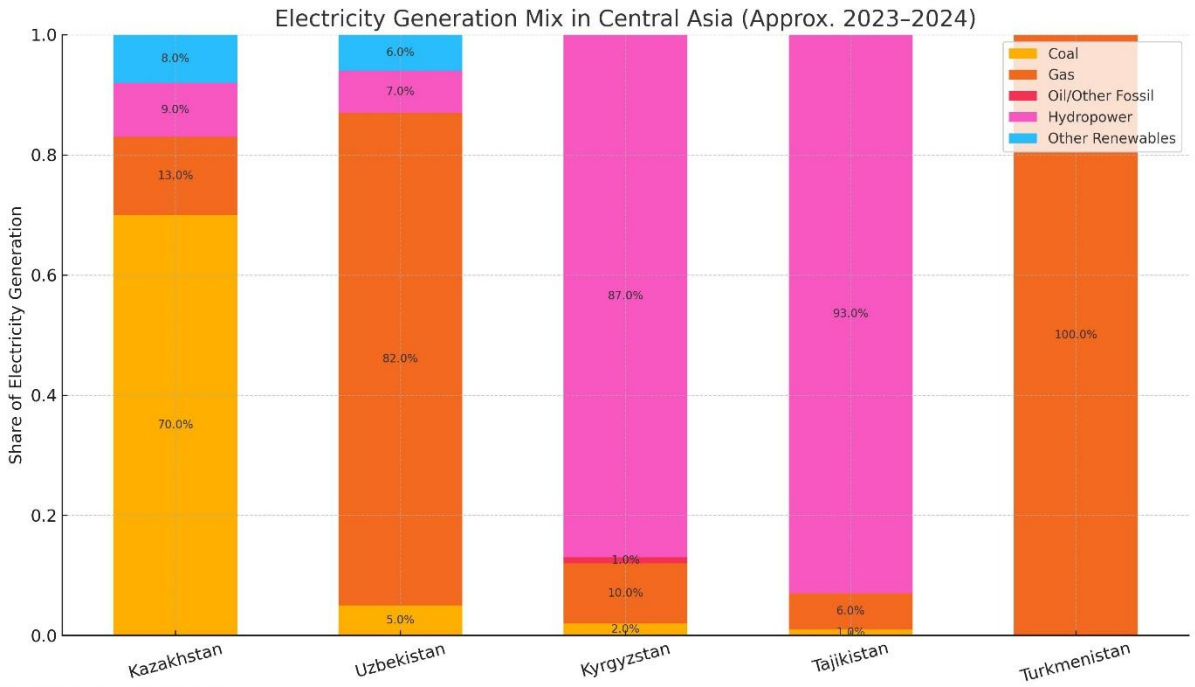

Figure 1: World Bank Annual Report 2023: A New Era in Development

- Seasonal Instability: This dependence on hydropower in Kyrgyzstan and Tajikistan causes seasonal fluctuation with excess generation of electricity in the summer (high water flows) and chronic deficits in the winter (low flows) causing internal instability, sometimes dependency on fossil fuel imports and/or regional power exchanges.

- Infrastructure and Management Challenges: Integration of the Central Asian power systems is a challenge because its obsolete transmission infrastructure, primarily built in the 1960s–1970s struggles to meet the demands of modern society due to a high level of power losses - up to ~12% in Uzbekistan and Turkmenistan and up to ~18% in Kyrgyzstan (OECD, 2022).

- Sedimentation Threat: The long-term viability of hydropower assets is affected by high sedimentation rates, especially in reservoirs, being often caused by land degradation and unsustainable agricultural practices upstream. To take one example, the Nurek Reservoir in Tajikistan had lost 35-50% of its design capacity because of sediment deposition (Rakhmatullaev et al., 2010).

- The Nexus Solution: The need for investment in integrated resource management and regional energy trading is acute. Studies show that a greater uptake of non-hydro renewable energy sources (wind and solar) could reduce the dependency on water for electricity generation by 25% in 2030 in the Syr Darya Basin compared to status quo, which would simultaneously mitigate water stress and reduce the need for additional hydropower capacity (OECD, 2022).

Issue 5: Trade Barriers and Customs Fragmentation (Economic/Governance)

Despite a rising political will for regional trade, Central Asian economies suffer from barriers that hinder their global competitiveness and intraregional integration. Trade is hampered by ambiguous regulatory, policy and business environment contributing to high trade costs compared to peers (IMF, 2022; World Bank, 2023).

- High Trade Costs: Uzbekistan is currently ranked among the top 20 most expensive nations in the world with whom to trade (World Bank, 2023). High tariffs, especially for capital goods, and restrictive regulations in services trade increase the cost of important inputs that are required for exports, affecting the ability to participate in Global Value Chains (GVCs).

- Customs Inefficiencies: Customs procedures continue to lag behind international best practices. Fragmented regulatory regimes cause delays and high transaction costs. Uzbekistan's two-step clearance process, which forces mandatory presentation of goods at an inland terminal even for low-risk cargo, affects clearance times, which average almost 8 days for road imports.

- Institutional Fragmentation: Lack of coordination between border controls and the dysfunctional sanitary and phytosanitary (SPS) systems constrain the potential of agri-food trade (OECD, 2022).

- Digitalization as a Solution: Despite these hurdles, Central Asian countries have made rapid efforts to digitalize and rationalize customs and trade processes. The average trade facilitation implementation rate of Central Asian states increased to 67% in 2023 from 38% in 2017 (UNECE, 2024). Low-cost and high-benefit soft connectivity measures, including digitization of transport documents (e-TIR, e-CMR) and improved interoperability, would further increase efficiency of operations.

Issue 6: Logistics, Development of Connectivity & Trade Pathways (Economic/Infrastructure)

Central Asia's geoeconomic transformation depends on overcoming the physical and operational challenges of the landlocked position, especially for Uzbekistan, the double-landlocked country (Azhgaliyeva et al., 2024).

- Overdependence and Geopolitical Risk: The region traditionally depended a great deal on the Northern Corridor through Russia. Geopolitical instability since 2022 has heightened the need for diversifying trade flows and strengthened the need for investment in alternative routes.

- The Middle Corridor Constraints: The Central Trans-Caspian Network (Middle Corridor), while being of strategic importance for diversification, has serious infrastructural and operational constraints. These include multi-modal transport requirements (road, rail, sea), capacity limitations (especially in crossing the Caspian Sea), absence of unified monitoring systems, unreliable shipping schedules and non-transparent tariffs. The Middle Corridor currently has little capacity and is not expected to replace the Northern Corridor entirely, but it is the most feasible alternative for the future (Figure 2).

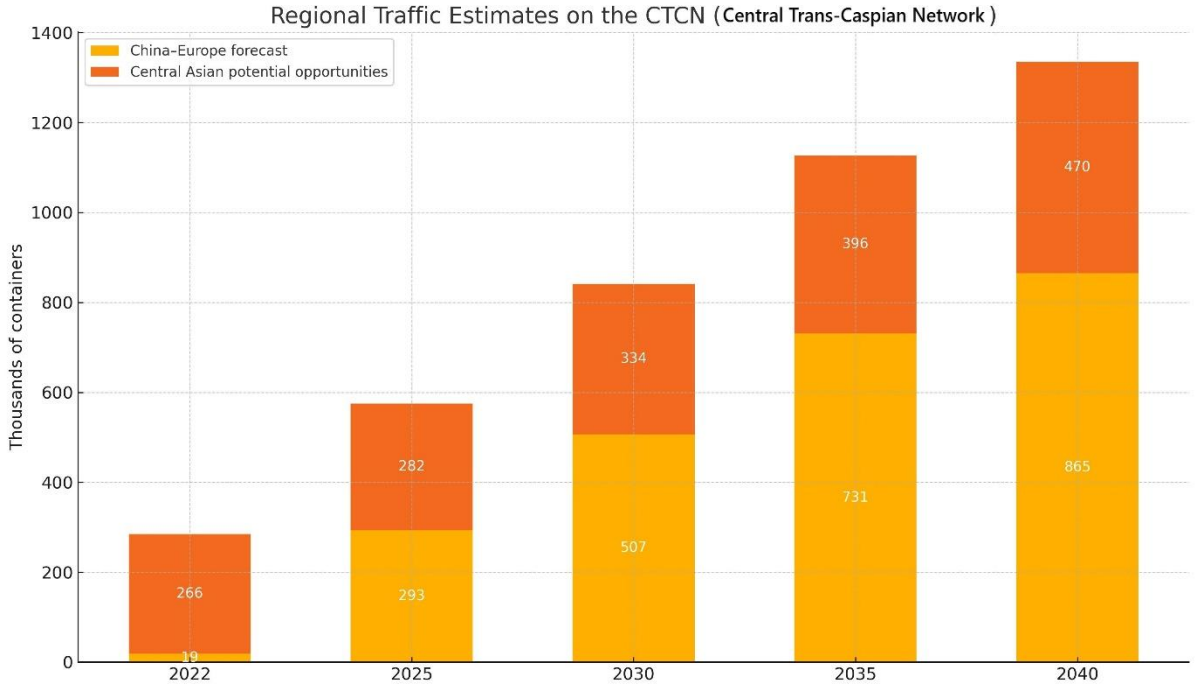

Figure 2: EBRD, 2023. Sustainable transport connections between Europe and Central Asia

- Southern Connectivity Challenges: Efforts to develop southern routes to maritime access through Iran and Pakistan also face important obstacles. Though Karachi and Gwadar (Pakistan) provide the shortest access, transit via Afghanistan is a challenge due to security risks, informal toll roads, dismal infrastructure and unpredictable border closures (Azhgaliyeva et al., 2024). Access to Iranian ports is hampered by the sanctions, difficult banking access, and inefficiencies of operation at the border of Turkmenistan requiring gauge change.

- Investment Need: Performance problems of the Middle Corridor such as high costs and slow delivery times render Central Asian trade very sensitive to its inefficiencies. Dealing with them requires substantial investments both in hard infrastructure (e.g., ports, rail upgrades) but also in key soft measures such as the standardization of procedures and digitalization of logistics (essential for private sector involvement).

Issue 7: Biodiversity Conservation (Environmental/Conservation)

Biodiversity loss and ecosystem degradation are important cross-border challenges in Central Asia, which are closely linked to climate change, land degradation, and overexploitation of natural resources (OECD, 2022; United Nations, 2021).

- Threats to Ecosystems: The main threats to biodiversity are anthropogenic and are associated with increasing population and intensified economic activities. These include habitat degradation, overgrazing and deforestation, pollution with toxic chemicals and pesticides, unsustainable development of recreation areas, and introduction of alien species (United Nations, 2021). The use of agrochemicals in Uzbekistan in the Soviet period was high, which negatively affected the environment and public health.

- Impact of the Aral Sea Crisis: The Aral Sea catastrophe caused massive loss of biodiversity, including disappearance of over 50 species of wild animals and plants. Eleven species of fish went extinct, and the number of endangered species increased extinct (World Bank, 2022).

- Hydropower Fragmentation: The construction of hydropower, although necessary for energy security, causes ecosystem alteration by fragmenting river habitats, obstructing fish migration and changing the flow and temperature of the river. Mitigation measures, such as establishing environmental flow release or building fish passages, are rarely taken in Central Asia.

- Need for Action: Uzbekistan is incorporating biodiversity monitoring into the system of state monitoring and is focused on setting up Protected Natural Areas (PNAs) and making conservation targets compatible with the interests of different sectors of the economy. This requires investment not only in conservation but also in mitigation of pollution and ecological degradation, modernization of irrigation and supporting land restoration. The Biodiversity Finance Plan (2025) creates a national framework which unites public funding with private capital and civil society backing to achieve the $60 million funding target. The plan has the potential to generate $3.6 billion through 2034 when executed in full, which will enhance biodiversity protection in the country. Ultimately, all these measures are investment in human capital and quality of human environment.

Section 2: The New Nexus - Geopolitical and Economic Dynamics

Central Asia's geoeconomic importance has surged, and the region has evolved into a strategic intersection of world trade and connectivity. This strategic importance is combined with rapidly improving investment climate, fueled by the adoption of structural economic reforms aimed at market liberalization and transparency.

Strategic Connectivity and the Case for Investment

The landlocked nature of Central Asia makes it a priority to develop robust cross-border infrastructure to facilitate access to world markets. This is a strategic imperative, and connectivity development is a prime area for foreign investment (Azhgaliyeva et al., 2024).

The Middle Corridor (Central Trans-Caspian Network) is now being recognized as a viable trade route between Asia and Europe, an alternative to the traditional trade routes. The Middle Corridor performs well vis-a-vis other regional alternatives. Realization of its full potential requires a significant capital for hard infrastructure (e.g. rail upgrades and ports); and important soft connectivity measures, including enhancing coordination and regulation harmonization to decrease border barriers. Low-cost and high-benefit soft connectivity measures such as digitization of transport documents (e-TIR, e-CMR), enhanced interoperability and trade facilitation efforts would offer substantial efficiency to operations, reducing the most significant barriers along the corridor such as lack of transparent tariffs and fair access. The Central Asian network (Figure 3) can play a more prominent role as the Eurasian hub because of its strategic central location between China and Europe (Azhgaliyeva et al., 2024).

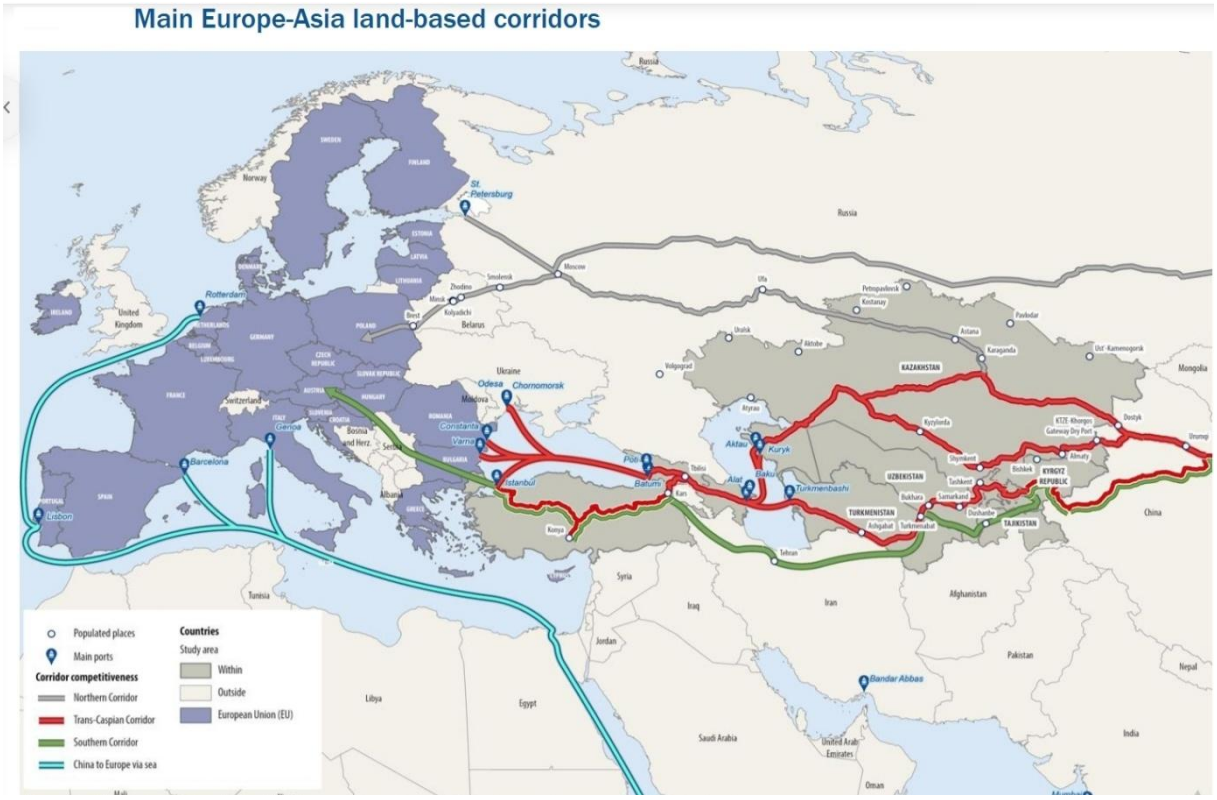

Figure 3: EBRD, 2023. Sustainable transport connections between Europe and Central Asia

Investors are attracted to regional platforms such as Central Asia Regional Economic Cooperation (CAREC) Program to coordinate investments in trade, transport and energy. Investment in this regional co-operation is viewed as essential to lower trade costs and reach the new high-growth consumer markets of over 80 million people (CAREC, n.d.). Trans-regional integration and connectivity are fundamental drivers leading to transformational changes in Central Asia, where both hard (e.g. railways, highways) and soft (e.g. harmonization of legal regimes) components are equally important to facilitate seamless movement of goods, services and capital.

China Connection and Belt and Road Initiative (the BRI)

The People's Republic of China (PRC) is a key partner and heavy investor in Central Asia, to a large extent through the Belt and Road Initiative (BRI). Central Asia constitutes a crucial part of the Silk Road Economic Belt (SREB), giving China a land-linked gateway to West Asia and Europe (Nicharapova, 2023). China's strategic interests include energy security by diversification, stability in the Xinjiang Uygur Autonomous Region (XUAR) which borders three Central Asian Republics (CARs), and access to European markets.

Chinese investment focuses heavily on infrastructure, energy, and trade. Key investments are the Central Asia-China gas pipeline system that routes gas from Turkmenistan, Uzbekistan, and Kazakhstan to China, as well as major railway projects. China's overall trade with Central Asia has increased to $90 billion in 2023 (Khanal & Zhang, 2024). Investment in transport corridors, like the China-Central Asia-West Asia Corridor, represents a logistical transformation of the entire region (Figure 2, Figure 3).

While the BRI provides much needed capital and infrastructure, it attracts highly polarized international perceptions. Western media sometimes presents the concept of BRI as an instrument of geopolitical supremacy, and concerns have been raised regarding debt sustainability and geopolitical risks. In contrast, there is a growing emphasis among China-based scholars to focus on the sustainable development aspects of the BRI, with research focusing on clean energy, carbon emissions and ecological governance. Investment in Central Asia is often driven by China's strategic interests in energy resources, infrastructure development and geopolitical concerns in the region (Khanal & Zhang, 2024). A long-standing issue in the context of the China-Central Asia relationship is water consumption in Central Asia and cooperation with the PRC over transboundary rivers. However, the most important border and transboundary issues between Kazakhstan and China including the border demarcation and cooperation in the use and the protection of trans-boundary rivers were settled through constructive negotiations in the late 1990's and early 2000's.

Section 3: Regional Leaders and Investment Hubs: Kazakhstan and Uzbekistan

The World Bank (2022) reports that Uzbekistan launched a comprehensive economic reform program in 2016 which included currency and foreign exchange liberalization, restructuration of state-owned enterprise, and tax and customs reforms. The region's most developed institutional framework exists in Kazakhstan because it joined the WTO, adopted OECD investment standards and operates through the Astana International Financial Centre (AIFC) (OECD, 2023). The two states lead Central Asia's investment activities; they generate 75% of regional GDP while creating positive effects for Kyrgyzstan, Tajikistan and Turkmenistan through their activities in hydropower, mining, agriculture, transport, and manufacturing (ADB, 2023).

Regional Cooperation

In 2016, a foreign-policy shift of Uzbekistan led to increased regional coordination, which resulted in more than 30 bilateral agreements between 2017 and 2023 on trade, borders, transport and water management (UN, 2021). The country's central location between all four Central Asian states makes it the central point for regional infrastructure development through the China-Kyrgyzstan-Uzbekistan railway and the Trans-Afghan corridor as well as electricity-market integration projects.

The 2022–2023 resolution of the Kempir-Abad reservoir dispute with Kyrgyzstan established 300 km of border demarcation and operational framework (UNDP, 2023). The border dispute resolution has brought stability in the region, decreased market risks and created better investment opportunities.

The Western Europe-Western China corridor, the ports of Aktau and Kuryk and 17,000 km of electrified railway lines are major transit assets in Kazakhstan (World Bank, 2023). The transportation networks enable Uzbekistan and southern republics to connect with European, Caspian and East Asian markets. The AIFC commercial jurisdiction and Samruk-Kazyna sovereign wealth fund operate as institutional support for multi-country investment projects.

Economic Liberalization and Investment Environment

The Uzbekistan-2030 Strategy describes how Uzbekistan will achieve upper-middle-income status by strengthening institutions, developing private enterprise and prioritizing the protection of the environment (World Bank, 2022). As part of its market reforms, the government accelerated price liberalization by selling state-owned enterprises and lowering the corporate income taxes to 15% from 20%. The "Single Window" customs platform now serves more than 50,000 businesses (IMF, 2022). The national Foreign Direct Investment (FDI) inflows reached $8 billion in 2023 while the government set a goal to achieve $110 billion by 2030 (Khoshimov et al., 2025).

Transport development is a major factor which drives this economic growth. The country dedicates funds to rebuild ~1,000 kilometers of highways every year while working to electrify essential railway routes. The upcoming new Tashkent International Airport is said to establish itself as one of the largest transportation centers in Central Asia when it opens in 2030.

Kazakhstan received the highest FDI at $230 billion and developed 1,400 Public-Private Partnership projects since 2016 (OECD, 2022). The entire region increases its attractiveness for investors because of this cumulative effect and growing scale.

Green Transition and Environmental Investment

The Green Economy Transition Strategy of 2019 serves as the base for Uzbekistan's environmental strategy, which includes its Nationally Determined Contribution (NDC) to decrease emissions by 35% by 2030. The country achieved competitive renewable-energy auction results which established solar and wind power prices at 1.8-2.7 US cents/kWh (Azhgaliyeva et al., 2024). The government has secured over 8 GW of renewable energy projects through contracts with companies like ACWA Power, Masdar, Voltalia and Total Eren. The government predicts a $10 billion adaptation-finance gap while exploring sovereign green bond options.

The 2060 Carbon Neutrality Strategy of Kazakhstan supports environmental investment through a combination of renewable-energy auctions and regional electricity-market participation (OECD, 2022). The two countries together possess more than 80 GW of untapped hydropower resources, an opportunity for green investment.

The regional investment system is based on Uzbekistan and Kazakhstan due to their large economic base, advanced reform efforts and strong institutional framework. The economic development of Uzbekistan and Kazakhstan also makes investments in Kyrgyzstan, Tajikistan and Turkmenistan more attractive creating a unified economic climate throughout Central Asia.

Section 4: Investment Opportunities Related to Cross-Border Issues and Cooperation

Recognizing the growing importance of the region on a global scale (Figure 4), on 6 November 2025, President Trump hosted the C5 + 1, bringing together all the presidents of the Central Asian countries. This summit marks a turning point in US-Central Asia economic and strategic ties. Over US$ 25 billion in contracts were signed, with a pipeline of over US$ 100 billion of longer-term commitments (World Bank, 2023).

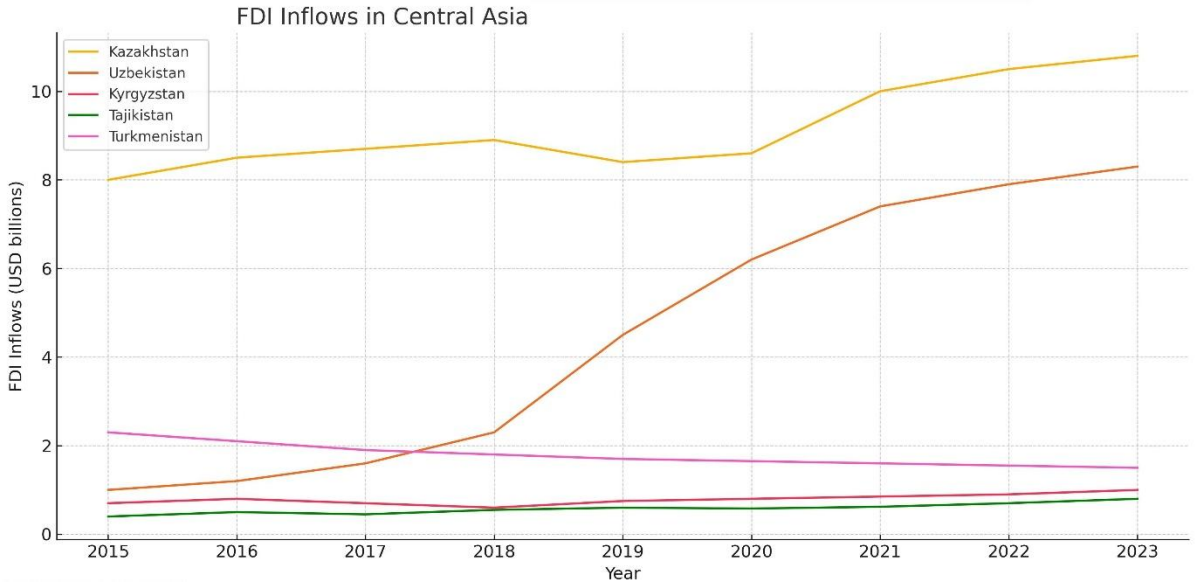

Figure 4: UNCTAD. (2023). World Investment Report 2023

For Uzbekistan specifically, agreements worth around US$ 34.5 billion were signed, for projects in aviation, critical minerals, infrastructure, agriculture, energy and tech. In Kazakhstan, US$ 17 billion in deals were announced, including a joint project to mine tungsten valued at around US$ 1.1 billion (Azhgaliyeva et al., 2024).

These agreements mark a strategic shift: through economics and not military engagement, the U.S. hopes to expand its footprint in a region, which has previously been dominated for many years by Russia and China. and give Central Asian states access to new investment, technology and supply chain partnerships. This shift gives Central Asian states access to new investment, technology and supply chain partnerships. Looking into the future, successful implementation of these agreements may change trade corridors in the region, increase local production of critical minerals and ease access to Western markets.

Some of the best opportunities for high ROI in Central Asia are in financing projects that directly tackle and address the seven cross-border critical challenges, often in multilateral or multi-sectoral frameworks.

a) Investment in Integrated Water and Energy Systems (Issues 1 & 4)

To try and mitigate the resource conflicts that are inherent with the WEF Nexus (Issue 1), as well as the seasonal instability of energy sources (Issue 4), investors should pay attention to solutions that promote efficiency and integration across sectors (Liu et al., 2020; De Keyser et al., 2026).

Water Resource Efficiency & Modernization:

- Irrigation Infrastructure: Large investment is required to modernize inefficient irrigation infrastructure of the downstream nations, most notably Uzbekistan, which uses ~90% of its water for agriculture. Investment is sought for the deployment of modern water-saving technologies (e.g. drip irrigation), water re-use and recycling facilities, and the development of water pricing reform to encourage resource conservation (Amirgaliev et al., 2022).

- Nexus-Driven Hydropower: Investment in large-scale hydropower, especially in upstream countries, should incorporate benefits-sharing frameworks to avoid threatening downstream irrigation needs and increasing interstate tensions. This includes the 'co-financing of joint projects', e.g. the dialogues between Kazakhstan, Kyrgyzstan and Uzbekistan for the Kambarata-1 HPP (De Keyser et al., 2026).

Modernization and Stability of Energy System:

- Smart Grid Investment: To manage integration of intermittent wind and solar energy with the main grid and seasonal fluctuations in the grid requires large investment in grid rehabilitation, modernization as well as smart control systems. Technical losses in the existing grids are high (Figure 5) and minimization is necessary for the overall efficiency of the system.

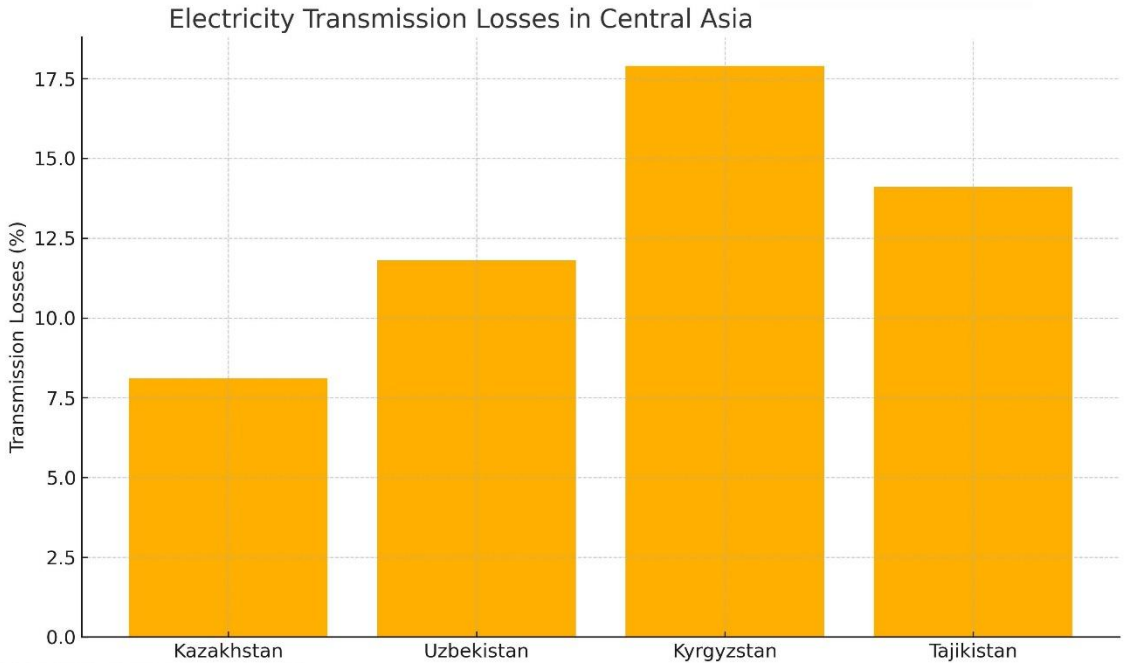

Figure 5: International Energy Agency (IEA). (2023). Electricity Market Report 2023.

- Sediment Management: Investment is urgently needed in engineering and environmental projects to combat high sedimentation rates that are threatening long-term viability of major hydropower reservoirs. This includes financing soil conservation and erosion control upstream as well as having sustainable sediment management practices at the reservoir level (Karthe et al., 2014).

b) Investing in Trade Infrastructure and Governance (Issues 5 & 6)

Capitalizing on Central Asia's position as Eurasia's geoeconomic bridge requires focused investments to solve physical bottlenecks and the regulatory balkanization of Central Asia.

Hard Connectivity (Logistics and Trade Pathways):

- Middle Corridor Development: Investment is required for the multimodal development of the Middle Corridor, which involves modernization of rail networks, upgrade of Caspian Sea ports and development of multimodal logistics centers in key regions of Uzbekistan. This also includes financing for the planned China-Kyrgyzstan-Uzbekistan railway, an important alternative linkage.

- Southern Route(s): Investors have the opportunity to finance infrastructure, which facilitates access to oceanic ports, such as modernizing rail infrastructure towards Iranian and Pakistani ports and resolving the issues of transshipment due to gauge differences (Azhgaliyeva et al., 2024).

- Tashkent International Airport: Investors are invited to participate in developing Central Asia's premier aviation hub, expanding passenger and cargo capacity to ~20 million travelers annually. The project includes new terminals, logistics facilities, and multimodal transport links, positioning Uzbekistan as a key connector between Europe, South Asia, and China's Belt and Road corridors.

Soft Connectivity (Trade Barriers and Customs):

- Digitalization and Automation: There are great opportunities for high returns in financing digital solutions for customs and logistics (Issue 5), including the implementation of e-TIR, e-CMR, unified customs clearance solutions and risk-based inspection systems to ease cross-border movement. The idea is to move away from current cumbersome procedures, in order to achieve international best practices in times taken to clear cargo.

- Regulatory Harmonization: Investment can facilitate technical assistance and capacity development for harmonization of different regulatory frameworks, for the standardization of sanitary and phytosanitary (SPS) measures and for addressing customs fragmentation across countries of Central Asia.

c) Investment in Mining, Critical Minerals and Resource Governance

Central Asia has massive deposits of critical minerals that are essential for technologies around the world, thus providing a major opportunity for investment.

- Oil and Gas: Central Asia's hydrocarbon reserves remain among the world's least explored yet most accessible. Kazakhstan, Uzbekistan and Turkmenistan offer stable frameworks for upstream and midstream investment, with new PSAs and privatization initiatives unlocking onshore and shale potential. Expanding regional pipeline networks and LNG infrastructure promise high returns as Europe and Asia seek diversified, non-Russian energy supplies (IMF, 2022).

- Mineral Resources: Central Asia is rich in valuable minerals that the world increasingly depends on—copper, tungsten, uranium, rare earth elements, gold, and lithium. Uzbekistan's Angren and Almalyk belts and Kazakhstan's Altai and Balkhash zones hold some of the region's largest and best-studied deposits. Kyrgyzstan and Tajikistan add important gold, antimony, and rare-metal resources, while Turkmenistan offers titanium–zirconium sands and growing rare-earth potential. With licensing becoming clearer, transport links improving, and new processing plants emerging, the region is steadily becoming a more attractive place for investors to develop full mining value chains, as Figure 4 demonstrates (Nicharapova, 2023; Shabir Ahmad Khan, 2025).

- Risk Mitigation: Investment is also pivotal in addressing environmental and social risks linked to mining, with emphasis on rigorous QA/QC (Quality Assurance/Quality Control) based practices in exploration as well as best practices in tailings management for avoiding cross-border pollution.

d) Financing Environmental and Conservation Agenda (Issues 2, 3 & 7)

Ecological resilience projects present their own unique investment opportunities along the lines of the global climate finance and ecosystem services markets (World Bank, 2022).

Ecological Innovation and the Aral Sea Restoration (Issue 3):

Zone of Environmental Innovation: Investors are able to finance large-scale land restoration and afforestation projects in the Aral Sea basin in line with Uzbekistan's initiative to promote the region as a Zone of Environmental Innovation and Technologies. Funding mechanisms should incorporate green finance mechanisms such as green bonds.

Nature-based Carbon Projects: Central Asia offers prime opportunities for these through large-scale tree planting and rangeland restoration. Uzbekistan's Aral Sea afforestation program alone targets over 1.5 million ha of saxaul forests, capturing thousands of tons of CO_2. Investors can earn verified carbon credits while supporting biodiversity, combating desertification, and revitalizing degraded steppe and riparian ecosystems across the region (World Bank, 2022).

Pollution and Health Mitigation: Significant investment is required to address the legacy of industrial and agricultural pollution. Priority must be given to the stabilization and rehabilitation of transboundary industrial and mining tailings, which pose a severe threat to shared water resources (OECD, 2022).

Stability and Development across the Borders (Issue 2):

Conflict-Sensitive Development: Investment will play a key role in supporting economic development in border areas, including the Ferghana Valley, enabling the construction of infrastructure (e.g. small-scale water projects, market access roads) which creates less competition for resources and increases the development of local cross-border cooperation, turning border areas from a source of conflict into points of shared economic cooperation (Mamatova, 2018; United Nations, 2021).

Tourism Potential: Uzbekistan's tourism boom - now drawing over 10 million visitors a year and supported by better air connections - has opened major opportunities in heritage hotels, eco-tourism, and wellness retreats. Silk Road cities like Samarkand, Bukhara, and Khiva remain some of the most striking UNESCO sites anywhere. The rest of Central Asia adds its own strengths: Kazakhstan's modern cities and steppe landscapes, Issyk-Kul, Kyrgyzstan's and Tajikistan's world-class trekking routes, Turkmenistan's desert and archaeological sites. With easier visas, improving transport, and active government support, the whole region is becoming a more inviting and investable tourist destination.

Biodiversity Protection - Issue 7:

Ecosystem Resilience: Funding is necessary for research and implementation of measures to combat climate change and infrastructure development by conserving and protecting sensitive ecosystems (e.g. rivers, glaciers, PNAs). This includes the financing of the introduction of ecological mitigation measures, such as fish passages and environmental flow regulations, which are now lacking in the hydropower sector in the region (OECD, 2022).

Conclusion: Embracing Cooperation to Build a Resilient Future

Central Asia is at an inflection point, where due to the common challenges in the region, namely water, environment and connectivity, strategic co-operation is imperative for achieving sustained economic stability. The trajectory of the region will be shaped by its ability and choice to move from resource competition, which is a legacy of the Soviet past, towards a synergistic future and benefit sharing.

The complexity of Central Asia's core issues – from managing the existential threat of water scarcity and the Aral Sea catastrophe, to resolving longstanding border issues to integrated energy and logistics networks on a big scale – calls for synchronized and cross-border investment (Karthe et al., 2014; Azhgaliyeva et al., 2024). The payoff for this coordination is substantial: the conversion of the landlocked geography of the region into the land-linked competitive heartland of Eurasian trade.

By investing in projects that strengthen cooperation through projects with real, positive outcomes, be that through financing the necessary hard infrastructure, investing in digital trade facilitation, tourism, or through mobilizing green finance, it is possible for international partners to go beyond transactional engagement and have high and stable returns on investment. (World Bank, 2020).

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Global Neighbours GmbH
Johannesgasse 15/3/12
A — 1010 Vienna
www.globalneighbours.org

+43 1 7146848
contact@globalneighbours.org