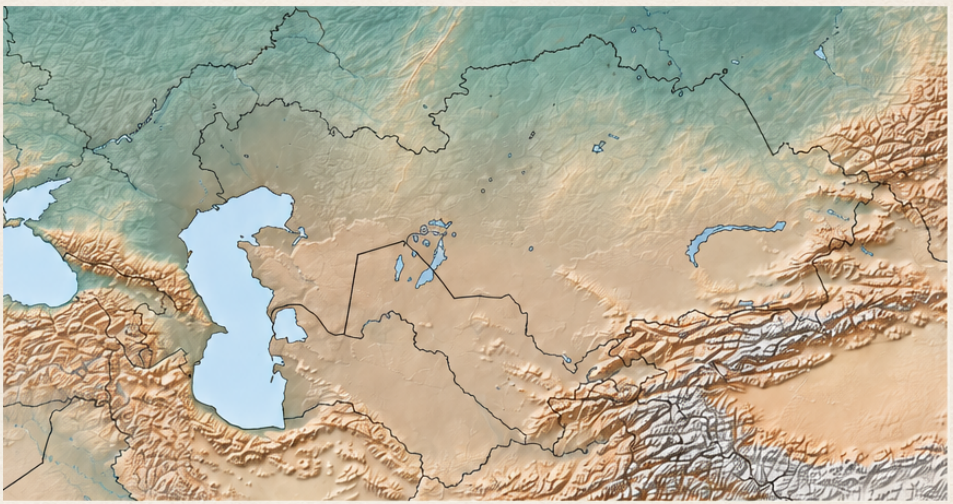
SDU CENTRAL ASIAN RESEARCH CENTER

Kazakhstan's Cross-Border Cooperation with Central Asian Countries:

Borders, Domains, and Practices

Edited by Sergei Golunov



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This volume examines cross-border cooperation between Kazakhstan and its Central Asian neighbors – Turkmenistan, Uzbekistan, and Kyrgyzstan. Part I analyzes the three borders: their history, the asymmetries between the neighboring regions, and the institutions and functions of cooperation. Part II explores key spheres of interaction – agriculture, tourism, water management, emergency management, urban proximity, and economic corridors – and compares Kazakhstan's experience with that of other world regions. The book is intended for researchers, policymakers, and practitioners dealing with borders, regional development, and Central Asian affairs.

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List of Abbreviations

ABEC	Almaty–Bishkek Economic Corridor
ADB	Asian Development Bank
AIIB	Asian Infrastructure Investment Bank
ASEAN	Association of Southeast Asian Nations
ASSR	Autonomous Soviet Socialist Republic
BWO	Basin Water Organization
CAREC	Central Asia Regional Economic Cooperation
CBC	cross-border cooperation
CESDRR	Center for Emergency Situations and Disaster Risk Reduction
CIS	Commonwealth of Independent States
COVID-19	coronavirus disease 2019
CSTO	Collective Security Treaty Organization
DRM	disaster risk management
EAEU	Eurasian Economic Union
EDB	Eurasian Development Bank
EGTC	European Grouping of Territorial Cooperation
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GDP	gross domestic product
GIS	geographic information systems
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Agency for International Cooperation)
ICWC	Interstate Commission for Water Coordination
IFAS	International Fund for Saving the Aral Sea
IFRC	International Federation of Red Cross and Red Crescent Societies
INSTC	International North–South Transport Corridor

IRENA	International Renewable Energy Agency
IWRM	integrated water resources management
MES	Ministry of Emergency Situations
NGO	non-governmental organization
OSCE	Organization for Security and Co-operation in Europe
OTS	Organization of Turkic States
RSFSR	Russian Soviet Federative Socialist Republic
SCO	Shanghai Cooperation Organization
SDU	SDU University
SSR	Soviet Socialist Republic
TITR	Trans-Caspian International Transport Route
TURKSOY	International Organization of Turkic Culture
UN	United Nations
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNODC	United Nations Office on Drugs and Crime
USSR	Union of Soviet Socialist Republics
WOAH	World Organization for Animal Health

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Introduction

Cross-border cooperation (CBC) is both an important field in conceptual border studies and a practical area of work that can produce tangible benefits for border territories: improving residents' quality of life, strengthening good-neighborly relations between adjacent communities, addressing environmental problems, and so on.

To assess the importance of this phenomenon, its meaning must first be clarified. The best-known definition, found in the 1980 European Outline Convention on Transfrontier Co-operation between Territorial Communities or Authorities (the Madrid Convention), describes CBC as "any concerted action designed to reinforce and foster neighborly relations between territorial communities or authorities within the jurisdiction of two or more Contracting Parties and the conclusion of any agreement and arrangement necessary for this purpose" (Council of Europe 1980). Markus Perkmann's broadly similar definition presents CBC as problem-solving cross-border interaction involving subnational authorities and supported by quasi-legal institutional arrangements (Perkmann 2003). In some cases, however, the term is used much more broadly. OSCE press releases, for example, effectively treat cross-border cooperation as any cooperation between neighboring countries (OSCE 2014; OSCE Secretariat 2022). This usage can probably be explained by the fact that the OSCE, unlike the EU, represents states rather than subnational regions, which have far greater influence in the EU. At the same time, such an interpretation blurs the concept and makes it less useful for clearly focused policy.

Yet conceptual and practical difficulties remain even when relatively narrow and specific mainstream definitions are used. One of the most serious problems is conceptual Eurocentrism,

since most theoretical and practical work in this field relies heavily on European experience. In the case of the Madrid Convention, the problem is that subnational authorities are presented as the main actors in CBC, even though their powers may be weak in centralized, especially authoritarian, states outside the EU, and their ability to conclude agreements, or even informal understandings, without central approval may be extremely limited. With this in mind, Sergei Golunov sought to move beyond a Eurocentric understanding of CBC and make the concept more applicable across diverse global settings. He proposed a somewhat broader definition: recurring cooperative interactions among actors from neighboring territories, or territories perceived as neighboring, in different countries or de facto independent political entities that bring mutual benefit to borderland communities. Such interactions must be non-criminal and, at least potentially, capable of being recognized as legitimate by the neighboring states (Golunov 2025). This definition focuses on the beneficiaries of CBC, while leaving open the question of who participates in it and who organizes it. It also implicitly allows for the possibility that central, rather than subnational, authorities may play the leading role.

Understood in this way, CBC can bring substantial benefits to borderland communities. It can soften the effects of both physical barriers, such as border control, and non-material constraints, including differences in legal and economic regimes, culture, language, and other factors. The development of CBC can help reduce the marginality of border provinces (Fritsch et al. 2015), which are often peripheral within their own national economies. A hard interstate border can also make the outer edge of such a province a weak channel for flows between that province and its external surroundings, especially when compared with open internal borders. More

advanced forms of CBC can support an integrated system of cross-border development, including complementary transport and production infrastructure (Fricke 2015; Christmann et al. 2020), access to medical, educational, and other services (Basboga 2020), mutual assistance in emergencies, matching surplus labor with demand for it (Pires and Nunes 2018), and promoting cross-border tourist destinations attractive to visitors from third countries (Kramsch 2001; Więckowski 2023). CBC can also help reduce development gaps between neighboring territories (Jakubowski et al. 2022), prevent population outflow by improving economic prospects in border territories (Cairo et al. 2024), spread innovations (van den Broek, Rutten, and Benneworth 2020), address local environmental problems (Renner, Meijerink, and van der Zaag 2018), improve relations between neighboring communities, and prevent conflicts (Spierings and van der Velde 2013; Wassenberg 2017).

Many of the benefits associated with CBC are captured by Christophe Sohn's idea of the "border as a resource." In this view, the border and border territories can be used by cooperating parties as economic and logistics gateways to a neighboring state, as venues for concluding deals, as spaces where price differences in goods and services and exchanges of innovation can be put to use, and as a means of attracting outside attention by creating a cross-border identity (Sohn 2014).

The CBC agenda is especially relevant for Kazakhstan, whose land borders are the fifth-longest in the world. There is already a substantial body of research on CBC along the Kazakhstan–Russia and Kazakhstan–China borders. Far fewer studies examine similar issues along Kazakhstan's borders with its Central Asian neighbors: Kyrgyzstan, Turkmenistan, and Uzbekistan. Yet this cooperation may be an important part of the Central Asian regional integration agenda. In that context, borders and their adjoining territories can be seen either

as bridges connecting the countries of the region or, conversely, as chasms made up of material and non-material barriers that obstruct closer and more effective convergence.

Most studies of Kazakhstan's CBC with its Central Asian neighbors focus on interaction in specific fields: management of transboundary water resources on the Kazakhstan–Kyrgyzstan border (Zinzani 2017; Kangur 2008), informal trade (Kaminski and Mitra 2012), obstacles to legal cross-border economic activity (Vakulchuk and Irnazarov 2014), and tourism (Sergeyeva et al. 2022). Comprehensive and systematic studies of this cooperation are still lacking.

The project "Cross-Border Cooperation between Kazakhstan and Neighboring Central Asian Countries," carried out at SDU University in Kaskelen, Kazakhstan, in 2023–2026, is intended to fill this gap. As part of the project, several works have been published or are being prepared for publication on CBC along specific borders (Kozhirova and Batyrbaev 2025) and in particular sectors (Smirnova 2026), as well as on the applicability of international experience to this cooperation (Golunov and Bitabar 2025; Golunov 2024; Serikkalieva 2025). The project has also produced broader conceptual generalizations about the need to move beyond Eurocentrism in CBC studies (Golunov 2025) and about the distinctive features of CBC within Central Asia (Golunov and Bitabar 2025). The present study may become the first book-length work to offer a systematic analysis of Kazakhstan's CBC with its post-Soviet Central Asian neighbors.

The main body of this work consists of two parts. The first provides a comprehensive analysis of CBC issues along Kazakhstan's individual borders. Svetlana Kozhirova and Kairat Batyrbayev examine the Kazakhstan–Turkmenistan border, the most closed and least contact-intensive of the three borders analyzed here. They nevertheless note clear progress in the

transport and logistics component of cooperation, as well as positive trends in trade, environmental protection, and culture.

Sergei Golunov then examines two more open and contact-intensive cases that differ substantially in their characteristics: the Kazakhstan–Uzbekistan and Kazakhstan–Kyrgyzstan borders. Although most of the Kazakhstan–Uzbekistan border remains weakly connected, the diversity and intensity of cross-border interaction along a relatively short section more than compensate for the lack of such diversity elsewhere. This includes not only the sharp rise in official contacts and the launch of large-scale logistics and production projects after President Shavkat Mirziyoyev came to power in Uzbekistan in the second half of the 2010s, but also various grassroots forms of interaction in agriculture, trade, transport, and other areas.

Interaction across the Kazakhstan–Kyrgyzstan border is more open and marked by consistently intensive official local-level contacts. It is especially telling that the Kazakhstan–Kyrgyzstan borderland hosts a form of cooperation that is unique in Central Asia: the Chu–Talas Water Management Commission, which formally includes not only central authorities but also regional authorities, local communities, and non-governmental organizations. Although disagreements periodically arise over water allocation and the rules governing cross-border flows of people and some goods, these disputes are ultimately resolved in a constructive spirit.

The second part examines CBC between Kazakhstan and neighboring Central Asian states in specific fields. Vera Smirnova analyzes cooperation in one of the key areas, agriculture, which occupies an important place in interaction between neighboring provinces and directly or indirectly encourages intensive grassroots cross-border cooperation: trade, the exchange of technologies and practical experience, water-allocation issues, and other activities. In the following chapter,

the same author analyzes cross-border cooperation in tourism, which is developing quite actively but still lacks sufficient cross-border coordination.

Azhar Serikkalieva examines cross-border cooperation in water management, focusing primarily on Kazakhstan's interaction with Kyrgyzstan and Uzbekistan. The configuration of such cooperation is shaped to a large extent by Kazakhstan's downstream position, but it also depends on the degree to which interaction is institutionalized. She emphasizes that the most stable institutional mechanisms have developed between Kazakhstan and Kyrgyzstan, whereas cooperation with Uzbekistan has until recently been more ad hoc, and interaction with Turkmenistan, given the absence of shared transboundary rivers, takes place mainly within a broader multilateral framework. Weak dispute-resolution mechanisms and climate risks remain common problems, making the development of joint transboundary institutions particularly important under these conditions.

Merey Galymzhanova's chapter focuses on CBC in emergency management, a field that is especially relevant for the Kazakhstan–Kyrgyzstan borderland. Because of the nature of this field, such cooperation is highly centralized, but this does not prevent intensive and prompt interaction.

Sergei Golunov draws attention to the neighboring pairs of settlements located on opposite sides of the border: Tashkent–Saryagash and Bishkek–Kordai. The obvious asymmetry in their size and potential in favor of the neighboring states' capitals appears to make it difficult to conceptualize these pairs as full-fledged twin cities. At the same time, the potential of these configurations for more effective cross-border cooperation seems to remain underused.

Islam Supyaldiyarov examines the Almaty–Bishkek and Shymkent–Tashkent economic corridors as instruments of

cross-border cooperation. He shows that their main practical role lies in coordination, expert preparation, planning, and the development of sectoral solutions. While the Almaty–Bishkek corridor has proved more durable than the Shymkent–Tashkent–Khujand project, he concludes that even developed coordination mechanisms do not by themselves ensure deeper cross-border integration.

In the final chapter of this part, Golunov analyzes how international CBC experience might be applied in Central Asia, noting both promising elements and likely limits to its applicability.

The authors, of course, do not claim that this study is exhaustive. They nevertheless hope that it will encourage further research on the conceptually and practically important issues of Kazakhstan's CBC with its Central Asian neighbors.

Part I. Borders

1. Kazakhstan–Turkmenistan

Svetlana Kozhirova and Kairat Batyrbayev

Post-Soviet borders in Central Asia have several features that distinguish them from most other borders in the world. First, they were not formed through long historical processes or wars, but administratively during the Soviet period, mainly through the national-territorial delimitation of the 1920s and 1930s. Second, before the collapse of the USSR, many of them had not been fully demarcated on the ground. Third, on both sides of many borders there were communities linked by ethnicity, kinship, and culture (Newman 2006b). Taken together, these factors produced different trajectories of post-Soviet border settlement, from protracted conflicts and unresolved territorial claims, as in the case of the Kyrgyz–Tajik and Kyrgyz–Uzbek borders, to the pragmatic bilateral settlement characteristic of the Kazakhstan–Turkmenistan model.

The transnational dimension of CBC (Perkmann and Sum 2002) is particularly important in Central Asia, since the region lies at the intersection of the interests of major external players, including Russia, China, the United States, the European Union, Turkey, and Iran. Each pursues its own strategy for engaging with the region through bilateral and multilateral mechanisms. In these circumstances, Kazakhstan–Turkmenistan cooperation is not a closed bilateral system. It is embedded in broader regional and transcontinental initiatives, above all the Trans-Caspian International Transport Route (TITR), the International North–South Transport Corridor (INSTC), and the infrastructure components of China's Belt and Road Initiative (Annajam 2023).

Context of Bilateral Relations

Turkmenistan and Kazakhstan declared independence in October and December 1991, respectively, and entered the post-Soviet international space almost simultaneously. In October 1992, the two states established diplomatic relations, marking the starting point for the gradual development of their bilateral partnership. Rapid diplomatic recognition and the early institutionalization of dialogue distinguished Kazakhstan–Turkmenistan relations from a number of other post-Soviet dyads, where the treaty and legal framework took years to develop.

The Treaty on Friendly Relations and Cooperation, signed in 1993 and ratified by Kazakhstan through Presidential Decree No. 2197 of April 17, 1995, became the foundational document establishing the normative basis for interaction (Adilet 1995). The treaty set out the key principles of bilateral relations: mutual respect for state sovereignty and territorial integrity, non-interference in internal affairs, equality, and mutually beneficial cooperation. Even at the stage of this basic treaty, the parties included provisions on cooperation at the subnational level, which indicates the importance of the border dimension in the bilateral agenda.

The border issue, which became a source of acute conflict among several other Central Asian states, was resolved in the Kazakhstan–Turkmenistan case within a short period and without major disagreements. The Kazakhstan–Turkmenistan state border is approximately 426 km long (Figure 1.1). In 1997, the two sides signed a declaration on the further development of cooperation that included key understandings on the border issue, and by 2001 the state boundary had been legally fixed. Law of the Republic of Kazakhstan No. 455 of July 2, 2003, "On the Ratification of the Treaty between the Republic of Kazakhstan and Turkmenistan on the Delimitation and Process of Demarcation of the Kazakhstan–Turkmenistan

State Border," finalized the legal formalization of the border (Adilet 2003b). In the first decade of independence, Kazakhstan and Turkmenistan eliminated potential territorial disputes and created a legal basis for the development of the full range of bilateral relations.



Figure 1.1. Map of the Kazakhstan–Turkmenistan borderland by province. Created with MapChart (mapchart.net) and licensed under CC BY-SA 4.0 (MapChart 2023). Province names are given in the state languages.

A comparison with other subregional pairs highlights the distinctive nature of the Kazakhstan–Turkmenistan settlement. On the Kyrgyz–Tajik border, disputed sections long remained sources of tension. The largest armed clashes took place in 2021 and 2022, causing numerous casualties; a treaty on the state border was finally signed in March 2025. Kyrgyzstan and Uzbekistan were able to reach a border agreement by 2023, but the practical implementation of these arrangements still re-

quires sustained attention. Against this background, the Kazakhstan–Turkmenistan model appears as an example of constructive pragmatism and mutual restraint.

The institutionalization of bilateral cooperation passed through several stages. In the first stage (1991–1997), the basic legal and regulatory framework was established: the Treaty on Friendly Relations and Cooperation was concluded, diplomatic missions were opened, and initial formats for intergovernmental consultations were launched. The second stage (1997–2007) was associated with the creation of sectoral mechanisms: the establishment of the Intergovernmental Kazakhstan–Turkmenistan Commission on Economic Cooperation, practical work on transport and infrastructure projects, and the development of interaction at the level of border regions, especially Kazakhstan's Mangystau Province and Turkmenistan's Balkan Velayat (Gundogar-news.com 2014). The third stage, from 2007 to the present, has been marked by the implementation of major infrastructure projects and the gradual expansion of cooperation in the humanitarian, environmental, and digital spheres.

Personal diplomacy has played an important role in the development of relations. Regular meetings between the presidents of Kazakhstan and Turkmenistan generated political momentum that was then translated into operational and technical levels of cooperation. According to official data, since 2010 the leaders of the two countries have held more than 30 meetings. In addition to state visits, the presidents have met on the sidelines of summits of the Shanghai Cooperation Organization (SCO) and the Commonwealth of Independent States (CIS), as well as during regional consultations of the heads of Central Asian states. Public statements by both presidents have maintained a friendly tone and have not placed disputed issues on the official agenda.

Transport and Logistics

Transport is one of the key structural elements of Kazakh–Turkmen CBC. The geographical position of both countries, in the center of the Eurasian continent and without direct access to the open seas, has historically increased the importance of overland transit routes for their foreign economic strategies (ESCAP 2022). The development of transport connectivity creates incentives for deeper cooperation, since each side gains economically from lower transit costs and a broader route network.

The key achievement of bilateral cooperation in the domain of transport infrastructure development has been the Uzen–Bereket–Gorgan railway route. The legal basis for the project was Government of Kazakhstan Resolution No. 1140 of November 28, 2007, which approved the trilateral agreement between Kazakhstan, Turkmenistan, and Iran on cooperation in the design and construction of this line (Adilet 2007). Construction proceeded in stages and was completed with the opening of the route in December 2014 in the presence of the presidents of the three states. The total length of the new railway line was about 900 km: the roughly 700 km Turkmen section, the roughly 80 km Iranian section from Etrek to Gorgan, and the connecting segment of about 120 km on the Kazakh side.

The importance of this route is multifaceted (Pokrovskaia 2022). For Kazakhstan, it provides direct and relatively short access to Iranian ports, especially Bandar Abbas on the Persian Gulf, expanding export opportunities for Kazakh producers toward South Asia, the Middle East, and Africa. For Turkmenistan, the project has become a tool for diversifying its transit role and strengthening its position in the regional transport architecture. The new line is about 600 km shorter

than the earlier rail route from Beyneu through eastern Turkmenistan to Mashhad (Lillis 2014), which produces a tangible economic effect under existing tariff conditions.

The Uzen–Bereket–Gorgan route forms part of the INSTC, a major infrastructure project designed to create a roughly 7,200 km transport link between Northern Europe and India (Asian Development Bank 2019). The agreement establishing the INSTC was signed by Russia, India, and Iran in 2000; more than 10 states, including Kazakhstan, later joined it. The corridor's western route through Azerbaijan and its eastern route through Central Asia compete for freight flows, and the Kazakhstan–Turkmenistan section is an important link in the latter. After the imposition of broad Western sanctions against Russia in 2022 and the complications affecting transit through Russian territory, the importance of the Central Asian route within the INSTC increased markedly.

At the same time, Kazakhstan and Turkmenistan participate in the TITR, also known as the Middle Corridor. It provides a direct connection between China and Europe through Central Asia and the South Caucasus, bypassing Russia. The Caspian maritime segment is served by the ports of Aktau and Kuryk on the Kazakh side and the port of Turkmenbashi on the Turkmen side. After 2022, freight volumes along the TITR increased significantly: while about 0.6 million metric tons of cargo were transported through the Middle Corridor in 2021, in 2023 the figure reached about 2.8 million tons, and forecasts point to further growth (TITR Association 2023; Interfax 2024; UNCTAD 2023). The port of Turkmenbashi, rebuilt by the Turkish contractor Gap İnşaat and opened in 2018 at a cost of around USD 1.5 billion, has acquired additional importance as a key transshipment hub for Eurasian transit.

Overland links between the two countries are served by two main border crossings: Bolashak–Serhetyaka and

Temirbaba–Garabogaz (Adilet 2011). The Bolashak–Serhetyaka checkpoint is the main overland crossing, handling most bilateral trade and transit cargo. The agreement on the international railway crossing point on the Kazakh–Turkmen border was approved by Government of Kazakhstan Resolution No. 714 of June 27, 2011. Its capacity has increased through gradual modernization. Automatic vehicle registration has been introduced, modern cargo scanners have been installed, and an electronic pre-ordering system has been launched. The Temirbaba–Garabogaz checkpoint mainly serves flows in the northwestern direction and plays an important role in Kazakhstan's trade with Turkmenistan's Turkmenbashi industrial area.

At the level of logistics infrastructure, a connected system of supporting facilities is taking shape on both sides of the border. On the Kazakh side, the Uzen–Bolashak section has become one of the key logistics nodes of Mangystau Province, accumulating substantial cargo volumes for onward transport both toward Turkmenistan and Iran and toward Caspian Sea crossings. On Turkmen territory, Bereket station has become a major transport center with links to Ashgabat and the Iranian direction; it has warehouse capacity, transshipment terminals, customs infrastructure, and service facilities.

Operational work is coordinated by the joint commission on road transport. Its regular meetings, the latest of which took place in late 2025, make it possible to coordinate tariffs, allocate cargo flows, and resolve technical difficulties at the border. The parties have moved from declarations of intent to practical measures: a network of logistics centers is being developed and through tariffs are being introduced. This has made it possible to increase transport volumes and offer faster routes through the territories of both countries.

Economic Cooperation

The economic dimension of Kazakhstan–Turkmenistan CBC shows a steady positive trend, largely linked to progress in transport and logistics. In 2025, trade turnover between Kazakhstan and Turkmenistan exceeded USD 530 million (Kapital.kz 2026). In line with the agreements reached by Kassym-Jomart Tokayev and Serdar Berdimuhamedov in November 2025, the parties set a goal of increasing mutual trade to USD 1 billion in the near term (Kazinform 2025a). This trend shows that economic relations between Kazakhstan and Turkmenistan have overcome a period of stagnation and moved into stable growth.

The structure of trade reflects the complementarity of the two economies. Kazakhstan supplies Turkmenistan with metal products, grain, flour, agricultural machinery, and food products. Turkmenistan, in turn, supplies the Kazakh market with petroleum products, polymers, textiles, and construction materials. An asymmetry remains in this exchange: Kazakh exports are more diversified, while Turkmen exports are more heavily oriented toward raw materials and semi-finished goods. Nevertheless, this economic compatibility encourages the expansion of business ties.

Small and medium-sized businesses are becoming increasingly visible actors in cross-border economic interaction. The chambers of commerce of both countries report a growing number of joint business initiatives, as well as the participation of entrepreneurs in fairs, exhibitions, and business missions. Cross-border trade relies to a considerable extent on long-standing informal ties between economic actors in Mangystau Province and Balkan Velayat. The intensification of entrepreneurial interaction is linked to efforts by both countries to simplify customs procedures, reduce barriers for small

businesses, and digitalize document flows (World Customs Organization 2021).

One dynamic area of activity has been the creation of a joint industrial, trade, and logistics hub on the border between Mangystau Province and Balkan Velayat. The project has now moved from concept to practical implementation: preferential tax and customs regimes are being introduced at specialized sites, with a focus on processing, packaging, and distributing goods. The strategic advantage of this zone lies in its role as the "western gateway" of the North–South corridor. Direct access to Caspian ports and proximity to the markets of Iran and the Persian Gulf states make the hub an important link in regional trade (Akorda 2025). Although infrastructure investment is still needed, the main efforts of the two sides are focused on aligning digital procedures, synchronizing customs processes, and creating a unified legal environment for investors.

The intergovernmental commission on economic cooperation is an important instrument for promoting trade. It addresses issues related to the trade regime, product certification, veterinary and phytosanitary control, and the regulation of transport operations. The commission serves as a platform for discussing specific trade disputes and coordinating positions on regulatory matters. Improving its effectiveness through a transition to digital document management and the introduction of a single-window principle for business remains an important task of institutional modernization.

In a broader context, Kazakhstan–Turkmenistan economic cooperation is embedded in a system of multilateral regional initiatives. Kazakhstan is a member of the Eurasian Economic Union (EAEU), which creates specific issues in its trade relations with third countries, including Turkmenistan, which is not part of this integration bloc. The asymmetry of trade

regimes creates certain difficulties, but in practice they are softened by bilateral regulatory instruments and flexible law enforcement. Turkmenistan, while adhering to the principle of permanent neutrality and keeping its distance from multilateral economic associations, nevertheless actively develops bilateral trade and economic relations.

Further development of trade potential depends on a shift from removing barriers to technological integration. The key tasks remain the synchronization of digital transport corridors and the mutual recognition of electronic certificates. An important step could be the expansion of direct correspondent relations between commercial banks and the scaling-up of settlements in national currencies, the tenge and the manat. Consistent progress on these practical issues would make it possible to move from simple trade toward a more durable investment partnership.

Energy

Energy occupies a special place in Kazakhstan–Turkmenistan relations, since both states are major producers and exporters of hydrocarbons. Kazakhstan has proven oil reserves of around 30 billion barrels and ranks twelfth globally (Mamatkobilov 2025). Turkmenistan has the world's fourth-largest proven natural gas reserves, although estimates differ widely: international reviews put them at about 14 trillion cubic meters (Rahimova 2025), while official Turkmen sources cite more than 50 trillion cubic meters (Oilgas.gov.tm 2023). Their status as major energy powers creates some competition in export markets, but it also opens opportunities for coordinating transit policy and developing technological cooperation.

In practice, energy cooperation is developing along several lines. Kazakhstan is interested in importing Turkmen elec-

tricity for its southern regions, where shortages of generation capacity periodically create strain in the energy balance. Turkmenistan, with its substantial thermal generation potential, views electricity exports as a promising way to diversify export revenues. Within the regional energy market of Central Asia, whose modernization is among the priorities of the United Nations (UN) and the World Bank, Kazakhstan–Turkmenistan interaction can help improve the reliability of the regional energy balance.

In the gas sector, the interests of Kazakhstan and Turkmenistan intersect primarily in transit logistics. Turkmenistan exports a large share of its gas to China via the Central Asia–China pipeline, which passes through Kazakhstan. This route provides a significant share of Turkmen budget revenues and remains an important element of the country's foreign economic strategy. For Kazakhstan, its transit role brings economic benefits in the form of payments and strengthens its bargaining position. Successful cooperation within the Central Asia–China pipeline framework helps sustain a constructive tone in Kazakhstan–Turkmenistan relations in other areas as well.

A promising area is the development of renewable energy in border regions (IRENA 2017). Kazakhstan's Mangystau Province and Turkmenistan's Balkan Velayat have strong potential for solar and wind generation. According to the International Renewable Energy Agency (IRENA), average annual solar irradiation in the region is 1,800–2,200 kWh/m², while average annual wind speeds across most territories exceed the 6–7 m/s threshold needed for profitable wind generation. In the context of global decarbonization and growing demand for green energy, joint investments in renewable energy facilities in border areas could attract international financing, including through the mechanisms of the Green

Climate Fund and the European Bank for Reconstruction and Development.

Both countries have assumed commitments under the Paris Agreement: Kazakhstan has set a course toward carbon neutrality by 2060, while Turkmenistan has outlined targets for reducing methane emissions. Joint border-area projects in renewable energy sources could become a practical instrument for fulfilling national climate commitments while also improving the energy resilience of remote border communities.

Border Security

The Kazakhstan–Turkmenistan border is generally characterized by a high level of stability: there have been no armed incidents, border control functions smoothly, and the relevant agencies interact constructively. At the same time, the characteristics of this section, including its length, predominantly desert and sparsely populated border zone, and distance from major administrative centers, create practical difficulties for control and monitoring.

Joint security of the state border is maintained through several mechanisms. The border services of the two countries regularly exchange operational information and hold bilateral consultations at the level of agency leadership. Protocols for joint responses to border incidents are in place. In recent years, the technical modernization of border infrastructure has intensified: video surveillance systems are being installed in vulnerable areas, unmanned aerial systems are being used to patrol remote districts, and mobile technical posts are being deployed. The introduction of biometric identification at checkpoints improves the accuracy of control while also accelerating the passage of lawful passenger flows.

Current threats to border security include drug trafficking, cross-border smuggling of consumer goods, fuels, and lubri-

cants, and irregular migration. Both states face transit pressure from flows of Afghan heroin and opium that originate in northern Afghanistan and move along several routes through Central Asia. Joint law-enforcement efforts in cooperation with the Collective Security Treaty Organization (CSTO) and regional UN bodies, especially the United Nations Office on Drugs and Crime (UNODC), are a necessary element in countering this threat. Environmental violations in the border zone, including illegal extraction of natural resources and unauthorized crossings into protected natural areas, also require a coordinated response (UNDP 2024a).

The legal regulation of migration flows is a separate area of border management. Residents of border districts in Kazakhstan and Turkmenistan maintain long-standing kinship, ethnic, and social ties, which generate stable flows of lawful seasonal and labor migration. A flexible regulatory system that takes into account the legitimate interests of labor migrants and people crossing the border on humanitarian grounds is important for the social policy of both states. Agreements on mutual visa-free travel facilitate lawful movement, but employment, social protection, and the legal status of labor migrants require further legal clarification.

The concept of "smart borders," discussed by specialists in border management, involves modernizing border control through digital technologies, big data analytics, and risk-based methods. Within this approach, blanket control is gradually replaced by selective enhanced control based on preliminary risk profiling. This approach makes it possible to improve security while accelerating border crossing for compliant users. The technological basis of smart borders includes biometric identification, advance electronic declaration, blockchain verification of cargo documents, automatic vehicle recognition systems, and artificial intelligence for analyzing passenger

flows. The phased introduction of these elements at the Bolashak–Serhetyaka and Temirbaba–Garabogaz checkpoints is one of the benchmarks for the development of border control infrastructure.

Environment and Resources

Environmental issues occupy an increasingly important place in the agenda of Kazakhstan–Turkmenistan border cooperation. Both states are located in a zone that is highly vulnerable to climate change and human pressure: most border territories consist of desert and semi-desert landscapes exposed to desertification, soil deflation, and growing freshwater scarcity (Mirzadinov 2021). According to the 2021 situational analysis of drought in Central Asia prepared under the UN Convention to Combat Desertification, the region is among the areas most affected by climate change globally: from 1950 to 2019, average air temperature increased by 1.5°C, three times faster than the global average, while precipitation in a number of areas fell by 15–20 percent.

Land degradation, pasture depletion, and shrinking water resources directly affect the population of border districts, many of whom work in agriculture and livestock breeding. Competition over pastures, watering points, and agricultural land could become a source of tension if natural resource management is not coordinated. In this respect, the Kazakhstan–Turkmenistan model, based on constructive dialogue and the absence of historical disputes, has considerable potential. It allows the parties to address resource issues in advance, unlike states in the region whose relations are burdened by protracted border conflicts.

Kazakhstan and Turkmenistan have concluded a number of agreements on environmental cooperation covering joint monitoring of environmental conditions, the exchange of hy-

drometeorological data, and the coordination of efforts to combat desertification and land degradation. Both states participate in the International Fund for Saving the Aral Sea (IFAS), an important regional environmental organization established in 1993 that brings together all five Central Asian states. IFAS activities include water-saving programs, the reclamation of degraded land, and the reduction of dust and salt emissions from the dried seabed of the Aral Sea (IFAS 2011). Although the Aral Sea is not located on the Kazakhstan–Turkmenistan border, the environmental consequences of its desiccation affect a broad region, including the Mangystau and Balkan border areas.

The Caspian Sea, on whose coast a part of the Kazakh–Turkmen borderland lies, is a special object of bilateral environmental cooperation. After the Convention on the Legal Status of the Caspian Sea was signed in Aktau in 2018, the Central Asian Caspian littoral states received an updated legal basis for regulating the use of natural resources, fisheries, and pollution prevention (Adilet 2018). The decline of the Caspian Sea to critically low levels compared with the 1990s poses a direct threat to the operation of the seaports of Aktau, Kuryk, and Turkmenbashi. Shoaling requires dredging and a reconsideration of fisheries management. Under these conditions, joint environmental monitoring and close coordination of conservation measures are not only tasks of cooperation but also conditions for the economic sustainability of the coastal regions of both countries.

Space-based monitoring of transboundary territories has become an important instrument of cooperation. The use of Earth remote sensing data makes it possible to track the condition of the Caspian Sea, the dynamics of desertification, and the condition of pastures in real time. Satellite data reduce the information deficit that previously complicated environmental

negotiations and create a common basis for decision-making by the two parties.

Humanitarian Dimension

The humanitarian dimension of Kazakhstan–Turkmenistan border interaction is a less formalized but stable and socially significant element of cooperation. It rests on the historical and cultural ties between the peoples of the two countries, whose languages belong to the Turkic language family and share a substantial part of their cultural heritage: nomadic traditions, a common literary epic tradition, musical and poetic traditions, and decorative and applied arts (Romanova 2024).

The practice of exchanging Culture Days between the two states has developed over recent decades. Days of Kazakh Culture in Turkmenistan and Days of Turkmen Culture in Kazakhstan, held alternately in different cities of the two countries, include tours by national theater and music groups, exhibitions of fine and applied arts, film screenings, and presentations of national cuisine and crafts. Joint projects to preserve nomadic heritage, including traditional livestock breeding, horse riding, and falconry, have received particular recognition. Some of these practices, such as falconry, are inscribed on UNESCO's lists of intangible cultural heritage.

Youth exchanges are an important instrument for strengthening bilateral ties over the long term. Students from Turkmenistan study at Kazakh universities, primarily in technical, medical, and humanities fields. State scholarships and partnership programs help create personal and professional contacts that can remain valuable throughout a career and become a basis for future cooperation between the two states.

Cooperation in healthcare reached a new level during the COVID-19 pandemic (2020–2022), when it became necessary to coordinate sanitary and epidemiological measures, create

sanitary corridors for essential supplies, and align policy toward labor migrants who found themselves in a difficult situation because of border closures. The pandemic experience revealed the potential of bilateral cooperation in crises and the need to strengthen joint response mechanisms. After the pandemic, the parties intensified talks on the development of telemedicine platforms and a system for cross-border medical data exchange.

Cultural and humanitarian cooperation gains additional significance in the context of strengthening Turkic identity across the wider regional space. Kazakhstan and Turkmenistan participate in the International Organization of Turkic Culture (TURKSOY); Kazakhstan is also a member of the Organization of Turkic States (OTS), in which Turkmenistan has observer status. Turkmenistan, adhering to the principle of neutrality, participates in these structures primarily as a cultural rather than a political actor. Joint humanitarian initiatives within the Turkic space create a basis for a regional identity grounded in cultural affinity.

Cooperation in the media and information exchange creates additional opportunities for cultural dialogue. The national television and radio organizations of the two countries maintain partnership agreements, exchange content, and jointly cover bilateral events. New formats, including online broadcasts, joint podcasts, and bilingual websites, make it possible to work with younger audiences accustomed to receiving information in digital environments.

Comparative Context

The Kazakhstan–Turkmenistan model of border cooperation takes on clearer analytical contours when compared with other subregional pairs in Central Asia. Such comparison helps identify both the specific features of this model and the factors

behind its success, which may be relevant for other bilateral formats.

The Kazakhstan–Uzbekistan model is the closest functional analogue: both pairs are characterized by significant trade volumes and well-developed transport connectivity. Kazakhstan–Uzbekistan relations, however, involve a higher structural asymmetry of economic potential and more pronounced competition in several sectors, above all agricultural exports. The Kazakhstan–Turkmenistan pair encounters such competitive tensions to a lesser extent because the two economies are more complementary by sector.

The situation is different in Kyrgyz–Tajik and Kyrgyz–Uzbek relations, which have been burdened by acute competition over water resources, historically disputed enclaves, and periodically recurring armed incidents. These cases show how high the costs of unresolved border conflicts can be, not only politically and economically but also in human terms. Against this background, the timely and conflict-free delimitation of the Kazakhstan–Turkmenistan border appears not only as a diplomatic achievement but also as a fundamental condition for further cooperation.

In the European context, attention is often drawn to the experience of Euroregions, cross-border entities that bring together border territories of two or more states to address shared problems jointly. As an institutional form, a Euroregion involves the creation of joint management bodies, the formulation of common development strategies, and joint access to financial instruments. A direct transfer of the European model to Central Asia is impossible because of differences in legal systems, levels of integration, and traditions of regional governance. At the same time, individual elements of European experience, especially the creation of common management

platforms and the handling of issues at the local level, may also be useful for Kazakhstan's cooperation with Turkmenistan.

Border Digitalization

Border digitalization is one of the key contemporary trends. It is significantly changing familiar methods of control by simplifying and accelerating border procedures. Kazakhstan and Turkmenistan, despite differences in the pace and approaches of their digital transformation of public administration, recognize the need to introduce digital tools into border administration.

In customs administration, digitalization means above all the transition to advance electronic declaration of cargo. This system allows customs authorities to analyze risks and decide on the type of control before the cargo physically arrives at the checkpoint. Kazakhstan's customs service has made significant progress in introducing digital tools under the Digital Kazakhstan concept and sectoral strategies. Turkmenistan is also gradually moving toward the digitalization of public administration.

Direct electronic data exchange between the customs services of the two countries has created a basis for mutual recognition of control results. It has reduced cargo clearance time by 30–50 percent and lowered business costs proportionally.

Distributed ledger technology (blockchain) is used to verify shipping documents and certificates. While this area was previously regarded as experimental, current practice confirms its importance for combating falsification and increasing the transparency of cross-border transactions.

A modern border management system includes an electronic queue and remote monitoring of checkpoints. Mobile services provide carriers with real-time data on checkpoint

congestion, making logistics more predictable and border crossing faster and more convenient for business.

Prospects

The long-term prospects for Kazakhstan–Turkmenistan border cooperation are shaped by a combination of economic factors and high-level management decisions taken in 2024–2025. The interaction rests on the growing importance of Central Asia as a transport hub, where the North–South corridor serves as an important artery linking Eurasian markets. The economic connectivity of the two states is supported by the completion of major infrastructure projects and by the need for collective responses to the climate and environmental challenges of the Caspian region.

A transition toward deeper integration requires the consistent harmonization of national regulatory systems. The two sides are focusing mainly on flexible formats of interaction that allow different legal models and systems of public administration to be connected. An important step toward a "seamless" economic space should be the convergence of digital transformation speeds and the unification of customs procedures around the emerging cross-border industrial hub. This would help soften existing asymmetries and create a more predictable environment for long-term investment.

One potentially useful institutional solution could be the creation of an Interregional Business Council based on Mangystau Province and Balkan Velayat. Such a permanent body, bringing together representatives of executive authorities, business associations, and the expert community, could perform functions of strategic planning and operational support for joint projects. This platform would increase the institutional resilience of the border partnership by translating polit-

ical agreements into specific economic projects and development roadmaps for the Caspian coast.

The technological framework of cooperation should rest on the introduction of a digital ecosystem covering all stages in the movement of goods and services. A priority area is the mutual recognition of electronic certificates and data verification based on distributed ledgers. Implementing these measures, together with attracting resources from international development institutions such as the Asian Infrastructure Investment Bank (AIIB) or the Eurasian Development Bank (EDB), would strengthen the effect of national investments in logistics infrastructure. The creation of modern storage and processing facilities in the border zone could turn it from a transit point into a center for generating added value.

The humanitarian dimension of the partnership requires a shift from general protocols to practice-oriented formats, including the creation of a Caspian Consortium. This involves not only inter-university dialogue but also the formation of a research and education space linking key universities in Aktau and Turkmenbashi. Such a structure could focus on training personnel for cross-border projects: specialists in maritime logistics and water desalination, as well as experts in gas chemistry. This would make it possible to create a talent pool adapted to the specific features of both economies and to turn scientific cooperation into an instrument of technological development for border regions. More broadly, the border partnership between Kazakhstan and Turkmenistan should be embedded in the regional context, becoming part of the Consultative Meetings of the leaders of Central Asian states and helping advance the region's interests in the global UN climate agenda.

Conclusion

The Kazakhstan–Turkmenistan partnership in the border zone is one of the stable examples of cross-border interaction in Central Asia. The analysis shows that this model rests on a combination of political will and pragmatic economic calculation, creating favorable conditions for multifaceted cooperation. The foundation of its stability was the timely and conflict-free resolution of the border issue in the early 2000s. The absence of territorial claims and historical contradictions allowed both states to avoid the costs characteristic of other parts of the region and to concentrate on a constructive agenda in which trust is converted into concrete economic results.

The transport and logistics foundation of the relationship, shaped by the Kazakhstan–Turkmenistan–Iran route and the modernization of key checkpoints, has created a material basis for interdependence between the two countries. Trade turnover, which exceeded USD 500 million in 2025 and is oriented toward reaching USD 1 billion, shows that infrastructure investments are producing trade effects. The humanitarian dimension, from educational exchanges to joint scientific initiatives, provides an additional margin of resilience. Drawing on a shared cultural and historical heritage, this layer of interaction is less dependent on political conditions and forms a long-term basis of trust between societies.

Despite clear achievements, the potential of bilateral ties has not been fully realized. The contemporary agenda requires a transition to a new quality of institutional cooperation. This concerns not only the unification of technical standards and the digitalization of customs procedures, but also the development of joint responses to climate challenges, above all the preservation of the Caspian Sea ecosystem. The creation of border industrial and logistics hubs and the introduction of the smart borders concept may help turn transit potential into production cooperation.

Ultimately, the viability of Kazakh–Turkmen CBC has been confirmed by decades of stable relations, while current priorities, including the creation of permanent coordination councils and deep digital integration, set benchmarks for the next stage of development. This partnership goes beyond good-neighborly relations and is becoming an important factor in the stability and economic development of Central Asia.

2. Kazakhstan–Uzbekistan

Sergei Golunov

Geographic Setting

Kazakhstan and Uzbekistan are Central Asia's two largest economies, accounting for more than 80 percent of the region's aggregate nominal GDP (World Bank n.d.-a) and roughly the same share of intraregional trade (Official Information Source of the Prime Minister of Kazakhstan 2023a). For Uzbekistan, one of only two double-landlocked countries in the world, trade with and through Kazakhstan is especially important: more than half of the country's foreign trade passes through Kazakhstan in transit (Omirgazy 2024).

The 2,356 km border between the two countries runs mainly across arid desert and semi-desert plains (Figure 2.1). On the Kazakh side, from west to east, it is bordered by Mangystau, Aktobe, Kyzylorda, and Turkestan provinces; on the Uzbek side by the Republic of Karakalpakstan and by Navoi, Jizzakh, Syrdarya, and Tashkent provinces. Uzbekistan's capital, Tashkent, a city of three million people, lies very close to the border, about 10 km from the nearest border checkpoints.



Figure 2.1. Map of the Kazakhstan–Uzbekistan borderland by province. Created with MapChart (mapchart.net) and licensed under CC BY-SA 4.0 (MapChart 2023). Province names are given in the state languages.

Border regions account for about 20 percent of Kazakhstan's trade with Uzbekistan (Gov.kz 2024). At the level of border regions, however, unlike at the national level, agricultural goods predominate: Kazakhstan supplies flour and meat, while Uzbekistan supplies fruit and vegetables.

Cross-border relations at the regional level were substantially affected by Kazakhstan's 2018 administrative reform. The reform renamed South Kazakhstan Province as Turkestan Province and separated Shymkent, which received a special status, from it. This reduced the role of Shymkent, a city of 1.2 million people, as the main administrative coordination center for cross-border cooperation in the Kazakhstan–Uzbekistan borderland. Yet the city has remained a key economic hub attracting a large share of cross-border flows.

A prominent feature of the Kazakhstan–Uzbekistan borderland is its highly uneven pattern of cross-border interaction. Regular cross-border contacts are almost absent along most of the border zone: the border there runs through desert and semi-desert areas poorly suited to settlement and economic activity, with no transboundary railways or paved roads.

To make matters more difficult, any sizable settlements of the two countries in this part of the borderland lie hundreds of kilometers apart. Conditions for cross-border cooperation are especially unfavorable along the sections adjacent to Kazakhstan's Aktobe and Kyzylorda provinces, which, like Uzbekistan's Navoi Province, have no regular overland connection with neighboring territories. This does not, however, make joint participation by representatives of Kyzylorda Province and their Uzbek partners impossible in projects to preserve what remains of the Aral Sea and plant vegetation on its dried seabed.

Under these conditions, the overwhelming majority of cross-border contacts pass through the southern section of the border between Turkestan Province and the adjoining regions of Uzbekistan. Living conditions are more favorable there because of the milder climate, proximity to the Western Tien Shan mountains, and access to water resources. Most of the cross-border rivers in the Kazakh–Uzbek borderland are found in this area. The largest is the Syr Darya, which originates in Kyrgyzstan, flows through Uzbekistan, and ends in Kazakhstan. The much smaller Ugam River rises in Kazakhstan and is also part of the Syr Darya basin. This part of the borderland also has several transboundary canals, the largest of which is the Dostyk Canal, a crucial resource for agriculture in the adjoining Syrdarya and Turkestan provinces.

It is the hundreds-of-kilometers-long southern section of Turkestan Province's border with neighboring Uzbek regions

that contains seven of the eight major paved roads crossing the border and one of the two railway crossings. The same area also contains the largest cross-border pair of cities by combined population: Tashkent in Uzbekistan, with 3 million inhabitants, and Shymkent in Kazakhstan, with 1.2 million. The link between them forms the most important economic axis in the Kazakh–Uzbek borderland. Another important contact zone is Maktaaral District, Kazakhstan's southernmost district, which protrudes into Uzbek territory and maintains very close agricultural ties with it.

In view of all this, it is hardly surprising that in 2024, according to Kazakhstan's statistics, the Turkestan Province section of the border accounted for up to 90 percent of all Kazakhstan–Uzbekistan border crossings (Apsattarova 2025), and that Turkestan Province clearly accounts for the dominant share of Kazakhstan's border-region trade with Uzbekistan.

Another stretch of the Kazakh–Uzbek border where cross-border interaction exists lies in the western part of the borderland, between Mangystau Province and the Republic of Karakalpakstan. Conditions for settlement and the development of cross-border ties are less favorable there. The road distance between the nearest district centers on opposite sides of the border, Beyneu in Kazakhstan, with a population of about 56,000, and Kungrad in Uzbekistan, with about 80,000 inhabitants, is close to 420 km, while the distance between the regional centers, Aktau and Nukus, is almost 1,000 km.

Such long cross-border distances between major settlements are typical of the Central Asian part of the Aral–Caspian lowland. With the exception of the Amu Darya section of the Uzbek–Turkmen borderland, the provinces located in this zone cannot build CBC around nearby towns. It is also important that transit through Kazakhstan's Caspian ports matters greatly to Uzbekistan, while Mangystau Province depends

on supplies of Uzbek fruit and vegetables. Notably, largely because of its transit role at the junction of transport routes leading to Uzbekistan and Turkmenistan, as well as oil production, the settlement of Beyneu has become the fastest-growing large settlement in Kazakhstan: its population has increased about 3.5 times since the Soviet collapse.

Historical Dynamics

Historically, the border between Kazakhstan and Uzbekistan took shape in the Soviet period, although to some extent it was guided both by the administrative-territorial divisions of the Russian Empire and, indirectly, by the zones of interaction among the ethnic and tribal groups that had previously controlled these territories. The territorial expansion of the Russian Empire in the nineteenth century brought the present-day Kazakhstan–Uzbekistan border area under Russian control and introduced administrative boundaries. These boundaries did not coincide with the modern border, but in some cases they may have served indirectly as points of reference during later transformations.

The present Kazakhstan–Uzbekistan border was formed in the Soviet period, mainly through the sharply contested national-territorial delimitation of Central Asia in the mid-1920s. Subsequent major territorial changes included the removal of the Karakalpak Autonomous Oblast from the Kazakh ASSR in 1930 and its later transfer to the Uzbek SSR in 1936; the transfer in 1956 of Bostanlyk District, which had a substantial Kazakh population, from South Kazakhstan/Chimkent Province of the Kazakh SSR to Tashkent Province of the Uzbek SSR; and the transfer of Pakhta-Aral (now Maktaaral) District from the same Kazakh province to Syrdarya Province of Uzbekistan. In the last case, however, most of the transferred territory was returned to the Kazakh SSR in 1971.

During the Soviet period, the border was relatively flexible and open to the movement of people and goods. In the more than 30 years since the Soviet collapse, the trend has been the opposite. On the one hand, the border has become less movable, since independent states usually resist territorial concessions more firmly than administrative-territorial units subordinate to a higher center. On the other hand, the border's functions changed: neighboring states began to use it to control transboundary flows, turning it into a barrier for people and goods and for borderland communities that had previously interacted without obstruction.

A key reason the border became a serious barrier was the sharply different political and economic trajectories followed by Kazakhstan and Uzbekistan from the 1990s through the 2010s. Kazakhstan moved toward greater economic openness and less intrusive control over society, while Uzbekistan under President Islam Karimov adopted a state-managed system with centralized planning, a regulated exchange rate, protectionism, and a controlled information space. Over time, Kazakhstan's economic model proved more effective: by the late 2000s, its per capita GDP was more than three times higher than Uzbekistan's (World Bank n.d.-e). The sharp divergence in the neighbors' economic policies created strong incentives for informal cross-border trade. Goods produced in Uzbekistan were much cheaper than their Kazakh counterparts because of Tashkent's protectionist policies, whereas third-country goods were far cheaper in Kazakhstan because Uzbekistan maintained high duties, other barriers, and multiple official and unofficial exchange rates.

As early as the 1990s, both countries began imposing trade restrictions on each other, with periods of tightening alternating with partial relaxation. Customs posts were set up on the main transboundary roads, above all between South Kazakh-

stan Province and neighboring Uzbek territories, but informal traders had little difficulty bypassing them.

A turning point in the tightening of border control came after measures taken by the Uzbek authorities in response to the terrorist attack by radical Islamists in Tashkent in February 1999. Claiming that some of the terrorists might have found refuge in adjacent Kazakh territories, Uzbekistan unilaterally began fencing and patrolling problematic sections of the border; Kazakhstan responded in kind. This led to numerous incidents involving border guards and customs officers of the neighboring countries on one side and local residents on the other. Some clashes ended in injuries, and several later incidents even caused fatalities. To prevent escalation, the sides began delimitation talks, and by 2002 the most serious disagreements had been settled.

The abrupt tightening of the border regime quickly changed the border landscape, the practices used to maintain the regime, and the ways people tried to exploit its vulnerabilities. Barriers were built on problematic sections in densely populated border areas, and buildings immediately adjacent to the border line were demolished. Uzbek authorities sought to limit trips by their citizens to South Kazakhstan Province to buy cheaper third-country goods, periodically requiring documentary proof of an authorized purpose of travel (Bukharbaeva 2005) and restricting imports of some Kazakh goods, such as flour. Kazakh authorities also restricted imports of cheaper Uzbek goods and introduced cumbersome legalization procedures for labor migrants from Uzbekistan.

The official restrictions pushed a large share of long-established cross-border trade flows into the shadows. Large quantities of flour, which was of higher quality than Uzbek flour, as well as non-food goods from third countries, were smuggled into Uzbekistan. Kazakhstan, in turn, received ille-

gal shipments of fruit, vegetables, and cotton; many labor migrants also entered the country outside official checkpoints, since low wages in Uzbekistan made seasonal cotton-picking and construction work in South Kazakhstan Province much more attractive.

By the 2000s, informal border trade driven underground had reached a striking scale. According to some estimates, illegal flows of Kazakh flour into Uzbekistan in that decade considerably exceeded legal trade (Novitskaia 2006), while seizures of multi-ton consignments of illegal goods and detentions of hundreds of illegal migrants attempting to cross the border became routine. Informal cross-border networks often made effective use of loopholes, exploiting weaknesses in border patrols or bribing border guards and customs officers (Rotar 2003).

After Uzbek President Islam Karimov died in 2016, the government of Shavkat Mirziyoyev set a course toward liberalizing the economic regime as a whole and economic and political ties with neighboring Central Asian countries in particular. This led to a substantial easing of restrictions on export and import operations, the introduction of a market exchange rate for the national currency, more active Kazakhstan–Uzbekistan cooperation at the level of border regions, and the launch of projects to modernize border infrastructure. Reciprocal steps by both sides liberalized border trade and migration rules. Contrary to what might have been expected, however, liberalization ultimately did not produce a sharp increase in border crossings. It should be borne in mind that border-crossing counts do not directly correspond to the number of individual border crossers, since shuttle traders and other frequent crossers may account for a substantial share of such crossings. Although the number of crossings jumped from 13.6 million to nearly 20 million in 2017–2018 (Kun.uz

2018), it later declined to 11.4 million by 2024. Alongside the temporary impact of the COVID-19 pandemic, this can be explained by factors such as Uzbekistan's economic growth, which made shuttle trade less profitable, and the narrowing of price differences between the two countries as Uzbekistan liberalized its economy. The informal cross-border economy has by no means disappeared, but in some cases it has become less profitable and less visible. At the same time, the past decade has clearly brought a trend toward liberalizing the regulation of cross-border flows and partly intensifying them.

Key Functions and Areas of Cross-Border Cooperation

While the classical European model of CBC assumes a wide range of cross-border links, primarily among official and non-governmental actors at the subnational level, Kazakh–Uzbek CBC is most often dominated by central governments. It is also usually framed as cooperation that takes advantage of geographic proximity and is aimed at economic gain. A further key area of Kazakh–Uzbek CBC is the joint handling of transboundary environmental problems, above all water management.

Official contacts between central and regional authorities, whether directly or indirectly connected with the development of CBC, can provide an overall framework and systematize priorities by advancing sets of projects through road maps, action plans, and similar instruments. They can also promote specific projects or symbolically reaffirm friendly relations between neighboring territories. Both Kazakhstan and, especially, Uzbekistan are highly centralized states in which even international contacts by regional authorities with no legal consequences often require approval from the center. In Uzbekistan, the media are more tightly controlled by the government and often avoid critical coverage of development

problems in border areas or of relations with the neighboring country.

The rigidity of centralized control does not mean, however, that central authorities are insensitive to the concerns of border areas. On the Kazakh side, one sign of this sensitivity is the rotation of officials between the post of akim (governor) of South Kazakhstan/Turkestan Province and that of ambassador to Uzbekistan: in the post-Soviet period, 4 of the 14 akims also served, at one time or another, as ambassadors. Uzbekistan does not use this practice, but the national capital lies very close to the border, and the current president, Shavkat Mirziyoyev, was born in borderland Jizzakh Province and headed that province in 1996–2001.

During Islam Karimov's presidency, official visits by delegations from neighboring regions of the two countries were rare and irregular. The situation changed dramatically after Shavkat Mirziyoyev came to power. His government began actively promoting, in relations with neighboring countries, a top-down model of interregional cooperation involving both borderland and non-borderland provinces. In July 2017, Kazakhstan and Uzbekistan signed an intergovernmental agreement on interregional cooperation (Adilet 2017), empowering "competent authorities" to develop such cooperation in various fields, although the agreement itself does not define the term clearly.

Since 2018, four bilateral forums on interregional cooperation have been held. The first three took place in centers of border regions: Shymkent in 2018, Urgench in 2020 (Kazinform 2020), and Turkestan in 2021. The fourth was held in 2024 in Samarkand, the center of a province that does not border Kazakhstan. The long interval between the third and fourth forums, followed by the high-level decision to reformat the event into a Council of Heads of Regions, may point to

difficulties in maintaining the effectiveness and regularity of the previous format and to the sides' desire to make interregional cooperation more centralized and more manageable. At the same time, both governments are trying to encourage bilateral ties between subnational regions and make them regular (President of the Republic of Uzbekistan 2024).

Central governments also encourage business forums, in which companies from border regions, especially in trade, agriculture, construction, and transport, play a particularly active role. Participants seek to establish business ties and have more autonomy in developing them than subnational authorities do.

One of the more developed forms of CBC, coordinated cross-border planning, is still relatively rare in the Kazakhstan–Uzbekistan borderland. Since 2016, however, such projects have appeared more often on the agenda, although some proposed initiatives are later redesigned or implemented with delays.

Some major cross-border planning projects aim to strengthen the transit potential of border areas and turn them into hubs for both intraregional and interregional trade and transport links. Among other things, these projects are intended to develop routes connecting Central Asian countries with China, Russia, and Iran, which has access to Indian Ocean ports.

In some cases, the logistics functions of such hubs can be combined with their use for developing production ties. The priority initiative in the Kazakh–Uzbek borderland has been the creation of the International Center for Industrial Cooperation, which is expected to host production zones, warehouses, and a customs clearance point for manufactured goods. First proposed as a border trade zone during Islam Karimov's presidency, the initiative gained momentum after

2016. Its specialization, location, and implementation timetable have been revised more than once, but both sides still regard it as one of the key items on the bilateral economic agenda.

The Kyzylorda–Uchkuduk road and railway project could substantially change the connectivity of the central part of the borderland. It was officially approved as early as 2021, but implementation has so far moved slowly because of insufficient funding (Daryo.uz 2024).

A somewhat less widely known project is designed to tap the attraction between the two largest urban centers in the Kazakh–Uzbek borderland, Shymkent and Tashkent, together with Khujand, one of Tajikistan's largest regional centers, located about 170 km from the Uzbek capital. In 2018, the Asian Development Bank proposed the Shymkent–Tashkent–Khujand Economic Corridor, and the governments of the three countries supported it. The corridor project envisaged cooperation in developing road and rail infrastructure, modernizing border management systems, building value chains in horticulture, improving food safety standards, developing tourism, and creating special economic and industrial zones (CAREC Program n.d.). In practice, reported work on the corridor has largely amounted to the partner states implementing previously planned national and regional programs within their own territories.

Since the 2000s, various projects of production cooperation based on value chains have been discussed at the official level. One such idea was voiced in 2008 by Kazakhstan's ambassador to Uzbekistan, Zautbek Turisbekov, who proposed building plants on the Kazakh side to process products grown by Uzbek farmers (Eliseev 2008a). The idea, however, did not receive support from Uzbekistan, which may have feared an unequal partnership.

In addition to the already mentioned International Center for Industrial Cooperation, a more recent initiative was the cotton cluster project proposed in 2023. It envisaged attracting Uzbek investment to build cotton-processing enterprises in the borderland of Maktaaral District in Turkestan Province and using Uzbek seeds and technologies to improve the quality of the cotton grown there (APK News 2024). The project has not yet reached implementation, and in the meantime its functional place has probably been taken to a large extent by a much larger Kazakhstan–China cotton cluster being developed in Otyrar District of the same province in partnership with Xinjiang Lihua (Official Information Source of the Prime Minister of Kazakhstan 2025c). This case illustrates the much greater role played by third-country factors in Kazakhstan–Uzbekistan CBC, and more broadly in Central Asian CBC, than in the "classical" models of CBC found in Europe and North America.

Compared with large official projects that receive broad media coverage, local practices of exchanging experience among borderland agricultural producers, partly formal and partly informal, remain largely in the background. Experience in cultivating cotton, fruit, and vegetables is transferred from the Uzbek side to the Kazakh side, in some cases through ethnic Kazakh repatriates (*kandas*) who moved from Uzbekistan to Turkestan Province. Since the second half of the 2010s, experience in growing tropical crops, such as pomegranates, bananas, and papayas, has also been transferred (BAQ.kz 2023). Kazakh farmers have also adopted technologies such as the use of biological agents for pest control; local production of these agents began in South Kazakhstan Province with support from Uzbekistan in the 2010s (Shimyrbaeva 2014). In the opposite direction, advanced

livestock-breeding practices have spread from Kazakhstan's border regions to Uzbekistan (Dolukhanov 2018).

Cooperation in the management of transboundary water resources on the Syr Darya and Ugam rivers and on canals, especially the Dostyk Canal, is driven not by profit but by the need to balance consumption under conditions of growing water scarcity. Kyrgyzstan is also involved, since the Syr Darya rises there and its flow is regulated by Kyrgyz reservoirs. This cooperation remains less close than comparable cooperation in the Kazakhstan–Kyrgyzstan borderland. It consists mainly of water-use quotas and measures to ensure the normal and safe operation of water-distribution infrastructure (Osmonalieva 2025). This may change after the Agreement on the Joint Management and Rational Use of Transboundary Water Bodies, signed in November 2025, which provides for an intergovernmental commission (see Chapters 4 and 6).

In the western part of the borderland, the allocation of transboundary river waters is not an issue. There, with support from several international organizations, the sides are taking coordinated steps to address another acute environmental problem: mitigating the consequences of the Aral Sea's desiccation, in particular through parallel planting of saxaul and other desert plants on land formerly covered by the sea (Kazinform 2025b).

At the far eastern edge of the borderland, in a sparsely populated mountain area where the borders of Kazakhstan, Kyrgyzstan, and Uzbekistan meet, the sides have managed to carry out a long-term cooperation project that has gained broad international recognition. This was accompanied by promotion of the area's conservation brand and brought relatively stable external funding (Samen 2021). The project is the Western Tien Shan natural World Heritage site, composed of protected areas in the borderlands of neighboring countries.

These efforts culminated in the joint site's inscription on the UNESCO World Heritage List (Astana Times 2016).

Conclusion

Because of the borderland's geography, CBC between Kazakhstan and Uzbekistan develops intensively only along a relatively small section of the border, while economic and political conditions make it less diverse and less focused than European or North American CBC.

At the same time, cooperation in several areas is developing quite dynamically and appears promising. These areas include, for example, the exchange of agricultural experience and technologies, trade links, water-use management, and the management of protected natural areas. In the future, large-scale production and logistics projects, as well as improvement of the interregional cooperation format, could significantly reshape this cooperation.

It would be advisable for the authorities to pay attention not only to projects that they initiate and control, but also, at least in depoliticized fields, to initiatives by non-state actors, including entrepreneurs and non-governmental organizations. Such initiatives often produce more tangible results, even if on a smaller scale.

3. Kazakhstan–Kyrgyzstan

Sergei Golunov

Geography and History of the Borderland Area

The Kazakhstan–Kyrgyzstan border, at 1,212 km, is roughly half as long as the Kazakhstan–Uzbekistan border, but almost three times longer than the Kazakhstan–Turkmenistan border. On the Kazakh side, the border adjoins Zhambyl and Almaty provinces; on the Kyrgyz side, it adjoins Talas, Chuy, and Issyk-Kul provinces (Figure 3.1).

Much of the border is not a zone of regular contact, since it runs through mountainous terrain. Cross-border movement is concentrated mainly in three valleys: the Talas Valley in the west, the Chuy Valley in the center, and the Karkara Valley in the east. The most intensive cross-border flows pass through the Chuy Valley between Zhambyl and Chuy provinces. On the Kyrgyz side, the main center of attraction is Bishkek, the national capital, located not far from the border and home to 1.1 million people. On the Kazakh side, this role is played above all by Almaty, a metropolis of 2.2 million people, although at first glance the distance between Almaty and Bishkek, 236 km, seems fairly substantial.

Cross-border flows are much weaker in the western part of the border area. Although the distance between the provincial centers of Zhambyl and Talas provinces, Taraz, with about 430,000 residents, and Talas, with about 41,000, is only slightly more than 100 km, the smaller population and much lower level of economic development reduce mutual attraction. In the eastern part of the border area, cooperation through the Karkara Valley is limited by the absence of large settlements on the Kazakh side.



Figure 3.1. Map of the Kazakhstan–Kyrgyzstan borderland by province. Created with MapChart (mapchart.net) and licensed under CC BY-SA 4.0 (MapChart 2023). Province names are given in the state languages.

A number of rivers cross the border between the two countries, and the management of their resources is crucial for CBC. Most of these rivers originate in Kyrgyzstan, making it a typical upper-riparian state, while Kazakhstan is a typical lower-riparian state in relations over the allocation of water resources. The largest transboundary rivers are the Talas River, which flows through Talas and Zhambyl provinces, and the Chu River, which crosses the border section between Chuy and Zhambyl provinces. The border is also crossed by the Kurkuroo-Suu and Asa rivers, on the Talas–Zhambyl section, by the Aspara River, between Chuy and Zhambyl provinces, and by the Karkara River, between Issyk-Kul and

Almaty provinces. Along substantial stretches, the Chu, Asa, Aspara, and Karkara rivers effectively form the border.

The modern border dates back to the Soviet period. It was drawn during the formation of Kyrgyz autonomy within the RSFSR in 1924–1926, adjusted in 1930 (Istoriia Rossii 1930), and remained broadly stable thereafter. The system of interrepublican transboundary interdependencies that emerged in the Soviet period, under the dominant planning role of the central Soviet authorities, did not always help the Kyrgyz SSR develop economic autonomy or deepen its links with adjacent territories of neighboring Soviet republics. By the time the Soviet Union collapsed, the republic was one of the weakest and most subsidy-dependent (United Nations Industrial Development Organization 1996), oriented more toward economic links with the RSFSR than with the Kazakh SSR, lacking both a fast rail link with Almaty and a short road between Almaty and the resort area of Lake Issyk-Kul.

In the post-Soviet period, the border became an interstate boundary, although delimitation changed its line only slightly (Adilet 2003a). Demarcation, which began in the 2010s, nevertheless sparked protests among Kyrgyz residents of areas affected by these changes. Protesters objected to the loss of pastureland and other economically used land to the neighboring state.

The border regime has been less stable. It has moved from tighter controls, including the introduction of both border and customs controls by the late 1990s, to the abolition of customs controls after Kyrgyzstan joined the Eurasian Economic Union in August 2015. In general, the border remains open to citizens of the neighboring states and, since both Kazakhstan and Kyrgyzstan have fairly liberal visa regimes, to most travelers from third countries. Yet the authorities periodically

tighten inspections or introduce other measures that create queues and traffic congestion at border checkpoints.

Cross-Border Asymmetries and Relations of Interdependence

The border between Kazakhstan and Kyrgyzstan separates Central Asia's neighboring states with the sharpest contrast in economic capacity. In 2024, Kazakhstan's total GDP was about 16 times that of Kyrgyzstan, while the difference in GDP per capita at purchasing power parity was almost fivefold. By comparison, the gap in per capita GDP between the United States and Mexico, whose border is often studied as a classic case of cross-border inequality, was only slightly more than threefold (World Bank n.d.-a, n.d.-d, n.d.-f). The two countries also differ greatly in territorial size: Kazakhstan is about 14 times larger, which makes the transit value of their territories for one another clearly unequal in Kazakhstan's favor.

This clear asymmetry has a noticeable effect on bilateral cross-border interaction in some cases. Kazakhstan controls access to a much wealthier and more attractive market, and its territory is essential for Kyrgyzstan's transit to Russia. Kazakhstan occasionally imposes sanitary and quarantine requirements on plant and livestock products entering its market and conducts campaigns to tighten controls at the border. For example, Kyrgyzstan needed many years to regain access to the meat and dairy market after Kazakhstan introduced restrictions in 2006 (Sputnik Kyrgyzstan 2018). Even after Kazakhstan joined the Customs Union in 2010 and Kyrgyzstan joined the Eurasian Economic Union in 2015, restrictions on meat and dairy products from Kyrgyzstan remained in place for several more years. In addition, after Kyrgyzstan joined the World Trade Organization in 1998, long before Kazakhstan joined in 2015, the Kazakh side periodically tightened border

checks, citing the need to combat a sharp rise in smuggling of Chinese goods through Kyrgyzstan and drug trafficking. In some cases, this led to queues lasting several days (Islambek 2017) and was perceived in Kyrgyzstan as an attempt to exert political pressure.

It should be noted, however, that the effects of cross-border inequality along the Kazakhstan–Kyrgyzstan border are much softer than in the classic US–Mexico border case. There, inequality is associated with large-scale migration, including illegal migration, from the poorer country to the richer one; the growth of organized criminal groups controlling illegal cross-border flows on the poorer side; and mass short-term travel from the richer side to buy cheaper goods and services. The less acute effects of inequality in the Kazakhstan–Kyrgyzstan border area can be explained by several factors:

First, Kazakhstan, including its border provinces, is not the main destination for Kyrgyz labor migrants. About 95 percent prefer Russia because wages are higher there and migrant networks able to provide support in the destination country are much larger (Bossavie and Garrote Sanchez 2022).

Second, at the level of borderland provinces, socioeconomic differences are largely smoothed out. On the Kyrgyz side, the most active cross-border zone of the Chuy Valley is dominated by Bishkek. In 2023, its per capita GDP, about USD 5,800, was 2.3 times the national average. Across the border, Zhambyl Province had a per capita GDP of about USD 5,300, about 40 percent of the national average (Bureau of National Statistics 2024a; National Statistical Committee of the Kyrgyz Republic n.d.-b). For Kazakh settlements near the border, which are much smaller than Bishkek, the Kyrgyz capital is an important center of attraction, offering access to medical and educational services that are often of higher quality, as well as shopping and cultural leisure. In other con-

figurations of interaction between border areas, however, the gap is more substantial. Between the metropolises of Almaty and Bishkek, the difference in per capita GDP is about five-fold, roughly the same as at the interstate level. The capacities of Zhambyl and Talas provinces are sharply asymmetric; the latter is one of Kyrgyzstan's most isolated and economically weak provinces. The difference in their total GDP is about tenfold, and the difference in per capita GDP is threefold (Bureau of National Statistics 2024a; National Statistical Committee of the Kyrgyz Republic n.d.-a, n.d.-b). In this case, the economic weakness of Talas Province does not make CBC with Zhambyl Province unmanageable, but it significantly reduces its overall potential and intensity.

Third, Kyrgyzstan has its own asymmetric bargaining asset in cross-border relations with Kazakhstan: Zhambyl Province depends on water sources originating in Kyrgyzstan for about 85 percent of its water supply (Seisembek 2023a). In some conflict situations, for example in 1999 (Tuzov 1999), 2010 (Bukeeva 2010), and 2013 (Lillis 2013), the Kyrgyz side restricted, or threatened to restrict, the flow of water into Kazakhstan. Other situations, such as the Kyrgyz side's reduction of water releases because of drought and the exhaustion of Kazakhstan's agreed quota, triggered public and media speculation (Rickleton 2023).

The asymmetry between Kazakhstan and Kyrgyzstan is not necessarily a conflict-generating factor. Disagreements may create short-term tensions, but in the end they are usually settled constructively, often within the official language of relations between brotherly peoples.

Somewhat paradoxically, the settlement of disputes can itself strengthen cooperation. It helps establish clearer and more constructive rules of interaction, streamline the border regime and cooperation between law-enforcement agencies,

and develop a sophisticated system of joint water management. The Chu–Talas Water Management Commission, established in 2006 with support from the OSCE, UN agencies, and other international organizations, was designed in particular to develop a compromise regime for transboundary water allocation with the participation not only of central authorities, but also of provinces, local communities, and NGOs. A cross-border institution of this kind, especially one that has operated steadily over a long period and includes local community representatives in its governance, is very rare in Central Asia. In water management, it is unique even across the broader post-Soviet space.

Levels of Cooperation

Borderland provinces play a key role in bilateral trade. In 2019, Kazakh President Kassym-Jomart Tokayev estimated their contribution at about half of bilateral trade turnover, while Almaty alone accounted for more than 25 percent in the same period (LS 2020). At the same time, for border provinces the neighboring country is still not the main foreign trade partner, ranking below at least China and Russia.

The structure of trade between neighboring Kazakh and Kyrgyz provinces differs from the structure of trade at the interstate level. In the latter, the decisive role is played by production chains linked to the supply and processing of Kyrgyz gold-mining products, involving enterprises located outside the border provinces (KaktusMedia 2023). In cooperation between borderland provinces, by contrast, agriculture and trade in agricultural and light-industry products dominate (Nikonorov 2020). Kyrgyz consumers depend on supplies, both official and in some cases informal, of Kazakh fuel, flour, and eggs, while neighboring Kazakh territories depend on Kyrgyz fruit and vegetable supplies.

As in many other cases, CBC between Kazakhstan and Kyrgyzstan is dominated by central government bodies, while provincial authorities have no independent power to conclude agreements, or even legally non-binding memoranda of understanding, with foreign partners without approval from the center. Compared with other Central Asian states, however, Kazakhstan and Kyrgyzstan are more open to intensive bilateral contacts, including at the provincial level. The media in both countries actively, and at times sharply, discuss local problems in border areas. This contrasts with media coverage of similar issues in other Central Asian states, where such topics are usually depoliticized and much less transparent to the public.

In Kazakhstan–Kyrgyzstan CBC, key decisions are ultimately made by central authorities. At the same time, the provincial branches of central ministries and agencies in the two countries, including agriculture, internal affairs, emergency situations, and others, work closely with one another, hold regular meetings, and maintain communication channels. Units of the emergency ministries, for example, hold meetings, exercises, and other activities (Jambylinfo.kz 2023). Provincial police departments coordinate searches and action against drug trafficking, terrorism, illegal migration, smuggling, the resale of stolen cars and phones, and livestock theft. In agriculture, the sides systematically monitor and carry out synchronized treatment of locust-affected areas (FAO 2025).

This does not mean that contacts between local authorities are unimportant for CBC. Such contacts appear to have been fairly intensive almost from the moment the two countries became independent. Only in the second half of the 1990s, however, did they become firmly established in official and media practice as international cooperation rather than quasi-domestic ties between parts of a formerly unified state. One of

the first meetings between the authorities of Zhambyl and Talas provinces that the local press treated as an instance of international cooperation took place in 1997, when the mayors of Taraz and Talas signed an agreement on cooperation in the economy, education, culture, and tourism. Among other things, it included measures to give Talas farmers access to the central market in Taraz (Znamia truda 1997). In March 1998, the governors of Zhambyl and Talas provinces met to develop a joint position on lobbying for lower customs tariffs and simpler border-control procedures (Druk 1998). In April 2001, Issyk-Kul Province opened a representative office in Almaty (Mambetov 2001). From the late 1990s and early 2000s, many heads of neighboring provinces met at least twice a year, whereas meetings between the heads of neighboring Kazakh and Uzbek provinces remained rare and irregular until the second half of the 2010s.

Municipal-level contacts, especially between the metropolises of Almaty and Bishkek, have also contributed to cooperation between border areas. They resulted in several agreements, intensive exchanges of delegations, and the Almaty–Bishkek Economic Corridor project discussed below. Almaty and Bishkek, like Taraz and Talas, are sister cities.

In the 2020s, the interregional forum became a new format of cooperation between Kazakhstan's and Kyrgyzstan's territories. The forum held in Taraz in 2023 ended with the signing of contracts worth a total of USD 65 million for joint projects in trade, agriculture, banking services, and water management (Omirgazy 2023). This format includes not only borderland provinces but also other territories, although the border provinces are probably its most active participants. It should be noted that Uzbekistan promotes interregional forums much more actively: by the end of 2025, four Kazakh–Uzbek forums

and four meetings of the Uzbek–Kyrgyz Council of Heads of Border Provinces had been held.

The governments and chambers of commerce and industry of the two countries also periodically organize business forums, in which enterprises from border provinces take an active part (Economist.kg 2023). In such cases, businesses often have more autonomy than provincial authorities.

As in other Central Asian cases, CBC between NGOs and local communities remains weak. This is probably partly because central governments seek to keep cross-border processes under tight control. Still, such events are occasionally held under administrative oversight: in 2018 and 2019, for example, provincial and municipal authorities in Chuy and Talas provinces organized environmental events involving journalists and environmental activists from both countries (Skripnik 2018; KaktusMedia 2019). As discussed below, local community representatives also participate in addressing problems in the Chu–Talas water basin.

In some cases, the niche that local NGOs occupy in European CBC is filled to some extent by international organizations from outside the region. They provide financial, organizational, and expert support for cross-border projects. Such projects are usually depoliticized and are implemented in areas such as nature protection, joint water management, logistics optimization, and the development of transport corridors.

In the borderland area between Kazakhstan and Kyrgyzstan, the most successful field for such projects has been the management of transboundary water resources. A bilateral intergovernmental agreement on water-management facilities on the Chu and Talas rivers, concluded in 2000 and entering into force in 2002, clarified existing rules for water allocation and made Kazakhstan partly responsible for maintaining the water-management infrastructure of the basin's transboundary

rivers (UNECE 2000). International organizations, including UN agencies, the OSCE, and others, became involved in addressing the remaining water-use problems. With their support, the Chu–Talas Water Management Commission was established in 2006.

Over time, the two states assumed most of the funding for the Commission's work, while international partners continue to finance individual projects, including those aimed at monitoring water quality (UNECE 2023). By now, the Commission has held dozens of meetings and has created basin and small-basin councils whose work includes representatives of central and provincial authorities, business, NGOs, and local communities. The meetings address water allocation, water-quality monitoring, the maintenance of technical facilities, basin mapping, and related issues.

As a CBC institution, the Chu–Talas Water Management Commission is one of the few active cross-border institutions in Central Asia in which, at least formally, not only official structures but also non-state actors participate fully. As a transboundary water-management institution based on partnership between state and non-state structures, including local water users, the Commission has virtually no equivalents in Central Asia or in the wider post-Soviet space, and only a small number of comparable institutions in Asia. Some researchers argue, however, that despite the formal inclusion of non-state actors, state agencies in fact dominate the Commission (Zinzani 2017).

The Chu–Talas Commission is not the only cross-border institution involving Kazakhstan and Kyrgyzstan that was created with the help of international organizations. In other examples, however, state structures are more clearly dominant and the partners' joint cross-border activity is less intensive. One such institution is the Almaty–Bishkek Economic

Corridor (ABEC), initiated in 2014 by the Asian Development Bank (ADB). The project seeks to develop cooperation between neighboring territories in urban planning, agriculture, education, healthcare, tourism, infrastructure and logistics, and disaster prevention. ABEC's governing bodies are an Intergovernmental Council chaired by the prime ministers and a Subcommittee that includes representatives of local authorities and the private sector (Almaty–Bishkek Economic Corridor n.d.). ABEC's most visible activity has largely been the coordination and synchronization of projects that the two sides are implementing in parallel.

Areas and Functions of CBC

The most developed areas of CBC between Kazakhstan and Kyrgyzstan are agriculture, trade, transport and logistics, tourism, water management, crime control, emergency management, culture, and sport. In some cases, cooperation may cover several interrelated fields, such as trade and logistics, agriculture and trade, or transport and tourism.

CBC projects and activities can perform different functions. One of the best-known classifications is that of de Sousa, who distinguished cooperation designed to improve mutual awareness, such as official visits and cultural events; mutual assistance, especially in disaster response; and functional cooperation, including joint planning of cross-border infrastructure and projects to create stable cross-border institutions (de Sousa 2013).

Along the Kazakhstan–Kyrgyzstan border, cooperation aimed at mutual awareness takes the form of official ceremonial events, for example those dedicated to the days of the neighboring state or province or to historical events significant for both sides, as well as officially sanctioned cultural and sports events (Jambyl TV 2018). Such events are often framed

through the lens of inter-Turkic ties and Central Asian integration.

The clearest example of mutual-assistance cooperation is interaction among provincial branches of ministries and agencies responsible for emergency situations, agriculture, water resources, and policing, where joint action requires rapid operational coordination. This includes dealing with the aftermath of earthquakes, cross-border fires, landslides and mudflows, floods, and snow blockages; controlling locusts, providing humanitarian assistance, and processing surplus agricultural output; reallocating water during drought-related crises; and fighting crime. Such cooperation takes the form of regular meetings, the preparation and implementation of joint plans, the maintenance of operational communication channels, exchanges of experience and information, exercises, and joint rescue operations (Azimzhanova 2023; Economist.kg 2025; Jambylinfo.kz 2023).

The main forms of functional cooperation in the Kazakhstan–Kyrgyzstan border area are the creation of cross-border institutions, discussed above, and cross-border planning. The latter most often involves the development of cross-border transport and logistics infrastructure, coordinated by the authorities on their respective sides of the border. Priorities include the development of the Almaty–Bishkek and Bishkek–Taraz transport corridors, the construction of a logistics center at the border, promotion of tourism between Kazakh provinces and Lake Issyk-Kul, strengthening Zhambyl Province's role as Talas Province's main window to the outside world and part of its transit corridor, and improving transport connectivity between remote districts of Almaty and Issyk-Kul provinces. Some transport and logistics projects have a wider significance, as they increase the attractiveness and carrying capacity

of highways linking Kazakhstan and Kyrgyzstan with China and Russia.

As elsewhere, effective coordination between authorities on opposite sides of the border and timely implementation of agreed tasks are often difficult because of underfunding and cumbersome decision-making procedures. The most telling example is the repeated post-Soviet attempts to build a shorter road between Almaty and the resort area on the northern shore of Lake Issyk-Kul, first in the late 1990s and early 2000s, then in the mid- and late 2000s, and again from 2023. A particularly discouraging attempt was undertaken by the authorities of Issyk-Kul Province in the late 1990s and early 2000s without sufficient coordination with the Kazakh side. It led to completion of the Kyrgyz road section up to the border, but received no corresponding support on the other side because the adjacent Kazakh section was avalanche-prone and difficult in terms of terrain (Kuatova 2000). Later projects stalled for lack of funding, while the ADB project launched in 2023 is still at an early stage (CentralasianLIGHT.org 2023).

Attempts by authorities at various levels to integrate local agricultural markets have also produced mixed results. Stable access for Talas farmers to markets in Zhambyl Province repeatedly became the subject of bilateral negotiations, which resulted in sporadic measures to facilitate that access. However, plans to build permanent trade centers at the border, supported at the government level and formalized in a 2007 intergovernmental agreement (Adilet 2008), have not been implemented because of funding problems (Duvanaev 2012).

A more important production, logistics, and trade hub role is assigned to the Alatau Industrial Trade and Logistics Complex, planned for the border section between Zhambyl and Chuy provinces, near Ak-Tilek–Karasu. The complex is intended to support the processing of agricultural products and

the production of textiles and pharmaceuticals. Interstate agreements on its construction were signed in 2021 and 2023, but because of difficulties in identifying investors and resolving other bureaucratic issues, construction began only in 2024 and has not yet been completed (Omirgazy 2025).

Joint planning for the development and modernization of border-checkpoint infrastructure has been more successful. A telling example is the repeated synchronized modernization of the adjacent Kordai and Ak-Zhol checkpoints, most recently in 2020–2021. To improve connectivity on the eastern section of the border, in the 2010s and 2020s the sides made substantial joint efforts to develop the section between Almaty and Issyk-Kul provinces with the Karkyra and Kegen checkpoints, which moved from seasonal daytime operation to year-round, around-the-clock service (24.kg 2025).

In environmental protection, alongside the already mentioned work of the Chu–Talas Water Management Commission, a clear example of joint planning is the transboundary Western Tien Shan World Heritage site, created jointly by Kazakhstan, Kyrgyzstan, and Uzbekistan (see Chapter 2). Another example is cooperation formalized by a 2024 agreement between three Kazakh protected areas and a Kyrgyz national park under the Global Snow Leopard and Ecosystem Protection Program, whose secretariat is based in Bishkek. Under this cooperation, camera traps have been installed, anti-poaching patrols are coordinated, and scientific information is exchanged (UNDP 2024b).

Some steps, although still not sufficiently systematic, are being taken to coordinate cross-border ties between neighboring territories in tourism. The 2007 intergovernmental agreement on mutual recognition of tourist visas for third-country nationals traveling in border districts of the other country was intended to strengthen such ties (CIS Legislation 2007). A

more recent initiative has been an attempt to revive the cross-border hiking route between Almaty and Lake Issyk-Kul, including the signing of a government-backed memorandum between tourist organizations of the two countries and a joint hike by officials, parliamentarians, and businesspeople in 2022 (24.kg 2022).

Functional CBC between the territories of the two countries is not limited to projects carried out or coordinated by state structures. Some elements of such cooperation can also be found in formal and informal partnerships among non-state actors, especially businesses. Cross-border passenger bus services between Kazakh and Kyrgyz destinations, for example, require close coordination among carriers on both sides of the border. Passengers most often cross the border on foot and transfer to another bus in order to avoid long delays caused by vehicle queues and inspection procedures. Elements of systematic interaction, including the planning of joint steps, can in some cases be seen in cooperation between tourist agencies and hotels in neighboring areas, especially between Almaty and firms or hotels at Issyk-Kul resorts.

Conclusion

Because of the mountainous terrain of the adjoining territories, CBC between Kazakhstan and Kyrgyzstan is concentrated in three valleys. The most important is the Chuy Valley, where Bishkek is the main center of attraction on the Kyrgyz side. The capital's location near the border largely offsets the sharp inequality between the two countries, and in some respects even gives the Kyrgyz side an advantage over the immediately adjacent territories on the Kazakh side.

At the same time, interstate inequality is still visible at the border level in the structure of some cross-border trade flows and in periodic attempts by the Kazakh side to regulate them

through restrictive measures. The Kyrgyz side, in turn, has a bargaining asset in its control over water resources. Disagreements over these and other issues occasionally produce conflict situations, but they are resolved and also stimulate CBC aimed at addressing disputes constructively.

As in other Central Asian countries, cooperation between neighboring territories is largely controlled by authoritarian and strongly centralized regimes that generally do not welcome uncontrolled cross-border activity with a potential for politicization unless they manage it themselves, and that seriously limit the powers of provinces to develop international connections. Nevertheless, CBC between Kazakhstan and Kyrgyzstan stands out from cooperation between most other pairs of Central Asian states because it is more intensive and more open. Representatives of provincial authorities and provincial branches of government agencies meet fairly regularly, and the media cover both achievements and problems in bilateral ties relatively openly. It is precisely along the Kazakh–Kyrgyz border that the region's unique cross-border institution, the Chu–Talas Water Management Commission, operates with the support of respected international organizations. Its work involves representatives of central government bodies, local authorities, NGOs, and local water-user communities. The combination of authoritarian and centralized governance with a fairly high degree of openness to cross-border contacts, together with the smoothing of sharp interstate inequality in the central part of the border area, makes Kazakhstan–Kyrgyzstan CBC a particularly interesting case for further study.

Part II. Spheres, Practices, Opportunities

4. Agriculture

Vera Smirnova

Kazakhstan and its neighbors have long been major agricultural producers and partners in mutually beneficial cooperation in the agricultural sector.

The border with Uzbekistan is especially important for exports of Kazakh products. Among post-Soviet countries, Uzbekistan is the second-largest buyer of Kazakh goods after Russia, accounting for 3.5 percent of Kazakhstan's total exports in 2024, or USD 2.8 billion (Bureau of National Statistics 2024b). In 2023–2024, Uzbekistan was the leading importer of agricultural products from Kazakhstan. It bought most of Kazakhstan's exported cattle and beef; it was also the second-largest buyer of Kazakh flour after Afghanistan, the second-largest buyer of Kazakh vegetable oil after China, and the top export market for oilseed cakes used as animal feed. Mutual trade in agricultural and food products between Uzbekistan and Kazakhstan reached USD 1.87 billion in 2023 (Abdurakhmonov 2024).

Kyrgyzstan has a much smaller market, with a population of about seven million, but it is also an important trading partner for the Republic of Kazakhstan. In Kazakhstan's foreign trade with members of the Eurasian Economic Union (EAEU), the Kyrgyz Republic ranks second after Russia, with 7.3 percent of turnover (Bureau of National Statistics n.d.), or around USD 2 billion (Ministry of Foreign Affairs of the Republic of Kazakhstan 2026). In January–February 2026, milk and fermented dairy products from Kyrgyzstan accounted for about 25 percent of Kazakhstan's imports of these products from members of the Commonwealth of Independent States (CIS). Kazakhstan, in turn, was the only CIS supplier of im-

ported eggs to Kyrgyzstan (Bureau of National Statistics 2026a); wheat deliveries to Kyrgyzstan have also been growing (Guliaeva 2026), and bakery products are exported there as well (Kanunnikov 2026).

Turkmenistan, by contrast, trades with Kazakhstan much less actively. In the first months of 2026, it accounted for only 0.2 percent of Kazakhstan's trade turnover, and average annual trade between the two republics is about USD 500 million. Kazakhstan exports wheat flour, sunflower oil, wheat, pasta, margarine, and tea concentrates to Turkmenistan. Apart from gas, Turkmenistan supplies fruit and vegetables to Kazakhstan, especially tomatoes, which became the second most important item in Kazakhstan's import structure from Turkmenistan in 2025 (Official Information Source of the Prime Minister of Kazakhstan 2025a).

Water Resources and the Vulnerability of Borderland Agriculture

Part of the infrastructure of cross-border cooperation (CBC) is a system of transboundary canals and rivers through which water from Uzbekistan and Kyrgyzstan reaches Kazakhstan's borderland.

Water coming from Uzbekistan is used both for irrigation and for drinking. The Bolshoi Keles, Zakh, Khanym, and Achinau canals, for example, originate in the Charvak Reservoir in Tashkent Province and supply water to Saryagash and Kazygurt districts in Turkestan Province. In the early 2000s, Kazakhstan invested in repairing these canals, lining their beds with reinforced concrete to reduce water losses during delivery. In November 2025, after eight years of negotiations, Uzbekistan and Kazakhstan signed an agreement on the joint management and rational use of transboundary

water bodies (Central Communications Service under the President of the Republic of Kazakhstan 2026).

Some settlements in Turkestan Province still receive drinking water from Uzbekistan. In 2023, residents of seven villages in Saryagash District complained about the quality of water from the canal, reporting that they had found dead chickens in it; in 2022, they had found cattle carcasses. The water-quality problem was so severe that chlorine and potassium permanganate were added to canal water for disinfection, and it was still used for drinking because there was no alternative source (Seisembek 2023b).

Shortages of irrigation and drinking water in Kazakhstan's border villages can impoverish rural residents whose livelihoods had depended on agricultural production before water scarcity worsened (Isa 2021).

Water scarcity limits the choice of crops available to farmers in the border districts of Turkestan Province. The state determines, for example, how much rice, a water-intensive crop, villagers may grow. Interestingly, despite the shortage, farmers may still expand rice cultivation because they believe that fields previously planted with rice later produce higher yields of melons and cotton (Dobrota 2023). The Ministry of Water Resources and Irrigation is negotiating with Uzbekistan to prevent losses for farmers who face crop-failure risks because of water shortages.

Kazakhstan receives irrigation water from Kyrgyzstan through the transboundary Chu and Talas rivers. The sides exchange data on the condition of the Kirov, Orto-Tokoy, and Toktogul reservoirs (Kazinform 2026) and hold negotiations on water deliveries. Meetings of energy and water ministers on water supplies from Kyrgyzstan may also be held in a trilateral format involving Kazakhstan, Kyrgyzstan, and Uzbekistan. In 2025, for example, Kazakhstan and Uzbekistan promised to

supply electricity to Kyrgyzstan. This would allow the Kyrgyz side to reduce winter electricity generation and store water in the Toktogul Reservoir for later release to Kazakhstan and Uzbekistan (Znamia truda 2025).

The difficult water situation for farmers dependent on Kyrgyzstan is pushing governments to help them adopt water-saving technologies more actively. Drip and sprinkler irrigation can save up to 40 percent of water. Kazakhstan provides subsidies covering up to 50 percent of the cost of introducing these technologies. Another problem is the deterioration of irrigation infrastructure built in the Soviet period, including reservoirs, canals, and hydraulic structures. In the coming years, funding from the Islamic Development Bank is expected to support the reconstruction of 76 canals with a total length of more than 420 km, the construction of three new reservoirs, Kalguty, Akmola, and Yrgayty, and the modernization of the Teris-Ashchybulak and Karakonyz reservoirs (Poliakov 2025).

In any case, water is chronically scarce in the borderlands. In the summer of 2023, one of the largest recent crises over irrigation water deliveries from Kyrgyzstan to Kazakhstan appears to have occurred. Satellite data showed that the Kirov Reservoir in Kyrgyzstan had indeed fallen to a very low level in August, meaning that there was objectively little water available. Kyrgyzstan first reduced and then completely stopped supplying water to Kazakhstan in the summer of 2023, causing large losses for agricultural producers. After the water supplies stopped, the Kazakh side announced a special anti-drug operation. Inspections of each vehicle at the Kyrgyz–Kazakh border were extended to 4–6 hours, effectively blocking all checkpoints on the border with Kyrgyzstan. As a result, truck queues stretched for many kilometers. At the Ak-Tilek checkpoint, for example, 500 trucks accumulated; at

Ken-Bulun, 150 (Karmazin 2023). Entrepreneurs transporting perishable agricultural products also suffered heavy losses.

In addition to the volume of water arriving from Kyrgyzstan, experts from the two countries also discuss its quality. The issue is wastewater treatment in Kyrgyzstan, a problem for which the state does not always have sufficient funds. Assistance is provided by the Global Environment Facility, UNDP, UNECE, and the OSCE. Kazakhstan and the Kyrgyz Republic are also working to introduce water-saving technologies, including irrigation-canal repairs and drip irrigation. Some forecasts suggest that in the coming decades flows in the transboundary Chu and Talas rivers will decline in any case, worsening relations between Kazakhstan and Kyrgyzstan (Ecosport.kz 2018).

Market Incentives and State Regulation of Border Trade

The financial basis of CBC is the private interest of market participants. State support for international cooperation is also significant, of course. It includes the infrastructure investments mentioned above: modernization of checkpoints, roads, and water facilities, as well as investment in border cooperation centers. In agriculture specifically, state subsidies for farming are also an indirect investment in border cooperation.

Through their domestic agricultural policies, states may unintentionally stimulate trade growth between countries and sometimes trigger crises, because agriculture is highly sensitive as a sector tied to food security. Kazakhstan is a traditional supplier of livestock to Uzbekistan, while also actively supporting domestic producers. When Uzbekistan's government launched a program to encourage imports of breeding livestock, Uzbek livestock producers began buying large numbers of breeding females in Kazakhstan (Orda.kz 2021). As a result,

156,000 head of cattle were exported from Kazakhstan in 2019, compared with only 38,000 in 2018. Moreover, 78 percent of Kazakhstan's cattle exports in 2019 went specifically to Uzbekistan (Buianov 2020). Cattle were exported primarily from border provinces to minimize transport costs. In Shymkent, for example, beef prices rose sharply in 2019, and sellers sometimes could not find enough meat to supply large buyers such as restaurants (Kun.uz 2019). Some of the exported animals were breeding stock whose raising had been subsidized by the state.

Kazakhstan's agricultural policy therefore generated profits not only for Kazakh farmers but also for Uzbek farmers, who received subsidies from the Republic of Uzbekistan and earned income from fattening and processing Kazakh cattle. Kazakhstan, in turn, had subsidized breeding livestock and lost the public funds invested in supporting agriculture, as well as the value that could have been captured by processing meat inside the country. As a result, in autumn 2019 Kazakhstan had to introduce a one-year ban on the export of breeding females. This proved difficult to enforce: cows, for example, were exported as if they were bulls (ElDala.kz 2024).

The Uzbek market is attractive to Kazakh farmers because it offers higher prices than the domestic market. After the restrictions were lifted, cattle exports resumed. In addition to Kazakh farmers and Uzbek processors, re-exporters also profited from cross-border cattle trade, since some cattle sold to Uzbekistan were later re-exported to Tajikistan and Afghanistan. The gains from cattle exports were so large that traders even resorted to smuggling, which Kazakh border guards had to combat with drones (Kazinform 2025d).

Seasonal Employment and Borderland Agricultural Labor Markets

One more important condition for CBC is the level of economic development among cooperation partners. The size of the development gap between countries can shape the intensity of cooperation. According to the World Bank, GDP per capita in 2024 was USD 13,991 in Kazakhstan (World Bank n.d.-g), USD 6,856 in Turkmenistan (World Bank n.d.-c), USD 3,094 in Uzbekistan (World Bank n.d.-h), and USD 2,420 in Kyrgyzstan (World Bank n.d.-b).

The gap in living standards between neighboring republics encourages cooperation because prices and wages differ. For decades, farmers in borderland Turkestan Province have hired migrants from Uzbekistan for cotton picking because Kazakh pickers demand higher wages. Uzbek workers sometimes leave for Kazakhstan shortly before the cotton harvest begins in Uzbekistan, hoping to earn more than they could at home. Their labor is so profitable for employers that farmers who hire foreign workers pay not only wages but also for food, travel, and registration with the migration police. In 2017, 71,000 Uzbek citizens received temporary registration in Maktaaral District (Isa 2018), whose population was 320,000. During the COVID-19 pandemic, Kazakh farmers' dependence on workers from Uzbekistan created an acute labor shortage in cotton fields (Isa 2020).

Migrants from Kyrgyzstan work in the fields of Kazakhstan's borderland Almaty and Zhambyl provinces (Ashakeeva 2018). Migrants from Turkmenistan's Balkan Velayat also come to Kazakhstan for work (UPL.uz 2025).

Cross-Border Transfer of Agricultural Technologies

Sohn writes that a border location can make provinces logistically attractive to foreign investors and give borderland communities mutually beneficial opportunities to acquire knowledge and experience (Sohn 2014). This is fully visible in

borderland Turkestan Province. Uzbekistan supplies Kazakhstan with crop seeds and also shares cultivation technologies. Another successful example of seed and technology exchange is a business growing pomegranate seedlings brought from Uzbekistan to Maktaaral District in 2016, which produced a good harvest in 2020 (Ontustik TV 2020).

During the post-Soviet period, repeated attempts were made to develop sericulture in borderland Turkestan Province. In 2010, with support from the foreign ministries of Kazakhstan and Uzbekistan, *grena*, or silkworm eggs, were purchased in Uzbekistan. Farmers in Maktaaral District, where mulberry plantations had survived, used them to grow silkworm cocoons, relying on knowledge of the technology preserved from Soviet times. That same year, 16,000 mulberry saplings were planted in Maktaaral District (KazTAG 2010). In 2017, with support from Uzbekistan, mulberry trees were planted on 30 hectares in Baidibek District under the Shatkal tree-planting program (Orazbekova and Lunin 2024). In 2023, 10,000 saplings of the Japanese Ashima mulberry variety were planted in borderland Zhetysai District of Turkestan Province; in 2024, Kazakh farmers planted 250,000 saplings of the Markhaba variety. The saplings were purchased in Uzbekistan. Farmers from Kazakhstan attended training seminars and master classes with Uzbek specialists. Mulberry is not water-intensive and is irrigated only three or four times per season, which matters under water-scarce conditions. Uzbek entrepreneurs are ready to buy mulberry leaves and silkworm raw materials. They also expressed readiness to build a silk factory if the mulberry area reached 400 hectares (Bilial, Zhumabek, and Abish 2024). Those wishing to plant mulberry and produce silk in Kazakhstan can receive financial support through the Auyl Amanaty program.

In 2016, lemon saplings were also brought from Uzbekistan to Zhetysai District. The farmer who piloted the project received information on greenhouse lemon cultivation from workers at lemon nurseries in Uzbekistan (Dobrota 2020). In 2019, media reports also recorded the import of lemon saplings and cultivation know-how to Sairam District of Turkestan Province. Four years later the trees began to bear fruit, but the owner complained that heating with coal, a more expensive fuel, made it difficult to compete with Uzbekistan's gas-heated lemon nurseries (Vera.kz 2023). Uzbekistan is therefore both a source of seedlings and agricultural technology for Kazakhstan and a competitor for Kazakh farmers.

Sometimes Uzbekistan serves Kazakhstan's border provinces only as a source of expertise, with agronomists from the Republic of Uzbekistan invited to work with crops that are new to the area, while seeds are purchased from China. This happened in 2025, when farmers in several districts of Turkestan Province decided to grow sunflower instead of water-intensive cotton (24KZ 2025).

While Uzbekistan, with its long history of horticulture and sericulture, provides Kazakhstan with expertise in these fields, Kazakhstan, a traditional meat producer, shares experience with Uzbek producers in livestock farming. For example, when Uzbek producers came to Kazakhstan to buy cattle, they also became familiar with modern technologies for raising and fattening animals and later transferred these practices back home (Buianov 2021).

In 2022, Kazakhstan supplied Kyrgyzstan with elite seeds of high-yield wheat (Kazinform 2022). Insemination specialists in borderland Issyk-Kul Province use breeding material from Kazakhstan for artificial insemination of female livestock (DairyNews.today n.d.). Embodied cross-border knowledge transfer, in the form of seeds and breeding material, is a

classic example of agricultural technology moving across a border. This model strengthens intraregional ties, saves time on acclimatization, and supports food security in Central Asia.

Shared Threats to Agriculture in Borderland Provinces

CBC with Uzbekistan also includes efforts to control pests affecting agricultural plants. In Soviet times, many biofactories operated in Maktaaral District of South Kazakhstan Province, producing biological agents that helped regulate pest populations. After the Soviet collapse, Kazakhstan began using chemical pesticides more actively because of their immediate effect, but their drawbacks include environmental damage and insect resistance. Kazakh experts assess Uzbekistan's work in this area highly, noting that along with collective and state farms, the republic preserved its biofactories as well. Officially, there are 1,250 of them in Uzbekistan. Kazakhstan imports biological agents mainly from Uzbekistan, although southern Kazakhstan already has several biofactories of its own (Shimyrbaeva 2014).

Uzbekistan and Kazakhstan both suffer from locust outbreaks, while agriculture is an important economic sector in both republics. In 2024, locust infestations in Uzbekistan were observed mainly in provinces bordering Kazakhstan, so Uzbekistan paid special attention to treatment in Karakalpakstan and Navoi Province. Joint surveys were conducted on Uzbekistan's borders with Kazakhstan and Kyrgyzstan, and experts exchanged information and experience to respond effectively to the threat (Ergashev 2024). The Moroccan locust is a serious transboundary problem in Kazakhstan, especially in Turkestan Province, and in northern Uzbekistan, where a major outbreak occurred in 2008 (FAO n.d.).

The locust issue is important both for the resilience of rural communities and for food security across the region. Experts

link the growing locust problem to the drying of the Aral Sea, which created new habitats for locusts, and to global warming. Regular transboundary surveys are carried out, and cooperation has also been established between the Institute of Plant Protection and Quarantine in Uzbekistan and the Kazakh Research Institute of Plant Protection and Quarantine. This cooperation requires major organizational effort and financial support from the Food and Agriculture Organization of the United Nations (FAO 2024). The importance of this work is illustrated by the 2008 case in Saryagash District, where locusts destroyed fodder in three rural districts. Livestock had to be slaughtered and sold because there was nothing to feed it with (Eliseev 2008b).

Kazakhstan's Ministry of Agriculture, together with Kyrgyz specialists, surveys border areas to monitor locust breeding grounds (Official Information Source of the Prime Minister of Kazakhstan 2025b). Kazakhstan, Kyrgyzstan, and Uzbekistan coordinate locust-control activities through trilateral meetings (Kazinform 2025c) and exchange information on locust movements in borderland provinces (Vechernii Bishkek 2025).

The countries of the region also cooperate through meetings of agriculture-ministry representatives mediated by FAO, with the aim of strengthening cooperation, exchanging best practices for effective pest control, and developing recommendations (Ministry of Agriculture of the Republic of Kazakhstan 2024).

Coopetition in Cross-Border Agricultural Ties

Overall, agricultural cooperation across Kazakhstan's Central Asian borders fits the logic of coopetition, a combination of cooperation and competition. The concept comes from business and game theory and was proposed by Adam

Brandenburger and Barry Nalebuff (Brandenburger and Nalebuff 1996). It means that in some cases firms benefit from cooperation, while in others they compete.

For Uzbekistan, borderland Turkestan Province is both a competitor and a territory of opportunity. Seeds can be sold there; Uzbek meat processors can buy livestock there; sericulture businesses can invest in using local land to produce mulberry leaves, since access to land may be more difficult in geographically compact Uzbekistan; and workers from Uzbekistan can earn higher wages there than at home. At the same time, borderland Turkestan Province is one of Kazakhstan's largest agricultural producers, and some of its products overlap with Uzbekistan's exports: it accounts for 100 percent of Kazakhstan's cotton, 74 percent of its grapes, and 35 percent of its fruit (Akimat of Turkestan Province 2023).

The language of competition is voiced, in particular, by Kazakh vegetable growers. They face difficulties because of price competition from producers in Uzbekistan. Experts identify illegal cross-border trade and a shortage of processing enterprises in Kazakhstan as part of the problem. The issue is especially acute for greenhouse vegetable producers. Turkestan Province accounts for about 70 percent of Kazakhstan's greenhouse area. In the off-season, greenhouse complexes mainly grow cucumbers, tomatoes, and herbs. Uzbek producers have an advantage over Kazakh ones for several reasons: lower wages in Uzbekistan; a longer period in Kazakhstan during which greenhouses need heating; and Uzbekistan's exemption, in force since 2018, from customs duties on imported fertilizers, greenhouse-construction materials, and seedlings (Dobrota 2019). Producers of fruit-tree and grape seedlings also feel price competition from Uzbekistan (Kazinform 2015).

Greenhouse owners in Kazakhstan felt strong competition from Turkmen tomato producers, and in 2023 this was also true in Uzbekistan, where farmers had to heat greenhouses with coal (Khurramov 2025). From 2017 to 2022, Turkmen tomato producers increased their share of Kazakhstan's imported tomato market from 3 percent to 45.7 percent. Greenhouse owners in borderland Turkestan Province suffered because they could not compete with cheap tomatoes from Turkmenistan. Turkmen producers' success is due to low gas tariffs for greenhouse complexes in Turkmenistan (EastFruit 2023). The main areas, actors, and discourses of agricultural CBC are summarized in Table 4.1.

Table 4.1. Agricultural CBC between Kazakhstan, Uzbekistan, Kyrgyzstan, and Turkmenistan

Area of cooperation	Actors	Discourse
Construction and renovation of infrastructure: checkpoints, roads, and a border cooperation center.	Governments, local administrations, and border control services.	Kazakhstan has treaties on allied relations with Kyrgyzstan (2003) and Uzbekistan (2022) and a strategic partnership with Turkmenistan. All four countries are located in the Central Asian region and are focused on economic development, including through expanded foreign economic ties.
Production, processing, and transportation of agricultural goods.	Commercial enterprises; veterinary, phytosanitary, and customs-control bodies; and the state as a provider of subsidies and a crisis manager in emergencies such as floods and droughts.	Kazakh media strongly frame Kazakh farmers as producers of agricultural raw materials, such as wheat and live cattle, and Uzbekistan as a neighbor that responds flexibly to opportunities created by the Kazakh market. It processes raw materials to its own advantage, fattening cattle and milling wheat into flour both for domestic consumption and for resale to Afghanistan and Tajikistan. Purchases of Kazakh cattle raise domestic cattle prices and allow Kazakh farmers to make production more profitable. Other discourses concern the ecological purity of Kyrgyz products, the dependence of agricultural producers in Kazakhstan's border provinces on irrigation-water deliveries from Kyrgyzstan, joint locust control, and Turkmenistan's growing role in the imported-tomato market.

Area of cooperation	Actors	Discourse
Trade in plant seeds and meat and dairy breeding animals, and exchange of expert knowledge on agricultural technologies.	Business enterprises, agricultural research institutes, educational institutions, and the state as a sponsor of research and development.	These exchanges help strengthen food security in the region.
Joint control of agricultural plant pests.	Research institutes, biofactories, and FAO.	Crop pests are a shared problem for border provinces and can be addressed through joint efforts.

Conclusion

Agriculture is a field in which trends can change very quickly because production depends heavily on the external environment, both natural conditions such as drought, locusts, and plant and animal diseases, and the situation in external markets.

Because food security is extremely important for states, they actively regulate this market, seeking to make it more stable and to reduce environmental risks for agricultural producers. At the same time, the state itself contributes to volatility in agricultural markets: subsidies for producers are introduced and withdrawn; bans are imposed and lifted on imports and exports of particular products; and green corridors are opened for imports of perishable agricultural goods.

Rapidly changing market conditions require maximum flexibility from participants in CBC. Operating at the grassroots level and responding to immediate circumstances, they cannot always think strategically and naturally pursue their private interests, which do not always coincide with national interests.

In the case of Kazakhstan and its Central Asian neighbors, states are responsible for creating the physical infrastructure of CBC. They build roads and railways, renovate water canals, expand the capacity of border checkpoints, and build border

cooperation centers. They also set the legal framework for cooperation by drafting and ratifying agreements on CBC. States provide assistance in emergencies.

The political context of relations between Kazakhstan and its Central Asian neighbors is generally positive and oriented toward supporting mutually beneficial cooperation projects. The republics' state languages belong to the Turkic group, which facilitates mutual understanding between the sides. The authorities of all the republics set ambitious goals for economic development and deeper cooperation.

Agricultural producers, agricultural processors, and companies trading in agricultural goods are perhaps the most active actors in border cooperation. They exchange information, technologies, seeds, breeding stock needed for animal reproduction, and agricultural products themselves. A number of media publications note that, in agricultural cooperation, Kazakhstan, with cattle, small livestock, and wheat, and Turkmenistan, with cotton and vegetables, more often act as sources of raw materials. Uzbekistan, for example, uses these raw materials for processing: it fattens cattle not only for domestic needs but also for re-export, ultimately earning more added value than the raw-material producer. Kyrgyzstan exports both essentially raw fruit and vegetable products and processed goods, including dried fruit and dairy products. This situation is perceived ambivalently in Kazakhstan: on the one hand, Kazakh producers welcome sales opportunities and higher domestic prices; on the other, they see forgone gains.

International organizations also play a role in building CBC. FAO helps combat locusts. In addition, FAO and the Sub-Regional Representation for Central Asia of the World Organization for Animal Health (WOAH) support control of zoonotic transboundary diseases. These organizations increase

the resilience of food-supply systems, reduce costs, and help improve operating standards in the relevant countries.

Agricultural experts, often working for corporations, train farmers, develop new plant varieties and animal breeds, and monitor the environment.

Although CBC improves the resilience of border provinces by helping find a balance in water management, supporting mutually beneficial border trade, providing access to agricultural technologies, seeds, and breeding stock for dairy and meat animals, and raising income opportunities for seasonal workers, it also creates challenges. Active cattle exports from Kazakhstan to Uzbekistan raise domestic meat prices and create shortages on the Kazakh market, which is especially painful for vulnerable groups of consumers. Cheaper labor and lower greenhouse-heating costs in Uzbekistan and Turkmenistan put Kazakh farmers at a competitive disadvantage. States and businesses participating in CBC will have to continue the difficult search for forms of cooperation that balance the interests of all parties involved.

5. Tourism

Vera Smirnova

Kazakhstan–Kyrgyzstan Borderland

In the Kazakhstan–Kyrgyzstan borderland, tourist mobility has developed in both directions. For tourists from Kazakhstan, Lake Issyk-Kul remains the main destination, while residents of Kyrgyzstan regularly travel to Almaty and to the natural attractions around Kazakhstan's former capital. Alongside tourism proper, other forms of mobility also persist, including shopping trips, visits to relatives, and travel to take part in sports and cultural events.

Trips to Issyk-Kul are seen as a more affordable alternative to vacations at lakes in Kazakhstan. This reflects Kyrgyzstan's lower standard of living and, consequently, lower prices for visitors. The Soviet-era tradition of traveling to this mountain lake also matters. Because there is no direct road, tourists from Almaty Province, which borders Kyrgyzstan, reach Issyk-Kul Province through Bishkek. Before the collapse of the USSR, mountain trails connected Almaty and Issyk-Kul and could be covered on foot in three days; after borders appeared between the Central Asian states, such trips lost much of their former appeal (Severnaia 2021), although some tourists continued to make these hikes (Satbaeva 2022).

During the tourist season, residents of Issyk-Kul Province earn income from visitors arriving from Kazakhstan's border and non-border provinces. Sources of income include renting out accommodation, helping with currency exchange, and selling vegetables, fruit, fish, melons, and *shoro*, a drink made from wheat, barley, and corn. There is also a perception that food in Kyrgyzstan is cleaner and more natural than in Kazakhstan. In addition to beach vacations on Issyk-Kul, visitors

can explore natural attractions in the mountains around the lake.

The cross-border tourist flow intersects with other flows, including the movement of people who try to profit from price differences between the two countries. In hydrocarbon-rich Kazakhstan, gasoline and diesel prices are a third to a half lower than in Kyrgyzstan. This contributes to the shadow market in fuels and helps some residents of border provinces earn income. In 2022, after COVID-19 restrictions were lifted and tourist travel from Kazakhstan to Kyrgyzstan began to recover, tourists faced long queues at the border because they had to wait in the same lines as fuel carriers. In addition, after the outbreak of large-scale hostilities in Ukraine and the emergence of obstacles to Russian tourism in Europe, some tourists from Russia shifted toward Central Asia. Tourists from eastern Russia first travel by car through Kazakhstan and then continue to Lake Issyk-Kul, increasing traffic across the Kazakhstan–Kyrgyzstan border and creating opportunities for borderland residents to earn more (Vaiskopf 2022).

At present, the road from Almaty to Cholpon-Ata, one of the tourism centers on Issyk-Kul, takes about seven hours, over roughly 450 km, so the route remains quite long. The idea of building a shorter road that would reduce the journey to Issyk-Kul to two or three hours has been discussed since the Soviet period, but it has never been implemented. Kazakhstan is interested in promoting its own resort areas at Burabay and Alakol (Beniaminova 2024), while Kyrgyzstan lacks sufficient funds to build the road and also has concerns that Kazakh businesses would become even more active around the lake than they already are (interview with a guesthouse co-owner, Cholpon-Ata, August 2025). Environmental concerns about the damage that a larger tourist flow could cause to Kyrgyzstan's natural environment remain another factor.

Nevertheless, the case for modernization has so far outweighed fears of environmental loss and of stronger economic influence from the neighboring country: a 279 km road project is now under discussion. Part of the funding is expected to come from the Asian Development Bank, and the project is planned for completion by 2035 (Kolesa.kz 2022). A partial solution came in September 2025, when a 52 km road linking Kegen in Almaty Province with Tyup on the northeastern shore of the lake opened, shortening the route from Almaty to the eastern part of Issyk-Kul to about 280 km (Times of Central Asia 2025d); the alternative western route through the Kastek Pass remains a project (see Chapter 9).

Consumer mobility also links Kazakhstan's border districts with Bishkek. Residents of Kordai, a Kazakh border settlement, travel to Bishkek as the nearest major city: it is closer than Taraz or Almaty and attracts them, among other things, because they can buy goods there, especially clothing, at Dordoi, the region's largest clothing market (CMN.kz 2026).

The borderland provinces of Kazakhstan and Kyrgyzstan are also included in broader Central Asian tourist routes, including itineraries covering all five countries of the region (Asia Odyssey Travel n.d.). At the same time, weekend tours to Kyrgyzstan have become popular. Kazakh tourists are attracted by walks across the "Sky Bridge" in Chunkurchak Gorge and the chance to paddleboard through the "Sunken Forest" at the Ala-Archa Reservoir (Nikolaeva 2025).

The development of this route may also be supported by the Almaty–Bishkek Economic Corridor (ABEC). In 2026, an updated ABEC tourism plan was presented to the public, with its main emphasis on creating a single tourist route between Kyrgyzstan and Kazakhstan (TV BRICS 2026). It is important to bear in mind that, among tourists entering Kyrgyzstan

overland, the largest share arrive through the border with Kazakhstan (Osmonalieva 2022).

In the opposite direction, tourism from Kyrgyzstan to Almaty is popular because Kazakhstan's former capital is geographically close: the journey takes around five to six hours, and taxis and scheduled buses are available. The main types of trips are shopping tours, skiing at Shymbulak, and excursions to Kazakhstan's natural attractions: Charyn Canyon and Lakes Kolsai and Kaindy.

An analysis of Kyrgyzstan's Diesel Forum shows that residents of Kyrgyz border provinces often travel to Almaty for sports events and to visit relatives and acquaintances. Forum users discuss buying branded goods in Almaty, noting the wider choice and broader range of sizes, while also pointing to higher prices than in Kyrgyzstan, especially at the Shymbulak ski resort (Diesel Forum n.d.). Almaty is perceived as a city with well-developed infrastructure, where one can spend several days shopping and sightseeing. Bishkek, for example, has neither a metro nor a zoo, so tour companies include metro rides and zoo visits in tour programs from Kyrgyzstan. Among the recommendations for preparing for a trip to Kazakhstan, Kyrgyz tourists are advised to check whether they appear in the debtor database to make sure they can leave the country without difficulty (Asia Expeditions n.d.).

The proximity of Bishkek (Manas) and Almaty airports to the border also affects cross-border mobility, as the two airports may function as partial substitutes: for some Bishkek residents it is cheaper or more convenient to fly from Almaty, while some Almaty residents may find Bishkek a better departure point.

Kazakhstan–Uzbekistan Borderland

Tourism across Kazakhstan's border with Uzbekistan follows a different logic: urban culture, historical and religious heritage, and health-resort facilities play a much larger role as attractions. As in the Kyrgyz case, relatives living on both sides of the border, as well as cultural and sports events, also matter. Flows develop in both directions: residents of Kazakhstan visit Tashkent and other tourist sites in Uzbekistan, while tourists from Uzbekistan are drawn to Turkestan Province.

Uzbekistan, a country with a centuries-long history of urban culture and a strong Islamic influence, is the main regional destination for foreign tourists. Residents of Kazakhstan living in provinces bordering Uzbekistan are no exception. This is especially visible during holidays, such as New Year and Nauryz, when long queues form at the border. They are created both by labor migrants returning home for a break and by Kazakh tourists wishing to visit nearby Tashkent, as well as by people traveling to relatives in Uzbekistan's border provinces.

In recent years, many modern all-inclusive sanatoriums have been built in Uzbekistan, and a significant share of their visitors are citizens of Kazakhstan (Zhakypov 2026). The Beldersay and Amirsoy ski resorts are also located near Tashkent (WE Project n.d.).

Conversely, borderland Turkestan is important for Uzbek Muslims because it is home to the mausoleum of Khoja Ahmed Yasawi, a Turkic poet and founder of the Yasawiyya Sufi order, which is inscribed on the UNESCO World Heritage List. Turkestan Province also has more than 1,780 historical and cultural monuments and four specially protected natural areas. Transport infrastructure also plays a role in tourism development: Turkestan has an international airport with a de-

sign capacity of three million passengers a year (Official Website of Turkestan Province 2025a).

Logistics projects help strengthen cross-border cooperation (CBC) in tourism. In 2024, a cross-border tourist train was launched on the route Almaty–Turkestan–Tashkent–Almaty (Informburo.kz 2024). In addition, in October 2018 the Asian Development Bank approved USD 800,000 to develop the Shymkent–Tashkent–Khujand Economic Corridor (KazTAG 2019).

Another type of project that promotes cooperation is the annual international tourism fair held in Tashkent, which brings together hundreds of companies and thousands of visitors (Official Website of Turkestan Province 2023). In 2019, with support from the tourism departments of Turkestan Province and the city of Shymkent, a tourism office dedicated to southern Kazakhstan opened in Tashkent (Official Website of Turkestan Province 2019).

Events of the Organization of Turkic States are held in Turkestan, which also contributes to borderland tourism. These include the "Cuisine of the Turkic World" gastrofestival, the "Face of the Tourist Capital" information tour, the "Ancient Turkic Traditions" ethno-festival, a balloon festival, the international song contest "Voice of Turan," and the "Drive Forum Silk Road Fest" rally (Official Website of Turkestan Province 2024c).

Statistics also show the importance of the Uzbek direction for Turkestan Province. In 2023, about 15,000 foreign tourists visited Turkestan Province, 8,000 of them from Uzbekistan. They came for sightseeing, study, cultural and sports competitions, business meetings, and work (Official Website of Turkestan Province 2024a). In the first 10 months of 2025, 43,802 foreign tourists visited Turkestan Province; Uzbekistan

ranked first as the country of origin of foreign tourists (Official Website of Turkestan Province 2025b).

Cooperation goes beyond classical tourism and includes sports-related forms of interaction. Sports events involving athletes from Kazakhstan and Uzbekistan are held in Kazakhstan's Turkestan Province and Uzbekistan's Navoi Province (Official Website of Turkestan Province 2022a, 2022b, 2024b).

Conclusion

Overall, tourism is one of the visible areas of Kazakhstan's CBC with Kyrgyzstan and Uzbekistan. In both cases, mutual tourist flows are supported by transport accessibility, the availability of border checkpoints, cultural and historical ties between the republics, and the presence of family links across the border.

The Kazakhstan–Kyrgyzstan route is built primarily around vacations by residents of Kazakhstan at Issyk-Kul and trips by residents of Kyrgyzstan to Almaty. For residents of Kazakhstan, Issyk-Kul remains attractive because prices are lower, the habit of vacationing there dates back to the Soviet period, tourism infrastructure is developed, and Kyrgyz products are perceived as cleaner and more natural. Residents of Kyrgyzstan, in turn, visit Almaty for shopping, leisure, sightseeing, sports and cultural events, and meetings with relatives and acquaintances.

The development of this route depends on transport and environmental issues. The existing route between Almaty and Issyk-Kul remains long, and the idea of a shorter road has been discussed for decades. At the same time, the growth of tourist traffic increases pressure on the border and raises the importance of projects linked to the Almaty–Bishkek Economic

Corridor and to the creation of a single tourist route between Kazakhstan and Kyrgyzstan.

The Kazakhstan–Uzbekistan route relies more heavily on historical-cultural, pilgrimage, health-resort, and event tourism. For residents of Kazakhstan, Tashkent and nearby tourist sites, including health resorts and ski resorts, are important attractions. For tourists from Uzbekistan, Turkestan Province is important, especially the city of Turkestan with the Khoja Ahmed Yasawi mausoleum and other sites of historical and cultural heritage.

Infrastructure and institutional projects enhance the potential of this cooperation. Turkestan International Airport, the cross-border rail connection Almaty–Turkestan–Tashkent, the Shymkent–Tashkent–Khujand Economic Corridor, tourism fairs, the work of the tourism office in Tashkent, and events of the Organization of Turkic States all help promote the tourism potential of border areas and make tourist flows more stable.

6. Water Management in the Border Regions of Kazakhstan and Other Central Asian States

Azhar Serikkalieva

Theoretical Foundations: Hydropolitics, Transboundary Governance, and Border Studies

Central Asia's water resources were developed within the Soviet economic system, in which responsibility for water abstraction, flow regulation, and irrigation was allocated among the republics without regard to future state borders. After the collapse of the USSR, this system became polycentric, and the interests of upstream and downstream states diverged in many cases. This chapter analyzes this configuration through three complementary approaches: hydropolitics, transboundary water governance, and border studies.

Hydropolitics examines distributive conflicts arising from the physical asymmetry of water flows between states (Gleick 2014; Wolf et al. 1999). In Central Asia, the most evident tension is between the hydropower interests of upstream states, especially Kyrgyzstan and Tajikistan, and the irrigation needs of downstream states – Kazakhstan, Uzbekistan, and Turkmenistan. At the same time, the scholarly literature is skeptical of the notion that "water wars" between upstream and downstream states are inevitable: according to Wolf, Yoffe, and Giordano (2003), parties to such disputes resorted to negotiation far more often than to violence. For Kazakhstan, which lies downstream from Kyrgyzstan on the Chu and Talas rivers and depends on regulation of Syr Darya flows beyond its territory, this asymmetry has major implications for its southern border provinces.

Hydro-diplomacy refers to strategies that turn water interdependence into a basis for cooperation (Conca 2006). In Central Asia, this is particularly evident in the water–energy nexus: Kyrgyzstan is interested in using reservoirs for winter electricity generation, whereas Kazakhstan and Uzbekistan need summer releases for irrigation. The 2025 trilateral agreement among Kazakhstan, Kyrgyzstan, and Uzbekistan on summer releases from the Toktogul Reservoir (Kyrgyzstan) in exchange for electricity and gas supplies to Kyrgyzstan in winter is an example of such a mutually beneficial exchange (CAWater-Info 2025). At the same time, disagreement persists over compensation for water services, which Kyrgyzstan proposes to treat more broadly than reimbursement of infrastructure maintenance costs (Times of Central Asia 2026b).

Transboundary water governance encompasses the legal, institutional, and administrative mechanisms for the joint use of shared water bodies. Its key element is a transboundary water-use regime, understood as the set of rules, bodies, and procedures governing relations among riparian states (Ostrom 1990; Earle, Jägerskog, and Öjendal 2010). Such regimes may be limited to data exchange or may include well-developed joint management bodies. The Central Asian system occupies an intermediate position: the Interstate Commission for Water Coordination (ICWC) and the International Fund for Saving the Aral Sea (IFAS) manage water allocation and routine coordination but have limited capacity to resolve disputes and finance major infrastructure projects (Ziganshina 2023).

Border studies place particular emphasis on the subnational dimension of interaction over the allocation of water resources: border provinces, farms, and municipal systems directly experience the consequences of both cooperation and water scarcity (Golunov and Bitabar 2025). It is therefore important to distinguish national water policy from practical in-

teraction among akimats (subnational administrations), farms, and water utilities. The central argument of this chapter is that Kazakhstan's water relations with its neighbors are structurally asymmetric, but the degree to which this dependence has been institutionalized varies considerably: the most developed bilateral mechanism operates in the Chu and Talas river basins, whereas cooperation on the Kazakhstan–Uzbekistan track remains less institutionalized.

International Legal and Institutional Framework

The international legal framework for transboundary water cooperation in Central Asia began to take shape on February 18, 1992, when five states signed the Agreement on the Management of Interstate Water Resources in Almaty. The ICWC was established at the same time and brings together the heads of the five states' water agencies. The Commission meets quarterly; as of April 2026, its 93rd meeting had been held in Bukhara (Times of Central Asia 2026b). The executive bodies of the ICWC are the Amu Darya and Syr Darya Basin Water Organizations (BWOs), which operate interstate facilities and coordinate water-withdrawal limits.

IFAS was established in 1993, with its chairmanship rotating among the participating states every three years. Kazakhstan has chaired IFAS several times, most recently in 2024–2026. Among recent documents, the 2023 Dushanbe Declaration is particularly important for incorporating climate adaptation into the Central Asian water agenda. At the same time, neither the ICWC nor IFAS has fully developed mechanisms for arbitration or enforcement of decisions (Ziganshina 2023). Coordination mechanisms are therefore considerably more developed than mechanisms for resolving conflicts.

Another component of the Central Asian system was the multilateral agreement on joint action concerning the Aral

Sea, signed in Kyzylorda in 1993. It is especially important for Kazakhstan because Kyzylorda Province lies in the lower reaches of the Syr Darya. The construction of the Kok-Aral Dam in 2005 and the gradual restoration of the Small Aral Sea with World Bank support became the most visible example of environmental rehabilitation in the Kazakh part of the Aral Sea basin (World Bank 2008). Table 6.1 summarizes the main instruments of this framework.

Table 6.1. International Legal Framework for Kazakhstan's Water Cooperation with Central Asian States

Document / institution	Year	Type	Significance for Kazakhstan
Almaty Agreement on the Management of Interstate Water Resources (five Central Asian states)	1992	Multilateral	Foundational
Agreement on the Aral Sea and Ecological Disaster Zone (Kyzylorda)	1993	Multilateral	IFAS participant
Syr Darya Agreement (Bishkek): Kazakhstan, Kyrgyzstan, Uzbekistan	1998	Trilateral	Key participant
Agreement on the Use of Water Management Facilities on the Chu and Talas Rivers	2000	Bilateral: Kazakhstan–Kyrgyzstan	Compensation for facility maintenance costs
UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (1992)	2001 (accession)	Multilateral	Participant (Kyrgyzstan is not a party)
Establishment of the Chu–Talas Water Management Commission	2006	Bilateral Kazakhstan–Kyrgyzstan institution	Co-chair
Strategic Action Program for the Chu and Talas Basins, 2022–2030	2023	Bilateral	Co-author
Kazakhstan–Uzbekistan Agreement on Transboundary Water-Metering Stations (Syr Darya)	2024	Bilateral	Initiator
Kazakhstan–Uzbekistan Agreement on the Joint Management and Rational Use of Transboundary Water Bodies	2025	Bilateral	Party
Trilateral Kazakhstan–Kyrgyzstan–Uzbekistan Agreement on the	2025	Trilateral	Electricity exporter

Document / institution	Year	Type	Significance for Kazakhstan
Water–Energy Balance (Toktogul)			

Sources: UNECE 2023; Ziganshina 2023; CAWater-Info n.d.-b; Diplomat 2024.

Kazakhstan and Kyrgyzstan: The Chu and Talas Rivers

The Chu and Talas rivers originate in Kyrgyzstan, where the main regulating structures are located, and then flow onto the plains of Kazakhstan, irrigating five districts of Zhambyl Province. This asymmetry creates a strong incentive for formal cooperation: as the downstream state, Kazakhstan cannot directly control water deliveries, while Kyrgyzstan bears the costs of operating infrastructure whose benefits accrue substantially to Kazakhstan (Ostrom 1990).

The legal basis for the bilateral mechanism was established by the Agreement on the Use of Water Management Facilities of Intergovernmental Status on the Rivers Chu and Talas, signed in January 2000. Under the agreement, Kazakhstan contributes to the costs of maintaining and repairing facilities located in Kyrgyzstan. In 2006, following the Chu–Talas I project supported by the Organization for Security and Cooperation in Europe (OSCE), the United Nations Economic Commission for Europe (UNECE), and the United Nations Economic and Social Commission for Asia and the Pacific, the Chu–Talas Water Management Commission was established with a permanent secretariat and working groups on legal issues, water allocation, hydraulic works, economics, the environment, and monitoring (UNECE 2023). Meetings alternate between the two countries, reinforcing the parity of the bilateral mechanism.

In December 2023, the co-chairs of the Chu–Talas Water Management Commission signed a joint statement approving the Strategic Action Program for the Chu and Talas Basins for

2022–2030, developed with support from the United Nations Development Programme (UNDP), the Global Environment Facility, and UNECE. It covers water quality and quantity, ecosystem conservation, climate adaptation, bilateral cooperation, monitoring, and economic issues (UNECE 2023). For Central Asia, it is one of the most developed examples of joint planning at the level of a specific river basin.

The 2024 growing season demonstrated that the mechanism functions effectively under normal hydrological conditions. Kazakhstan received 418 million m³ via the Talas against a planned allocation of 380 million m³, and 165.3 million m³ via the Chu against a planned 135.6 million m³ (Table 6.2). Zhambyl Province received its full irrigation water supply (Ministry of Water Resources and Irrigation of the Republic of Kazakhstan 2024; Times of Central Asia 2024).

Table 6.2. Water Deliveries from the Chu and Talas Rivers to Kazakhstan, 2024 Irrigation Season

Indicator	Chu	Talas
Planned 2024 allocation (million m³)	135.6	380.0
Actual deliveries in 2024 (million m³)	165.3	418.0
Above plan (%)	+21.9%	+10.0%
Increase from 2023 (million m³)	+29.7	+94.2
Irrigated area in Kazakhstan (thousand ha)	~93.6	~87.4 (Merke, Baizak, Zhambyl, and Talas districts and the city of Taraz)

Sources: Ministry of Water Resources and Irrigation of the Republic of Kazakhstan 2024; Times of Central Asia 2024.

In February 2026, Kazakhstan and Kyrgyzstan extended their hydrological data-sharing program through 2026–2028, covering the Kirov, Orto-Tokoy, and Toktogul reservoirs. Data exchange is important both for protecting the population

and infrastructure from floods and for agricultural planning in Zhambyl Province (Times of Central Asia 2026a). In 2025, the province received 160 million m³ via the Chu and 427.5 million m³ via the Talas (Times of Central Asia 2026a).

A weak point in the bilateral system remains the condition of water infrastructure. The Kirov Reservoir has been in operation since 1975 and the Orto-Tokoy Reservoir since 1956; their aging increases the risk of emergency releases and flooding. In the 2010s, UNECE supported Kyrgyzstan in improving the safety of the Kirov Dam because infrastructure that is formally domestic can generate transboundary risks. In addition, disagreements periodically arise over the scale and form of compensation: Kyrgyzstan favors a broader economic valuation of water services, whereas Kazakhstan considers its contribution to facility maintenance costs sufficient (Times of Central Asia 2026b).

Kazakhstan and Uzbekistan: The Syr Darya and Border Irrigation Canals

The Syr Darya, 2,212 km long, originates in Kyrgyzstan in the Naryn River system, passes through Uzbekistan and Tajikistan, and then enters Kazakhstan. Within Kazakhstan, its waters are critically important for Turkestan and Kyzylorda provinces. The Toktogul Reservoir in Kyrgyzstan, with a capacity of 19.5 billion m³, is the central element of the Naryn cascade and accounts for a substantial share of Syr Darya flow (CAWater-Info 2025). For Kazakhstan, the Shardara Reservoir, the Koksarai Counter-Regulator, and the irrigation systems of the lower reaches are especially important.

The main interstate tension in the basin is associated with the water–energy nexus. Kyrgyzstan is interested in using the Toktogul Reservoir for electricity generation in winter, whereas Kazakhstan and Uzbekistan need summer releases for

irrigation. The 1998 Agreement on the Coordination of Water and Energy Use in the Syr Darya Basin established a framework for balancing these interests, but its implementation mechanisms remain limited (CAWater-Info n.d.-b). The 2025 trilateral agreement among Kazakhstan, Kyrgyzstan, and Uzbekistan linked summer water releases to winter supplies of electricity and gas to Kyrgyzstan.

Unlike Kazakhstan–Kyrgyzstan water cooperation, Kazakhstan–Uzbekistan cooperation did not rest on a specialized bilateral body until the signing, in November 2025, of the Agreement on the Joint Management and Rational Use of Transboundary Water Bodies. Cooperation proceeded through the ICWC and the Syr Darya BWO and was supplemented by ad hoc negotiations when problems became acute. This made interaction less predictable and more crisis-driven. The new agreement establishes an intergovernmental commission that is to meet twice a year, alternately in each country; it is too early to assess how it will work in practice.

At the borderland level, the Dostyk (formerly Dustlik), Zakh, Khanym, and Bolshoi Keles canals are particularly important along the border between Kazakhstan's Turkestan Province and Uzbekistan's Tashkent and Syrdarya provinces. During the growing season, these canals deliver water from Uzbekistan to irrigate cropland in Turkestan Province (Official Information Source of the Prime Minister of Kazakhstan 2023b). The most acute problem remains the Dostyk Canal, which irrigates about 140,000 hectares in the Maktaaral and Zhetysai districts: actual deliveries regularly fall below agreed limits. In 2023, neither the planned inflow of 4.2 billion m^3 into the Shardara Reservoir nor the planned delivery of 920 million m^3 through the Dostyk Canal was met, resulting in an irrigation water deficit (Official Information Source of the Prime Minister of Kazakhstan 2023b).

Unreliable measurement long made it difficult to verify compliance with water-withdrawal limits. In March 2024, Kazakhstan and Uzbekistan agreed to install reciprocal gauging stations on the Syr Darya, with specialists from each side installing instruments on the neighboring state's territory. The project is being implemented with technical support from the German Agency for International Cooperation (GIZ) and within the Blue Peace Central Asia initiative; in January 2025, technical specifications were approved for the first 10 automated hydrological stations (Diplomat 2024; Times of Central Asia 2025a). Joint measurements create a common factual basis for negotiations and reduce the scope for mutual accusations.

Water quality is a distinctive problem. In July 2023, Kazakhstan formally raised concerns about pollution in transboundary waters arriving from Uzbekistan, including agricultural drainage water with high concentrations of pesticides, nitrates, and salts. Negotiations take place within the ICWC, but there is still no separate bilateral protocol on water quality. Thus, three interrelated problems persist on the Kazakhstan–Uzbekistan track: reliability of water deliveries, reliability of measurement, and water-quality control.

Kazakhstan and Turkmenistan: Limited Interaction

Water-related interaction between Kazakhstan and Turkmenistan has a distinct character. Mangystau Province and Balkan Velayat do not share a river basin; both are located in an arid zone with minimal surface watercourses. Kazakhstan does not directly participate in the allocation of Amu Darya water and engages with this issue mainly through the broader Aral Sea agenda of IFAS.

The main points of contact between Kazakhstan and Turkmenistan are their joint participation in IFAS and the

ICWC, discussions on updating the 1992 Almaty Agreement, and their shared interest in mitigating the consequences of the Aral Sea crisis. The water dimension of Kazakhstan–Turkmenistan relations should therefore be regarded as limited, indirect, and predominantly multilateral.

Comparative Analysis: Institutions, Climate, and Digitalization

Institutional Effectiveness

United Nations Sustainable Development Goal indicator 6.5.1 (SDG 6.5.1) measures the degree of implementation of integrated water resources management (IWRM) at the national level. Between 2017 and 2023, Kazakhstan increased its score from 30 to 51 and moved from the "low" to the "medium-high" category (CAWater-Info 2024). The adoption of a new Water Code in 2024, incorporating the principles of environmental flows, integration of surface water and groundwater, and public participation, reflects a broader shift in national water policy. However, this indicator does not in itself measure the quality of bilateral transboundary cooperation.

Three systemic deficits persist at the transboundary level. First, the ICWC can allocate water and coordinate infrastructure operation, but its capacity for dispute resolution and the development of binding rules is limited. Second, the ICWC and IFAS depend on state contributions and donor assistance and lack the resources to finance major infrastructure projects independently. Third, existing agreements largely fail to cover transboundary groundwater, an omission that becomes particularly important under drought conditions.

The key difference between the Kazakhstan–Kyrgyzstan and Kazakhstan–Uzbekistan tracks is the degree of institu-

tionalization. As noted above, the Chu–Talas Commission has a permanent secretariat, working groups, and a joint action program. Until the 2025 agreement, no comparable bilateral body existed on the Kazakhstan–Uzbekistan track, so negotiations were more often activated in response to specific problems such as shortfalls in water deliveries or concerns about water quality. This demonstrates that institutional arrangements directly affect the predictability of transboundary interaction (Table 6.3).

Table 6.3. Comparative Analysis of Kazakhstan's Water Cooperation along Its Border Tracks

Criterion	Kazakhstan–Kyrgyzstan	Kazakhstan–Uzbekistan	Kazakhstan–Turkmenistan
Dedicated bilateral institution	Chu–Talas Water Management Commission (since 2006)	Intergovernmental commission under the 2025 agreement; previously ad hoc negotiations through the ICWC	None; cooperation through IFAS/ICWC
Key agreements	2000 Agreement; Strategic Action Program 2022–2030; 2026 data-sharing protocol	2024 agreement on water meters; 2025 bilateral agreement on transboundary water bodies; 2025 trilateral Kazakhstan–Kyrgyzstan–Uzbekistan agreement	Multilateral agreements within the ICWC; no separate bilateral treaty
Main water bodies	Chu, Talas	Syr Darya; Dostyk, Zakh, Khanym, Keles canals	Amu Darya – indirect involvement through the broader Aral Sea context
Positions of the parties	Kyrgyzstan – upstream state and location of the main facilities; Kazakhstan – downstream	Kazakhstan depends on flow regulation and water withdrawals upstream	Practically no shared river system
Main problems	Aging water infrastructure; dispute over compensation for costs and water services	Dostyk Canal shortfalls; water quality; reliability of measurements	Limited direct water interaction
Digitalization	Data exchange on reservoirs and hydrological stations (2026)	10 automated hydrological stations (2024–2025, GIZ)	No data

Sources: UNECE 2023; Times of Central Asia 2024, 2025a, 2026a, 2026b; Diplomat 2024; Ministry of Water Resources and Irrigation of the Republic of Kazakhstan 2024.

Climate Risks and Irrigation Security

Climate change is increasing the instability of water supply in Central Asia. According to the European Bank for Reconstruction and Development (2022), temperatures in the area are rising at roughly twice the global average rate. Between 1961 and 2012, the Tien Shan glaciers that feed the Chu, Talas, and Naryn rivers lost about 27 percent of their mass and 18 percent of their area (Farinotti et al. 2015). In 2025, designated by the United Nations as the International Year of Glaciers' Preservation, glacier mass loss in Central Asia was estimated at approximately 30 km³ (Van Tricht et al. 2026). Research on the Tien Shan also records warming of approximately 0.30°C per decade (Zhang et al. 2026). In the short term, accelerated melting may increase runoff, but in the long term it depletes glacier-fed flows.

For Zhambyl, Turkestan, and Kyzylorda provinces, this means greater interannual variability in water supply. Lower storage in the Toktogul Reservoir constrains Kyrgyzstan's capacity for summer water releases and directly affects Kazakhstan and Uzbekistan. In February 2026, the ICWC noted decreased water availability in the region ahead of the growing season (SIC ICWC 2026). For the Amu Darya, the 2026 forecast was approximately 65 percent of the historical average flow (Water Diplomat 2026).

Climate risks also stimulate new forms of cooperation. Work on the Strategic Action Program for the Chu and Talas basins intensified in 2022–2023, and a trilateral agreement on the Toktogul Reservoir was concluded in 2025. At the same time, the gap between stated goals and available financing persists: the announced EUR 2–2.3 billion in "green" invest-

ment remains largely prospective rather than realized financing (Water Diplomat 2026).

Digitalization of Water Management

Digital technologies are gradually becoming part of Kazakhstan's water management. The new Water Code of 2024 provides for a National Water Resources Information System to monitor reservoirs and forecast floods; the Tasqyn system is being developed to model flood scenarios. In Kyzylorda Province, the automation of 3,500 km of irrigation networks is planned with financing from the Islamic Development Bank, with expected annual water savings of 0.5 km³ by 2027 (Astana Times 2024).

Digitalization is especially important at the transboundary level. Reciprocal gauging stations operated by Kazakhstan and Uzbekistan on the Syr Darya, together with data exchange between Kazakhstan and Kyrgyzstan on key reservoirs, create a shared measurement base. Such transparency reduces information asymmetry among riparian states and facilitates negotiations over water allocation. In this sense, digital tools are becoming a practical component of hydro-diplomacy rather than an independent policy objective.

International Comparisons and Potential Reference Points

International experience highlights several mechanisms that may be useful for Central Asia. The Rhine Commission demonstrates the importance of binding rules and accountability mechanisms for pollution, although direct transfer of this model is constrained by differences in levels of political integration and trust. The Mekong River Commission is closer to Central Asian conditions because it combines a water–energy nexus with limited interstate trust; its procedure for prior

notification and consultation on major hydraulic projects may provide a reference point for developing the ICWC's consultation mechanisms. The Nile Basin Initiative, in turn, demonstrates the value of multilateral technical dialogue and shared data under conditions of political disagreement.

Three lessons from these comparisons are most applicable to Kazakhstan. First, the Chu–Talas Commission already provides an operational model of bilateral institutionalization, elements of which could be used on the Kazakhstan–Uzbekistan track. Second, shared measurement infrastructure reduces negotiation costs because the parties rely on comparable data. Third, climate adaptation is gradually becoming a common framework for agreements on water deliveries and infrastructure.

Conclusions and Recommendations

Kazakhstan's transboundary water management is shaped primarily by the country's downstream position relative to key sources of runoff and flow-regulating structures. However, the consequences of this asymmetry vary depending on institutional arrangements. On the Chu and Talas rivers, a specialized bilateral commission operates with stable procedures and a joint action program. On the Kazakhstan–Uzbekistan track, such a body is only now being created under the 2025 agreement, and interaction has so far been activated mainly around specific problems involving water deliveries, measurement, and water quality. In relations with Turkmenistan, water issues remain predominantly part of the multilateral Aral Sea agenda.

Formal institutions do not exhaust water interaction in border areas. Contacts among akimats, farms, and local water users also play a significant role. Climate change increases the risks of unstable water supply, while digital monitoring systems create new opportunities to reduce uncertainty. Under

these conditions, Kazakhstan's main interests are reliable irrigation water deliveries, control over the quality of transboundary waters, and maintenance of environmental flows to the Small Aral Sea.

A weak point in the Central Asian system remains the implementation of agreed commitments: transboundary institutions in Central Asia are based largely on the consent of the parties and have limited enforcement capacity. Stable procedures for data exchange, joint planning, and the resolution of specific disagreements therefore have greater practical importance than new declaratory rules.

Recommendations

1. Expand digital water infrastructure. Extend the model of reciprocal automated gauging stations to the Kazakhstan–Kyrgyzstan track and create a shared hydrological information platform providing real-time data on key reservoirs. The National Water Resources Information System should be linked to comparable systems in neighboring states through technical data-sharing agreements.

2. Mobilize international financing for the reconstruction of water infrastructure in Kyrgyzstan. Initiate negotiations with the Asian Development Bank and the World Bank on financing the rehabilitation of the Kirov and Orto-Tokoy reservoirs. This would reduce the risk of emergency flooding in Zhambyl Province and lessen the dependence of infrastructure modernization on direct bilateral payments.

3. Embed water and climate adaptation in the IFAS agenda. Provide for the incorporation of glacier and snow components into water-availability forecasts, mutual notification of reservoir releases during periods of flood risk, and joint climate assessment of infrastructure projects with transboundary impacts.

4. Develop the subnational level of water interaction. Institutionalize negotiations between the akimats of Zhambyl, Turkestan, and Kyzylorda provinces and their counterparts in Kyrgyzstan and Uzbekistan, include representatives of akimats in relevant working groups, and support basin councils involving farmers' associations from border districts.

5. Develop an agreed methodology for accounting for water services. Within the ICWC, or through a separate protocol with Kyrgyzstan, define approaches to the economic valuation of water ecosystem services. This would allow compensation to be discussed not as payment for water as a resource, but as cost-sharing for maintaining infrastructure and ecosystem functions.

7. Management of Emergency Situations

Merey Galymzhanova

Introduction

Central Asia is a vast, high-risk disaster region. According to disaster-risk profiles for Central Asian countries, earthquakes are perhaps the greatest threat to the region, followed closely by floods (OECD 2019). Since natural disasters do not take state boundaries into account, regional cooperation is vital for emergency response. Emergency management is therefore a crucial part of CBC, because disaster-prone borderland areas, such as Almaty and Zhambyl provinces in Kazakhstan and Talas, Chuy, and Issyk-Kul provinces in Kyrgyzstan, create incentives for repeated interaction between local emergency services.

The United Nations Office for Disaster Risk Reduction (UNDRR) defines disaster risk management (DRM) as the "application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses" (UNDRR 2017). This chapter uses the term because the international community has gradually shifted toward DRM in handling emergencies. This shift can be seen in the adoption of the Sendai Framework for Disaster Risk Reduction 2015–2030, which aims to reduce disaster risk and minimize losses. More recent DRM efforts include the UN Early Warnings for All initiative, which seeks to ensure the protection of people worldwide through early warning systems by 2027.

Scholarship on CBC in Central Asia has so far paid limited attention to disaster risk management; existing works have mostly covered the economic or cultural aspects of Kazakh–

Kyrgyz relations. Studies that do address this field usually focus on regional DRM frameworks and on the Center for Emergency Situations and Disaster Risk Reduction (CESDRR), an intergovernmental organization intended to coordinate mutual efforts to prevent emergency situations in Central Asia (Mavlyanova, Lipatov, and Yuldashev 2018; Smith and Shashkina 2022). This makes emergency management a useful field for examining how CBC is institutionalized under centralized governance.

CBC traditionally emphasizes autonomous cooperation between local authorities, but this is difficult to assess in highly centralized Central Asian states. Therefore, this chapter examines how emergency-related CBC between Kazakhstan and its neighboring Central Asian states operates under centralized governance. Empirically, the analysis focuses mainly on the Kazakh–Kyrgyz borderland, where emergency risks and documented cooperation practices are most visible. The chapter addresses the following questions: How does centralized governance affect the autonomy of emergency services in Kazakhstan's CBC with neighboring Central Asian states? What factors create limited decentralization or horizontal coordination in this field?

The first section is a literature review that synthesizes the small body of work related to the topic. It is followed by a methodology section explaining the qualitative research model used in the chapter. The discussion is divided into two sections: the first compares Kazakhstan's emergency-related CBC with other Central Asian cases and discusses the two countries' emergency services; the second traces the early history of bilateral disaster management and examines the role of CESDRR in the institutionalization and limited decentralization of emergency services. The conclusion summarizes the

findings and provides grounded recommendations for both CBC practice and future research on this issue.

Literature Review

This chapter uses multi-level governance as its primary theoretical framework. This theory holds that complex issues that cannot be handled by governments alone should be addressed through collaborative efforts by state and non-state actors, including intergovernmental and non-governmental organizations, thereby facilitating bottom-up integration (Hooghe and Marks 2001). The theory is well established among scholars of CBC, as it recognizes that cross-border interactions are often initiated by non-governmental entities (Perkmann 2003). New regionalism is used as a background lens for understanding how regional cooperation can develop around shared risks (Hettne and Söderbaum 2000).

A relevant contribution to the study of CBC in Central Asia is Golunov and Bitabar (2025), which establishes the importance of fostering cross-border cooperation in the region. Because Central Asia is landlocked, and Uzbekistan is double-landlocked, CBC helps soften the barrier effects of borders and promotes connectivity. In the functional typology of cross-border cooperation proposed by de Sousa, cooperation in emergency management falls under the category of mutual aid, involving coordinated response and assistance between neighboring subnational authorities (de Sousa 2013).

There is also an emerging body of work on how disasters are addressed through cross-border cooperation. Since the European Union is central to the development of CBC as a concept, many scholars, mentioned in other chapters of this book, have examined how Europe handles CBC in various sectors, highlighting both its strengths and weaknesses.

The European Union Civil Protection Mechanism is the most robust EU framework addressing cooperation in such situations. It promotes coordination between countries by providing a platform for awareness raising, joint training, and the exchange of expertise. It also has a reserve of common resources funded by the EU to assist countries in catastrophic events. However, Kalogiannidis (2024) points to significant legal and administrative obstacles that hinder mutual efforts. Laws and procedures concerning disaster risk management may differ from state to state, resulting in operational delays. Some legal frameworks may not be recognized in certain states, and studies of this issue call for more unified legal frameworks for effective DRM. In addition, states may refuse assistance in hazardous situations because of concerns over national sovereignty (Kalogiannidis 2024).

In contrast to the discussion surrounding the EU, relatively few studies focus on Central Asian cooperation in disaster risk management. This may be because the significant transformation in Central Asia's approach to DRM is relatively recent and slow-paced. Kazakhstan and its neighboring states have historically focused on disaster response, since the region is disaster-prone due to high seismic activity and hydrological hazards. Much of this response, however, was carried out individually by each state. During the 2011 earthquake in the Fergana Valley, Uzbekistan, Tajikistan, and Kyrgyzstan operated in isolation, even though the border region suffered significant losses (Mavlyanova, Lipatov, and Tiefenbacher 2021).

In 2015, Kazakhstan's adoption of the Sendai Framework for Disaster Risk Reduction marked a shift toward a more proactive approach to emergencies. Mavlyanova, Lipatov, and Tiefenbacher (2021) explain that disaster risk management is more sustainable than the reactive approach previously taken

by Central Asian states. It reduces the burden on government budgets, which are often used to address damage after disasters have already occurred, and can also facilitate long-term economic and social development.

Several authors have also pointed to CESDRR as a major milestone in the adoption of proactive strategies (Mavlyanova, Lipatov, and Yuldashev 2018; Smith and Shashkina 2022). CESDRR has become the Secretariat of the annual Regional Forum–Meeting of the Heads of Emergency Authorities of Central Asian Countries, where these authorities discuss the strengthening of DRM frameworks in the region. It adheres to the principles set by the Sendai Framework and the Sustainable Development Goals and works with non-state actors and organizations such as UNDRR and the World Bank to address risks in Central Asia and implement preventive measures.

At the same time, the organization's efforts do not yet seem to be fully implemented. It remains in the first stage of DRM development, where declarations of intent are rarely realized (Hollis 2015). This is a recurring theme in Central Asia, where early cooperation efforts have often been discontinued (Mavlyanova, Lipatov, and Tiefenbacher 2021). Among other factors, this may reflect the limited capacity of Central Asian governments, as high turnover rates produce a significant loss of institutional knowledge (Smith and Shashkina 2022).

Collectively, the studies discussed above show that the most common obstacles to cooperation in emergency situations include lack of funding, sovereignty concerns, and bureaucracy, all of which disrupt coordination in critical events. Region-specific obstacles to CBC in Central Asia include border disputes resulting from post-Soviet delimitation and demarcation. Scholars also highlight the discrepancy between emerging DRM frameworks and actual integration. However,

there remains a significant lack of attention to interactions between borderland territories and to the specific facets of emergency-related CBC between Kazakhstan and its Central Asian neighbors. These efforts therefore require closer examination.

Methodology

The current study uses a qualitative case study approach to examine Kazakhstan's CBC with Kyrgyzstan in disaster management. It does so by analyzing existing news articles, policy documents, agreements, and related literature. Most of the documents were sourced from UNDP, UNDRR, and CESDRR. The news articles were drawn from official news sources in Kazakhstan and Kyrgyzstan.

Process tracing is used to examine the relationship between causes and outcomes. In this study, it is used to trace the development of CBC between Kazakhstan and Kyrgyzstan, as well as the factors driving limited decentralization and horizontal coordination among emergency agencies.

The study has several limitations. The existing literature may not provide full insight into the state of emergency-related CBC between Kazakhstan and its Central Asian neighbors. The use of secondary data also limits the analysis of decentralization in both countries. There is also a scarcity of cases relating to Kazakh–Turkmen and Kazakh–Uzbek emergency cooperation. Further studies could use interviews with government officials and experts for a closer examination of cross-border interactions.

Findings and Discussion

Kazakh–Kyrgyz Cooperation in the Regional Context

To explain how Kazakh–Kyrgyz cooperation in emergency management differs from Kazakhstan's cooperation with other countries in the region, it is useful to briefly examine cases of Kazakhstan's bilateral interaction with its Central Asian neighbors from a comparative perspective.

Turkmenistan remains the most closed-off country in Central Asia. Its restrictive border regime limits the potential for systematic partnerships with its neighbors, including cooperation in emergency management.

Kazakh–Uzbek interaction in this field appears more substantive, yet it remains significantly less regular and intensive than Kazakh–Kyrgyz cooperation. There are few publicly known specific examples of such cooperation. The most notable of these was the joint effort by the two sides to address the consequences of the flood caused by the breach of the poorly constructed Sardoba Reservoir dam in Uzbekistan in May 2020 (CAWater-Info n.d.-a). It caused serious damage to Maktaaral District in Turkestan Province, flooding 14 Kazakh villages. Despite a degree of short-term tension in bilateral relations, the emergency response services of both countries quickly provided assistance to the population of the affected areas. Although this case may be regarded as an example of fairly effective bilateral cross-border cooperation in emergency management, the cooperation in this instance was situational rather than systematic.

Compared with the two cases discussed above, Kazakh–Kyrgyz cooperation in emergency management appears much more stable and intensive. Among other things, the emergency response services of Kazakhstan and Kyrgyzstan, including their local branches, periodically hold meetings to discuss the cooperation agenda and work closely together in emergency situations.

Kazakhstan shares the Tien Shan mountain system with Kyrgyzstan and, along a relatively short eastern section of its border, the Western Tien Shan with Uzbekistan. This territory is particularly exposed to hazards such as forest fires, avalanches, and glacial lake outburst floods. This creates a strong incentive for cross-border cooperation in various forms. One of the first issues addressed through cooperation between the two countries was control over the Kirov Reservoir, located on the Talas River in the western part of the borderland. In 2010, it was widely perceived as a potential source of danger because of the risk of a breach that could flood nearby settlements. Although a subsequent expert assessment showed that the reservoir was in satisfactory condition, the two sides decided to reinforce its right bank with concrete and install a video surveillance system (Vechernii Bishkek 2010). Kazakhstan and Kyrgyzstan are jointly developing early warning systems for floods caused by glacial lake outbursts in the mountain region (UNDRR 2025). In 2023, after heavy snowfall buried vehicles in the border area of Zhambyl Province, Kyrgyzstan sent rescuers, volunteers, and the necessary equipment to assist the Kazakh side (Abdrahmanova 2023; Azimzhanova 2023).

Long-term cooperation between the emergency response structures of Zhambyl, Chuy, and Talas provinces has institutionalized mechanisms of coordinated response, including information exchange and joint research. At the same time, regional ties are strongly shaped by a number of features of centralized state governance.

The Ministry of Emergency Situations (MES) of Kazakhstan reports directly to the President. It oversees emergency situations and natural disasters, formulates state policy, and supervises the committees under its authority. The 2014 Law on Civil Protection redistributed functions in the field of dis-

aster risk management by defining the responsibilities of each level of government. For example, crisis management was transferred from the Departments of Emergency Situations to local executive bodies at the provincial level. This points to a hierarchical model with strong vertical cooperation but limited horizontal interaction between national ministries (OECD 2019). In 2024, the Emergency Prevention Committee was established to supervise local executive bodies in the prevention of emergency situations (El.kz 2024). The MES of Kyrgyzstan is organized in a similar way, functioning as a centralized state coordinating body.

Interstate Coordination Mechanisms and Their Role in Cross-Border Cooperation

Through regular meetings, joint exercises, and interaction during disasters, the Kazakh–Kyrgyz partnership gradually reached the point at which interstate bodies could be created. In 2011, the UNDP project "Mainstreaming Disaster Risk Management into Decentralization Processes in Kyrgyzstan" was launched, although it faced significant difficulties because of weak state capacity (UNEG 2011). In 2014, with OSCE support, the Crisis Management Center was established in Kyrgyzstan to improve coordination between government agencies during disasters. More recently, a unified emergency response service and an emergency call system for operational services have been under development to reduce response times (Krasnova 2026).

CESDRR was established in 2016 and is currently a key intergovernmental platform in Central Asia for facilitating regional and international cooperation in disaster risk reduction. As noted above, CESDRR is the Secretariat of the annual Regional Forum. In addition, the organization regularly holds joint exercises and simulations for emergency service person-

nel, including firefighters, paramedics, and search-and-rescue dog handlers.

CESDRR facilitates the harmonization of national emergency response systems with international disaster risk management standards. Emergency response involves numerous official procedures, which complicates rapid action in urgent situations. CESDRR works with national services to simplify procedures and streamline communication during disasters. Its framework mechanisms do not decentralize these institutions; rather, they make interaction between the parties more flexible.

A central area of CESDRR activity is the development of the Regional System of Early Warning and Mutual Information about the threat and occurrence of emergencies. In November 2023, at the Regional Forum in Almaty, the heads of the emergency authorities of the Central Asian countries signed an Appeal to UN Secretary-General António Guterres on establishing a Regional Early Warning and Mutual Information System on the threat and occurrence of transboundary emergencies (CESDRR 2023b); the initiative has since been promoted within the framework of the UN Early Warnings for All initiative.

The integration of early warning systems for earthquakes in Kazakhstan and Kyrgyzstan has been under way since 2020. In 2025, the two countries agreed to exchange seismological data, which is crucial for managing risks in the Tien Shan mountain range (CESDRR 2025a). The Central Asian Institute for Applied Geosciences and the National Scientific Center for Seismological Observations and Research of the MES of Kazakhstan were the primary actors in this agreement.

In 2025, CESDRR received a grant from the International Federation of Red Cross and Red Crescent Societies (IFRC) for further development of the Regional Agreement for inter-

national disaster response. According to the document outlining the outcomes of the organization's activities, CESDRR is currently implementing more than 60 projects with a total budget of over USD 6 million (CESDRR n.d.). The grant supports the development of the legal basis for the Central Asian Coordination Center for Emergency Response, an institution intended to coordinate efforts between international partners and national disaster agencies. CESDRR actively collaborates with organizations such as UNDRR, GIZ, IFRC, and others, as well as with emergency agency branches of Central Asian countries. Many of these projects focus on data exchange and capacity building. This is an important element of DRM because it helps policymakers gain a fuller understanding of possible risks and provide an adequate real-time emergency response.

Digitalization also plays a role in limited horizontal coordination. It simplifies the management of cross-border interactions by providing digital alternatives. The project to create Digital Safety Passports and Interactive Maps was proposed in 2022 and completed in 2024. With OSCE support, data from existing safety passports of Kazakhstan's provinces were collected and sent to international partners. The implementation of GIS mapping technologies also initiated training for Kazakh and Kyrgyz officials (CESDRR 2023a). According to CESDRR, more than 320 employees of emergency agencies of Kazakhstan, Kyrgyzstan, and Uzbekistan completed a training course and improved their use of technology in emergency situations (CESDRR 2024).

More broadly, many capacity-building projects have been initiated in participating countries. Within a project launched by FAO in 2021, the Center organized a workshop on capacity building in disaster risk reduction and disaster preparedness in agriculture in the Kyrgyz Republic (CESDRR 2021). In 2025,

a subregional workshop on improving climate risk assessment and forecasting introduced officials and specialists from Kazakhstan and Kyrgyzstan to new impact-based technologies and methods for assessing disaster damage (CESDRR 2025b). Disaster risk management strategies thus continue to be integrated into different areas of life.

CESDRR encourages horizontal cooperation between international organizations, government bodies, and emergency agencies. The role of non-state actors in addressing matters that cannot be handled by national legislation alone is a key component of cross-border cooperation. Many interactions take place in person, which helps establish working relations between individuals and improve trust. Disaster risk reduction in Kazakh–Kyrgyz CBC therefore operates within a multilevel governance system that brings together state and non-state actors to address shared risks.

Several challenges persist in Kazakh–Kyrgyz cooperation. Given limited state funding, there is a degree of dependency on external support. CESDRR conducts many of its projects using international grants and donor investments. In line with the observations of Hollis (2015), Central Asian countries are not yet able to move beyond the first stage of regional DRM collaboration. At the same time, the institutional capacity of other Central Asian countries appears limited: although CESDRR operates as a regional cooperation platform in Central Asia, the other three states of the region are involved in its work mainly through specific activities, projects, and consultative formats.

Overall, the institutionalization of disaster risk reduction cooperation between Kazakhstan and Kyrgyzstan is actively continuing. In this light, CESDRR can be viewed as a platform that promotes limited horizontal governance in emergency management, which has a positive effect on the effectiveness of such cooperation. It serves as a platform for horizontal in-

teractions by facilitating contacts between state and non-state actors.

Conclusion

This chapter has examined Kazakhstan's cross-border cooperation with neighboring Central Asian states in emergency response, with a focus on the Kazakh–Kyrgyz borderland. In this case, interaction is especially intensive because the severity and diversity of the problems involved have required closer cooperation that goes beyond situational response. The level of institutionalization of disaster risk management between Kazakhstan and Kyrgyzstan is relatively high and is largely aimed at addressing gaps in national legal systems. However, many disaster risk prevention mechanisms remain at the implementation stage and are only beginning to be put into practice.

Kazakh–Kyrgyz cross-border cooperation in emergency management was initially centered largely on borderland provinces. Stable cooperation between Zhambyl, Chuy, and Talas provinces created a strong basis for the establishment of CESDRR, which exists mainly due to the efforts of Kazakhstan, Kyrgyzstan, and the international organizations that fund its activities. CESDRR contributes, to a limited extent, to the development of horizontal ties through regular interaction with non-state actors, including international organizations and scientific institutions, as well as through digitalization and capacity-building among participants.

Several recommendations follow from these findings. As the importance of digitalization continues to grow, the governments of Kazakhstan and Kyrgyzstan should focus on developing technologies used to collect data on natural hazards in the area of the shared Tien Shan mountain system. Joint training and simulation exercises should be conducted for at-

risk borderland communities. Existing bodies such as CESDRR should be strengthened by involving local authorities and relevant specialists in their work. If deeper cooperation at the local level is to be achieved, the organization should not be constrained by predefined frameworks. Finally, there is still very little published research on cross-border cooperation among Central Asian borderland territories, especially in the field of emergency management. Future studies could examine borderland communities and their specific experience of dealing with natural hazards both in Central Asia and, in comparative perspective, beyond the region.

8. The Potential of Cross-Border Urban Proximity: Tashkent–Saryagash and Bishkek–Kordai

Sergei Golunov

A specific phenomenon of Kazakhstan's Central Asian borderlands is the existence of two pairs of settlements separated by a state border but located in immediate proximity to each other: Kordai and Bishkek on the Kazakhstan–Kyrgyzstan border, and Saryagash and Tashkent on the Kazakhstan–Uzbekistan border.

These pairs are not comparable in size or in demographic, infrastructural, and economic potential. Tashkent and Bishkek are metropolises and the main centers of economic attraction in their respective countries. They offer their residents a wide range of cultural, educational, medical, and other services and opportunities. Saryagash has the status of a city with a population of more than 60,000, while Kordai, with about 40,000 residents, retains the lower status of a settlement. This reduces its chances of becoming a formal partner of Bishkek, although discussions about granting Kordai city status arise from time to time. Neither Saryagash nor Kordai has infrastructure as developed as that of the neighboring capitals. At the same time, they at least perform the function of gateways to Kazakhstan and therefore possess a number of related opportunities.

How can the cross-border proximity of these pairs of settlements be conceptualized? In such cases, the concept of "twin cities" is most often discussed. It has various definitions. The broadest of them emphasize the existence of intensive and systematic cooperation between partner cities (Joenniemi and Jańczak 2017), including interaction at the spontaneous

grassroots level (Nugent and Soi 2020). Understood in this way, the concept may be applicable to the Bishkek–Kordai and Tashkent–Saryagash pairs. However, more common definitions use relatively strict criteria, including comparability in the size of partner cities, institutionalized cooperation, and joint urban planning (Joenniemi and Sergunin 2011). From this perspective, conceptualizing the pairs of settlements considered here as "twin cities" is problematic.

Among alternative conceptualizations, the model of relations between a metropolis and a satellite city deserves particular attention. The latter has partial autonomy in employment and is able to provide basic services, but its continuing dependence on the metropolis in these areas generates daily commuting flows (Berger 1978). This conceptualization, however, is usually applied to pairs of cities within one country, not to settlements located on opposite sides of a state border. Another relevant notion is the concept of a "gateway city," according to which one border city serves for another as a portal to external territory (Scholvin 2021).

In both cases, travelers from the neighboring country can reach the territory of the border city with relatively low time and other costs. Kordai and Saryagash are immediately adjacent to the border; after passing border control, the centers of Bishkek and Tashkent can be reached fairly easily by public transport. Related practical matters also usually pose no serious difficulties: communication is facilitated by the widespread use of Russian and by the proximity of Turkic languages, while currency exchange and the purchase of a mobile SIM card are generally straightforward.

As media materials and our observations show, trips to Tashkent and Bishkek for shopping, medical services, education, and participation in cultural events are routine practices for residents of Saryagash and Kordai, respectively. Residents

of Tashkent and Bishkek, in turn, usually cross the border on foot, since crossing it by vehicle may involve long delays and bureaucratic complications. They widely use Saryagash and Kordai as intermediate points on the way to Shymkent and Turkestan, or to Almaty, respectively.

Because both the formal and informal segments of the passenger transport market are highly developed along these routes, typical fares remain relatively low. At least some residents of Kordai and Saryagash who frequently cross the border have bank accounts and SIM cards from the neighboring state, while some vendors on the Kazakh side accept payment in Kyrgyz and Uzbek currency. In the Kordai–Bishkek zone, our observations also showed interest among Bishkek residents in goods from third countries that are sold more cheaply on the Kazakh side.

Both Kordai and Saryagash are periodically used as venues for high-level meetings. From a diplomatic point of view, both settlements are probably viewed by the parties as compromise locations for negotiations: on the one hand, they are on Kazakh territory; on the other, they are located close to the capitals of Kyrgyzstan and Uzbekistan. Kordai has periodically hosted meetings of parliamentary delegations, where a wide range of issues were discussed, including agricultural trade, labor migration, the optimization of border-crossing procedures, and the development of cross-border transport links. In Saryagash, an informal trilateral summit was held in 2018 between the presidents of Kazakhstan, Russia, and Uzbekistan, Nursultan Nazarbayev, Vladimir Putin, and Shavkat Mirziyoyev (Smayyl 2018); in 2020, a working meeting between Nazarbayev and Mirziyoyev was held there as well (President of the Republic of Uzbekistan 2020). Cooperation between the two countries in railway transport was discussed in 2025 during a working meeting between the Minister of Transport of

Uzbekistan and the heads of the railway administrations of Kazakhstan and Uzbekistan (Government Portal of the Republic of Uzbekistan 2025).

A specific feature of the Saryagash–Tashkent zone is the interest of some Tashkent residents in the recreational potential of Saryagash as a major balneological resort. In addition, Saryagash is an important supplier of mineral water for Tashkent consumers. Unlike Kordai, it is not only a road gateway but also a railway gateway between Kazakhstan and Uzbekistan, handling much more intensive freight flows.

Compared with Saryagash, Kordai is more dependent on the neighboring side in energy supply. According to Kazakh government sources, Kordai's dependence on electricity from Kyrgyzstan, with supply issues decided in Bishkek, is about 90 percent (Zhdanov 2022).

Another specific feature of Kordai is its use by entrepreneurs from Kyrgyzstan, including major dairy producers, as a way to enter the Kazakh market. Such companies have a legal address in Kordai where claims can be received. This practice gives exporters from Kyrgyzstan the opportunity, while effectively remaining in Bishkek, to respond quickly to legal issues arising in Kazakhstan. Apparently, this arrangement is less typical of Saryagash: we were unable to find information on currently operating representative offices of companies from Uzbekistan registered in the city, although there are examples of offices that were registered earlier but are no longer active. This may be explained both by the greater attractiveness of relatively nearby Shymkent for registering legal addresses and by the existence of a customs border between Kazakhstan and Uzbekistan, which narrows the room for maneuver for entrepreneurs from Uzbekistan.

Conclusion

Despite the obvious asymmetry of potential in the Bishkek–Kordai and Tashkent–Saryagash pairs, the zones between these settlements retain significant unused potential for cooperation. Although these pairs apparently cannot be regarded as full-fledged "twin cities," Saryagash and Kordai can well be positioned as "gateways to Kazakhstan" from neighboring states. This opens opportunities for their development as convenient transport hubs, entry points for entrepreneurs from neighboring countries, and zones offering goods and services competitive in price or quality for residents of the neighboring capitals. Development strategies for Saryagash and Kordai should aim to build their competitive advantages in at least a limited range of fields. At the same time, it is important to prevent these settlements from turning into fully dependent satellites of the neighboring metropolises.

9. Economic Corridors: Almaty–Bishkek and Shymkent–Tashkent

Islam Supyaldiyarov

Two of Kazakhstan's borders with Central Asian neighbors carry an economic corridor designation. The Almaty–Bishkek Economic Corridor (ABEC), initiated by the Asian Development Bank (ADB) in 2014, was the pilot economic corridor of the Central Asia Regional Economic Cooperation (CAREC) program and remains the region's longest-running project of this kind. The Shymkent–Tashkent–Khujand Economic Corridor, proposed by the same bank in 2018 and supported by the governments of Kazakhstan, Uzbekistan, and Tajikistan, covered the most intensive contact zone of the Kazakhstan–Uzbekistan borderland and extended it into Tajikistan. Both projects were placed precisely where cross-border interaction was already densest, and both were presented as instruments for turning that interaction into something more organized.

Earlier chapters of this book have noted that the practical results of these projects appear modest, and that their implementation has largely consisted of assembling, under a corridor "umbrella," activities that each side was already carrying out on its own territory. This chapter takes that observation as its starting point and asks a more specific question: what role do the two corridor projects actually play in cross-border cooperation, and why is that role the one it is rather than another? The answer offered here is institutional. Corridor projects work at the level of coordination, expert analysis, project preparation, and sectoral standard-setting. The conditions that most strongly affect movement across these two borders, namely the customs regime, the rules of labor mobility, in-

spection practice and checkpoint throughput, and the financing of infrastructure, are decided at other levels entirely: within the Eurasian Economic Union, in bilateral treaties, and in national budgets and administrative practice. Comparative work on cross-border regions in Europe points in the same direction: even where joint bodies are created, national states continue to set the framework within which those bodies operate (Sohn and Reitel 2016). A corridor project can therefore become quite well institutionalized while the cost of crossing the border remains unchanged, or changes for reasons that have nothing to do with the project. Recognizing this mismatch of levels makes the corridors easier to evaluate fairly, and it suggests what they can reasonably be expected to deliver.

Four things need to be kept apart in what follows. A corridor designation is a name attached to a space by governments or a development bank. A corridor project is a funded, time-limited intervention that takes the designated space as its object. A transport axis is the physical alignment of roads, railways, and checkpoints between two cities. And functional integration is the actual extent to which trade, labor markets, infrastructure, and planning are organized across the border. Policy documents and media reporting routinely treat these as one thing. Border studies has long insisted on keeping them apart, treating a border as a set of institutions and practices rather than a line on a map (Newman 2006a), and research on cross-border cooperation has repeatedly shown that the label attached to a cooperation arrangement is a poor guide to what it actually does (Perkmann 2003). The distance between the four is the subject of this chapter.

The Corridor Format and Its Central Asian Versions

The economic corridor is not a Central Asian invention. It was developed largely within ADB's work in the Greater

Mekong Subregion and elsewhere in Southeast Asia, where corridors are understood as zones of economic development along transport routes crossing state borders, and where the format is closely associated with trade facilitation and infrastructure planning rather than with the transfer of powers to joint bodies. As the following chapter notes, this is one of the aspects of ASEAN experience most often considered relevant to Central Asia. The format travels with a particular division of labor: an external institution supplies analysis, coordination, and a small budget; the participating states supply the decisions.

Critical research on infrastructure-led development suggests what this division of labor implies in practice. Corridors are produced first as objects of policy and planning, and only later, if at all, as economic realities (Schindler and Kanai 2021), and the distance between an announced infrastructural future and what is eventually delivered has become a recurrent finding in this literature (Wiig and Silver 2019). Work on Eurasian borderlands adds two cautions that apply directly to the cases examined here: new infrastructure at a border may reinforce control and channel flows as readily as it opens them (Rippa 2020), and proximity to a transit axis does not by itself draw a borderland region into the flows passing through it (Alff 2016).

The two Central Asian versions differ in ways that make direct comparison misleading unless the difference is stated. ABEC is a bilateral project linking two neighboring countries along a single axis of about 240 km. The Shymkent–Tashkent–Khujand corridor is a trilateral architecture covering Shymkent and Turkestan Province in Kazakhstan, Tashkent city and Tashkent Province in Uzbekistan, and Sughd Province in Tajikistan. This corridor area contained some 11.1 million people at the end of 2018, with a combined gross regional product of

about USD 24.5 billion (Asian Development Bank 2021b). The axis examined in this chapter, Shymkent–Tashkent, is one bilateral segment of that larger design, and outcomes recorded for the trilateral project as a whole cannot simply be read as outcomes for that segment. Khujand lies roughly 170 km beyond Tashkent, and the Uzbek–Tajik component of the corridor is governed by a relationship in which Kazakhstan does not participate.

Their stated agendas were nonetheless similar and broad, ranging from infrastructure, logistics, and border management to agriculture, tourism, and special economic zones (see Chapters 2 and 3). Neither promised, or could have promised, to alter the legal regime of the border itself.

The Almaty–Bishkek Economic Corridor

ABEC has the more developed institutional structure of the two. Its work is directed by a Subcommittee that reports to the Kazakhstan–Kyrgyzstan Intergovernmental Council, is co-chaired at deputy-ministerial level, and includes representatives of local authorities and the private sector, with sectoral working groups beneath it. The eighth meeting of the Subcommittee was held in Astana in May 2024, and the corridor's tenth anniversary was marked by a meeting at prime-ministerial level in December 2024. That the coordinating bodies foreseen in the design were in fact created, and have continued to meet across a decade and across a change of funding phase, is itself a result worth recording; as the next section shows, it is not one that can be taken for granted. Whether such a body amounts to a genuine redistribution of authority across the border, or to a durable venue for coordinating decisions that continue to be taken nationally, is a question that comparative research on cross-border governance deliberately leaves open, since the creation of joint in-

stitutions does not in itself empower new political actors (Nelles and Durand 2014).

ADB's own completion reporting allows the project's output to be assessed with unusual precision. The first support operation was approved in December 2017, revised upward to about USD 3.2 million, closed in December 2022 with roughly USD 2.5 million used, and was rated successful. Its institutional and planning outputs were fully achieved: the working groups were established, a tourism master plan and an accommodation classification system were produced, and a direct Almaty–Bishkek bus service was launched in September 2022. Its investment-related output was only partly achieved: one health project worth USD 30 million was committed in 2022, while the anticipated private investment did not materialize. Its performance indicator of more than 40,000 daily border crossings was not met either, which the completion report attributed to the pandemic (Asian Development Bank 2023). A second phase was approved in August 2022 with a budget of USD 2.5 million and is scheduled to run to mid-2027 (Asian Development Bank 2026a).

Two features of this record deserve attention. The first is the character of the deliverables. A master plan, a classification system, and a set of working groups are instruments of coordination and standard-setting; the bus service is the clearest case of a measure that was actually implemented rather than recommended. None of them is infrastructure, and the project neither financed nor built any. The second is the fate of connectivity projects that attracted the most public attention. At the meeting of the Connectivity Working Group in November 2025, the alternative Almaty–Issyk-Kul road was still at the stage of a draft feasibility study and the electric-bus project at the stage of legal and financial structuring (Almaty–Bishkek Economic Corridor 2025). The shorter mountain road

to Issyk-Kul, discussed for decades and costed in a 2020 assessment at between roughly USD 81 million and USD 587 million depending on the alignment chosen (Asian Development Bank 2020), remains a project rather than a road.

On the Kazakhstan–Kyrgyzstan border, the instructive fact is that the removal of tariffs and customs clearance in 2015 did not remove delay. In October 2025 Kazakhstan extended its CarGoRuqsat electronic queuing platform to the Karasu crossing, explicitly in order to address multi-day waits affecting Kyrgyz carriers of perishable goods (Times of Central Asia 2025b); in February 2026 carriers attributed congestion to intensified inspections, and in May 2026 the Kyrgyz border service reported more than 150 trucks queuing at a crossing (Interfax-Kazakhstan 2026). Friction on this border has not disappeared; it has changed its administrative form, moving from tariff clearance toward valuation and origin verification, inspection campaigns, and the administrative allocation of crossing slots, all of them instruments that remained in national hands after 2015. That a border is made and remade through everyday administrative practice at the line, rather than fixed by the treaties that describe it, is a central claim of the bordering literature (van Houtum and van Naerssen 2002) and of ethnographic work on Central Asian boundaries in particular (Reeves 2014); the regional record also shows how quickly a border regime here can be tightened and then loosened as national calculations change (Megoran 2017). Whether this amounts to a genuine displacement of control from one instrument to another, or simply to the persistence of old problems alongside rising traffic, cannot be settled with the available evidence; but the pattern is clear enough to be worth stating, and it is a useful caution against reading formal liberalization as a measure of how open a border has become in practice.

The most important physical improvement on the Almaty–Bishkek axis during this period also came from outside the corridor project. The 52 km road linking Tyup, on the north-eastern shore of Lake Issyk-Kul, with Kegen in Almaty Province opened in September 2025, replacing a route of roughly 460 km with one of about 280 km (Times of Central Asia 2025d) and answering, at least partly, a connectivity problem that ABEC had been studying for years. Whether it reduces the case for the alternative road through the Kastek Pass is an open question: the two routes serve different destinations, and no traffic data for the new link have been published.

It is worth adding that the densest cross-border commercial institution on this axis owes nothing to the corridor project at all. The Dordoi bazaar complex outside Bishkek was built by traders rather than by any program, and its fortunes have turned on customs regimes and re-export opportunities rather than on corridor planning (Karrar 2017; Spector 2017). The same holds, in a different form, for the contact zone of the Kazakhstan–Uzbekistan border, where the scale of cross-border commerce described in Chapter 2 developed largely independently of any corridor designation.

The Shymkent–Tashkent–Khujand Economic Corridor

The trilateral project followed a different trajectory, and its documentation is unusually candid. ADB's technical assistance was approved in October 2018 with a budget of USD 800,000 (Otyrar 2019), later revised to USD 2.1 million, and closed in February 2024 with about USD 1.45 million disbursed (Asian Development Bank 2024). An independent validation by the bank's evaluation department rated it less than successful. The reasons given are institutional rather than financial: the steering committee and working groups foreseen

in the design were never established, the three governments did not sign the memorandum of understanding on corridor development, and such groups as did function operated informally (Asian Development Bank 2025).

What the project produced was analysis: an assessment of trade potential along the corridor, a road map for its development, and two pre-feasibility studies. The trade assessment is of particular interest here, because it contains the only measurement of trade at corridor level available for either of the two cases. Recorded trade between Shymkent and Turkestan Province on the one side and Tashkent city and Tashkent Province on the other amounted to USD 39.2 million northbound and USD 329.3 million southbound in 2015, and to USD 136.1 million and USD 76.4 million respectively in 2018. Across all three members of the corridor area, trade within the corridor fell from USD 599.0 million in 2015 to USD 341.5 million in 2018, that is, from 0.6 to 0.3 percent of the three countries' total foreign trade (Asian Development Bank 2021a).

These figures must be handled carefully, and for two reasons they cannot support a narrative of decline. Uzbekistan maintained an overvalued official exchange rate until September 2017, so the dollar value of Uzbek flows in 2015 is not comparable with the value of the same physical flows in 2018; part of the recorded fall is an artifact of revaluation. And the series consists of two observations and was not continued after 2018.

What the figures show is something else, and it is important for the argument of this chapter: measured at the level of the corridor itself, cross-border trade within the corridor area was a very small share of the participating economies' trade, and it moved independently of the national bilateral totals, which grew over the same years. Trade between Kazakhstan

and Uzbekistan as a whole reached about USD 4.8 billion in 2025, roughly 3 percent of Kazakhstan's total foreign trade turnover (Bureau of National Statistics 2026b). Such national figures describe the bilateral relationship; they are not measurements of what happens along a corridor, and the corridor data are the reminder of how different the two can be. A further caution applies to both: recorded trade is an incomplete measure of exchange on these borders, where informal and small-scale flows have long been substantial and are poorly captured in official statistics (Kaminski and Mitra 2012; Vakulchuk and Irnazarov 2014).

The most visible joint undertaking on this axis, moreover, was never a corridor-project output. The International Center for Industrial Cooperation, discussed in Chapter 2, was launched in April 2021 by the two prime ministers as a 400-hectare complex at the Zhibek Zholy/Gisht Kuprik crossing; by February 2025, the version submitted to Kazakhstan's Mazhilis was a 100-hectare complex at the Atameken/Gulistan crossings, with opening planned for the first half of 2027 (Times of Central Asia 2025c). The site, the scale, and the timetable changed; the designation did not.

On the Kazakhstan–Uzbekistan border, the binding constraint has been checkpoint throughput. Kazakhstan's State Revenue Committee reported that the Zhibek Zholy crossing had been designed for 150–200 light vehicles a day but was processing 300–400, with queues of 150–250 vehicles in bad weather (State Revenue Committee of Kazakhstan 2023); in March 2024 the border service attributed waits of some two and a half hours to the simultaneous reconstruction of four other crossings and to holiday traffic (Tengrinews 2024). The response was physical and national rather than programmatic: Kaplanbek and Navoi reopened in January 2025 after reconstruction, and Zhibek Zholy/Gisht Kuprik closed in February

2025 for rebuilding, with reopening announced for September 2026 and stated daily capacity rising from 30,000 to 70,000 people (Kun.uz 2026). Rail capacity on the same axis is being addressed in the same way: the Darbaza–Maktaaral railway expansion is under construction, with an associated ADB loan still awaiting approval (Asian Development Bank 2026b).

Given that the Turkestan Province section accounts for up to 90 percent of all crossings on this border (Apsattarova 2025), these works matter more for the Shymkent–Tashkent axis than anything the corridor project produced. Whether they have reduced the real cost of crossing is not yet possible to say, since the announced capacities are design parameters and no throughput figures have been published since the reopenings.

What Corridor Projects Govern, and What They Do Not

The contrast between the two projects is instructive, but it should not be overstated. ABEC built the coordinating machinery that the trilateral project failed to build, and it produced instruments that were adopted. Yet on neither axis did the corridor project determine the conditions under which goods and people actually cross the border. Those conditions are set at three other levels.

The first is supranational, and it exists on only one of the two borders. Kyrgyzstan's accession to the Eurasian Economic Union, signed in December 2014 and in force from August 2015, removed customs control on the Kazakhstan–Kyrgyzstan border, and Article 97 of the EAEU Treaty allows citizens of member states to work without a permit. The removal of tariffs is not, however, the same as the removal of trade costs. Research on the union has argued that it has delivered considerably less liberalization in practice than its legal architecture implies, with non-tariff and administrative barriers remaining substantial (Dragneva and Hartwell 2021),

which is consistent with the broader character of post-Soviet regionalism, where supranational institutions coexist with strong national executives (Libman and Vinokurov 2012). On the Kazakhstan–Uzbekistan border neither applies: Uzbekistan has been an EAEU observer since December 2020 but remains outside the common customs territory, tariffs and clearance apply, and access to the Kazakh labor market runs through a permit system whose employer-sponsored quota was set at 22,000 positions for 2024. A single decision taken in Astana and Bishkek in 2014–2015 thus did more to change the legal conditions of crossing on one of these axes than a decade of corridor work could have done on either. It is also precisely the kind of decision that no corridor body is empowered to take.

The second level is bilateral and interstate. Checkpoint capacity, sanitary and phytosanitary requirements, visa treatment, and the regime governing particular categories of goods are matters for intergovernmental agreement and for the border, customs, and veterinary services of the two states. Chapters 2 and 3 describe how consequential these instruments are in practice, from the synchronized modernization of the Kordai and Ak-Zhol checkpoints to Kazakhstan's periodic tightening of controls on agricultural imports.

The third level is national, and it includes the two things that matter most for physical connectivity: the money and the administrative routine. Checkpoints and roads on both axes have been financed from national budgets and built by national agencies. Inspection intensity, the allocation of places in a queue of trucks, and the speed with which documents are processed are day-to-day administrative practices of national services.

Below all three lies a constraint that this book's introduction identifies as central to Central Asian cross-border coop-

eration generally: the limited international capacity of subnational authorities. Under Kazakhstan's Law on International Treaties of May 30, 2005, treaties are concluded on behalf of the Republic, the Government, or central state bodies; local executive bodies are not among them. Provincial and city administrations can sign memoranda, join delegations, and sit on a corridor subcommittee, but they cannot conclude the instruments that would change a customs or mobility regime; the international capacity of subnational governments follows from domestic constitutional arrangements rather than from functional need (Kuznetsov 2015).

A corridor project that works primarily through regional authorities and sectoral working groups is therefore working, by design, at a level below the one at which the decisive rules are made. The outcome is a familiar one: new spatial strategies can proliferate without displacing the authority of the national state, because rescaling is itself a political project that may be launched at one level and blocked at another (Brenner 2004).

This is not a criticism of the corridor format so much as a description of it. Read in this light, the outcome noted earlier in this book, that corridor implementation has largely amounted to systematizing what the parties were doing anyway, looks less like a failure of execution and more like the predictable result of an instrument that coordinates but does not decide.

Conclusion

Two economic corridors occupy a real but narrow place in Kazakhstan's cross-border cooperation with its Central Asian neighbors. Their contribution has been of four kinds. They have created standing venues for discussion where sectoral officials and, in the ABEC case, regional authorities and business representatives meet on a regular schedule. They have generated analysis that did not exist before, including the

only corridor-level trade measurement available for either border. They have produced sectoral instruments that were adopted and are in use, among them the tourism master plan and the accommodation classification system on the Almaty–Bishkek axis, noted in Chapter 5. And they have served as a channel through which an external institution brings expertise and modest funding into a field where, as this book's concluding chapter notes, funding is generally scarce.

What they have not done, and were not equipped to do, is change the conditions under which the border is crossed. This is the central finding of the chapter, and it follows from the mismatch of levels described above rather than from any particular shortcoming of the projects themselves. It also explains why the better-institutionalized of the two projects has not produced visibly better outcomes along its axis: ABEC built its coordination machinery and kept it running for a decade, yet delay at Kazakh–Kyrgyz crossings was still being documented in 2026, while on the Kazakhstan–Uzbekistan border, where the corridor project failed to establish its governing bodies at all, bilateral cooperation nonetheless deepened substantially through other channels after 2024.

Two practical conclusions follow. The first concerns evaluation. Corridor projects should be judged by what they can actually deliver: the durability of the coordination bodies they create, the proportion of planned outputs completed, the number of measures implemented rather than proposed, and whether cooperation continues after the external assistance ends. They should not be judged by trade turnover along the axis, which responds to customs regimes, exchange rates, and third-country transit far more than to anything a corridor secretariat does. By that standard ABEC is a qualified success and the trilateral project is not, and the difference lies almost en-

tirely in whether the governments were willing to staff and convene the bodies they had agreed to create.

The second concerns expectations. A corridor designation is not evidence of integration, and the appearance of a corridor on a map should not be read as a statement about how connected two cities have become. Along both axes, the decisive changes of the past decade, EAEU accession on one and checkpoint reconstruction on the other, were made by governments acting through instruments that have nothing to do with corridors.

The corridor format remains useful in Central Asia, and the experience of ASEAN discussed in the following chapter suggests directions in which it might be developed. But its usefulness lies in coordination, analysis, and the slow accumulation of shared standards, and it is on that ground, rather than on the promise of economic transformation along a line drawn between two cities, that the format should be defended.

10. Cross-Border Cooperation: Lessons from Other Regions

Sergei Golunov

When analyzing the possibilities for optimizing Kazakhstan's CBC with the neighboring countries of Central Asia, it is necessary to take into account lessons from relevant foreign experience. This includes both achievements that can suggest new ideas and improve the effectiveness of existing formats, and problems and failures that help to understand which mistakes should be avoided.

When turning to foreign experience, it is important to assess its applicability to Central Asian realities. On the one hand, one should treat apparently attractive solutions with caution, even if they have proven effective under specific conditions, since they may fail to work in a different context. On the other hand, one should not reject in advance experience formed in a significantly different environment. A more productive approach may be to reflect critically on it: adapting some elements and rejecting others.

One of the key problems of the applicability of existing experience lies in the pronounced Eurocentrism of conceptual and methodological work on CBC. Indeed, in the overall body of research, especially in highly ranked peer-reviewed publications, works based on the realities of cross-border cooperation in the European Union clearly prevail, while studies devoted to other borderlands are represented much more weakly (Golunov 2025). If one takes into account that the second-largest body of literature concerns North American borders, above all the US–Canadian border, it is possible to speak of a pronounced Western centrism in CBC research.

How might this Euro- or Western centrism affect attempts to conceptualize "non-Western" cross-border cooperation? The experience of the European Union is better regarded less as a model for the rest of the world than as a "global anomaly," albeit a positive one.

Indeed, cross-border cooperation in the EU develops under conditions of deep integration and receives comprehensive ideological, legal, and financial support. Outside the European Union, including in Central Asia, comparable conditions do not exist.

Ideologically, cross-border cooperation at the internal borders of the European Union is framed by the aim of bringing the territories of neighboring countries as close together as possible. Despite the abolition of border controls, these territories remain separated by less visible but still significant boundaries of economic, administrative, ethnocultural, and other differences. As a result, transboundary ties remain substantially less intensive than interaction within one and the same country (Spierings and van der Velde 2013). Cross-border cooperation with neighboring countries outside the EU is viewed as part of the neighborhood policy, aimed at creating a belt of friendly states engaged in close interaction around the borders of the European Union.

Financially, support for cross-border cooperation in the EU has no analogues on a global scale. It is embedded in European regional policy, which is one of the largest expenditure areas of the European Union budget. The main instrument of such support is the Interreg program, whose total funding currently approaches EUR 1 billion per year (European Commission 2024).

In legal terms, the EU encourages the creation of transboundary institutions by developing legal mechanisms that ensure their legitimacy. As early as 1980, the possibility of

establishing such institutions was enshrined in the European Outline Convention on Transfrontier Co-operation, known as the Madrid Convention (Council of Europe 1980). Since 2006, the format of the European Grouping of Territorial Cooperation (EGTC) has been in place, allowing cooperating parties to establish legal entities for the implementation of joint programs and projects (European Union 2006). However, outside the European Union, such legal mechanisms for creating transboundary institutions are virtually absent. Subnational authorities, as a rule, do not have the powers to sign legally binding agreements, and often even memoranda of understanding, with foreign partners. Moreover, in highly centralized states even informal transboundary contacts between public authorities may be subject to strict control by the center.

A distinctive feature of the European Union is the existence of a clear strategic agenda for cross-border cooperation, as well as a substantial body of manuals, programs, framework documents, and so on. In most nation-states outside the EU, governments often do not possess sufficiently clear strategies for cross-border cooperation. At the same time, the conceptual and territorial focus of the relevant initiatives is often diffuse: they may encompass not only border territories and communities, but also more distant subnational regions and formats of interaction only weakly connected with local CBC, such as interregional forums or transboundary infrastructure projects.

The North American experience of CBC, especially the US–Canadian case, has its own distinctive features. Unlike the EU, this is not a case of deep integration: the borders between the cooperating parties are not transparent, official programs of large-scale financial support for cross-border cooperation are absent, and subnational authorities do not have legal powers to conclude international agreements independently or to

create cross-border institutions with legal personality (Cappellano and Makkonen 2020).

At the same time, the US–Canadian borderland offers rather favorable conditions for cross-border activity by non-governmental organizations, which, in the view of a number of researchers, are the main driving force of such cooperation. Informal contacts between subnational authorities also play an important role. Although they do not possess autonomous powers to conclude international agreements, they do have broad powers within their own territories. This creates opportunities for the coordinated implementation of infrastructure and other projects of cross-border significance on both sides of the border on the basis of informal arrangements (Clauson and Trautman 2016).

Thus, the specific features of US–Canadian cross-border cooperation are the high intensity of cross-border activity by non-governmental organizations, especially in the areas of monitoring cross-border traffic, infrastructure, innovation, and environmental projects, as well as the ability of local authorities to use their domestic powers to synchronize projects in adjacent territories. This experience occupies a prominent place in the conceptual understanding of cross-border cooperation, but it is also too specific to be treated as a pattern that fits typical conditions on a global scale.

In Central Asia, including Kazakhstan, the conditions for cross-border cooperation differ significantly from European and North American ones. Although the integration process and the ideological component accompanying it are formally present, cross-border cooperation still occupies no particularly visible place within it, while practical steps toward integration remain limited and are implemented slowly. Official discourses do not reveal a clear conceptual understanding of cross-border cooperation. The number of international projects

with a clear territorial focus on border areas and with active involvement of representatives of border communities remains small. Central authorities exercise strict control over the external ties of borderland provinces, including informal connections, while the autonomous capacities of these provinces to develop international cooperation are substantially limited. Funding for projects related to cross-border cooperation generally remains modest.

Among the conditions that substantially distinguish the Central Asian context from the classic European experience of cross-border cooperation, one may also include the significant direct and indirect role of "third parties" – a number of states and international organizations – in many projects related to CBC. Also, in Central Asia informal actors and relations play a significant role in cooperative cross-border relations, for example in trade and transport. Under certain conditions, they can be partially incorporated into the framework of officially approved CBC.

Let us now consider the possibilities of adapting global experience of cross-border cooperation to the realities of Kazakhstan's Central Asian borderlands. Despite all its specificity, the EU experience remains the most institutionally developed in the world. It contains a number of elements that may be useful for Kazakhstan and its Central Asian neighbors. These include:

(1) organizing competitive support for cross-border cooperation projects along the lines of Interreg programs, but taking into account much more modest financial capacities and focusing on clearly depoliticized areas and problems;

(2) using methodological materials developed in the EU, including the Manual on Removing Obstacles to Cross-Border Cooperation published in 2013 (Council of Europe and Institute of International Sociology of Gorizia 2013). At the

same time, it is necessary to take into account that the recommendations it contains are designed for the political, economic, and other realities of the EU and therefore cannot always be directly applicable to the Central Asian context;

(3) using advanced practices of cooperation in specific areas, including cross-border infrastructure planning, management of transboundary water resources, support for innovation activity, and the creation of joint tourist destinations;

(4) supporting cross-border mesoregions comprising groups of provinces and other administrative regions, some of which may not directly adjoin the border but nevertheless have a sustained interest in developing cross-border ties with partners to address depoliticized problems. One such mesoregion could be formed by the territories of the countries adjoining the Syr Darya River. In this case, the core areas of cooperation could be water-resource management and the sustainable development of agriculture. Another possible format is linked to regions with stretches of border where the intensity of contacts in desert zones is low. For example, on the Kazakh side these could be Aktobe, Kyzylorda, and Turkestan provinces, and on the Uzbek side the Republic of Karakalpakstan and Navoi and Jizzakh provinces. Such cooperation could focus on jointly addressing problems of transboundary transport connectivity, the environment, and agricultural innovation.

The Euroregion model, in which local authorities and representatives of civil society play an autonomous role in addressing a wide range of issues related to cross-border cooperation, appears much less applicable to the realities of Kazakhstan's Central Asian borderlands. The scale of support for cross-border projects requiring financing is likely to be significantly more limited. This, in turn, may limit both the scope of such support and the range of actors able to receive it. Nor does it seem likely that such areas as systematic support for

public cross-border activism or the promotion of shared cross-border identities will be fully included in the agenda of Kazakhstan's cross-border cooperation with its Central Asian neighbors.

The US–Canadian model of cross-border cooperation is, on the one hand, closer to Central Asian realities, since it presupposes the preservation of border controls and relatively modest scales of financed projects. What does not fully correspond to the Central Asian context, however, is reliance on diverse, including politicized, cooperation among non-governmental actors, as well as intensive informal contacts between local authorities. Overall, North American experience, including its specific tools and practices, may be somewhat useful for establishing cooperation and improving its effectiveness in specific areas. These include monitoring and streamlining cross-border transport flows; water-resource management – taking into account the experience of the US–Canadian and US–Mexican boundary water commissions, which are among the oldest institutions of this kind – and the management of transboundary protected areas.

The Chinese model of cross-border cooperation is markedly different from both the European and North American models. It combines a rigidly centralized authoritarian style of governance with the granting of a certain autonomy to selected administrative regions, which receive increased funding and priority channels of communication with the center. Many initiatives to develop cross-border trade and infrastructure, including those fitting within the Belt and Road Initiative, are implemented with the active participation of such administrative regions (Rippa 2020; Su 2013). In a number of cases, for example in China–Hong Kong cooperation and in the participation of Chinese subnational authorities in projects in the Greater Mekong Subregion, the granting of

expanded powers to regions is used by the Chinese government as a political instrument. It helps reduce partners' concerns about inequalities in the parties' capacities (Su 2013). Another specific feature of the Chinese model is the establishment, since the 1990s, of cross-border economic cooperation zones, which primarily serve the purposes of stimulating trade and, in some cases, developing production (Yang 2006).

Such an element of Chinese cross-border cooperation as the creation of border trade zones has gained recognition in many regions of the world. Among other things, it is also used in Kazakhstan–China cross-border cooperation, a clear example of which is the functioning of the special economic zone in the Khorgos area. It is likely that the projects of the Alatau Industrial Trade and Logistics Complex on the Kazakhstan–Kyrgyzstan border and the International Center for Industrial Cooperation on the Kazakhstan–Uzbekistan border are also directly or indirectly inspired by Chinese experience.

The strategy of granting special powers to selected administrative regions deserves attention, since such regions may be much more sensitive to the agenda of cross-border cooperation than central authorities. At the same time, implementation of such a strategy is associated with a number of problems. These include high corruption risks (Golunov and Bitabar 2025), its "one-sided" character when it is insufficiently coordinated with the actions of foreign partners, and the dependence of the success of such a strategy on the political and financial power of the country implementing it.

The format of cross-border cooperation within ASEAN is closer to the Central Asian context on a number of parameters. These include the prevalence in the association of countries with authoritarian regimes; the dominance of central governments over regions (although Indonesian–Malaysian cross-border cooperation in this respect appears to be a notable ex-

ception); the absence of a clear emphasis on cross-border cooperation in official discourse; and the blurred geographical boundaries of relevant cooperation. In many cases, for example in projects involving economic corridors and "growth triangles," such cooperation extends beyond borderland territories proper. Still, at least the following three aspects of ASEAN experience deserve particular attention.

First, this concerns the format of transboundary economic corridors, which are zones of economic development along transport routes crossing state borders. It should be noted that, with support from the Asian Development Bank, which actively participates in similar projects in ASEAN countries, the Almaty–Bishkek Economic Corridor project is being implemented in the Kazakhstan–Kyrgyzstan borderland, while the Shymkent–Tashkent–Khujand Corridor is being implemented across border territories of Kazakhstan, Uzbekistan, and Tajikistan. So far, the implementation of these projects appears mainly to consist of conceptually systematizing, under their "umbrella," planned activities carried out by participants on their respective sides of the border, and it has not produced breakthrough results.

Second, ASEAN actively uses the format of "growth triangles." It focuses on combining the complementary potentials of three or more cooperating parties for the implementation of joint projects – for example, labor, natural resources, and financial capital. In such initiatives, the dominant role is played by central governments and big business, while subnational governments, as a rule, are assigned a secondary place (Nadalutti and Rüland 2024). The configuration of "growth triangles" may be useful above all for establishing trilateral Kazakhstan–Kyrgyzstan–Uzbekistan cooperation. However, this would be possible only if the parties were able to identify a

mutually acceptable configuration of resources, with each participating country making a key contribution of its own.

Third, for Central Asia the format of cooperation in the Greater Mekong Subregion could be of considerable interest. It includes five ASEAN countries – Vietnam, Cambodia, Laos, Myanmar, and Thailand – as well as two Chinese administrative regions: Yunnan Province and the Guangxi Zhuang Autonomous Region. In addition, non-governmental and international organizations, as well as business structures, participate in the program. The axis of this subregion is a major river, and its priorities include stimulating economic development; developing transboundary transport infrastructure; environmental protection and water-resource management; and cooperation in agriculture, tourism, education, and healthcare. Given the heterogeneous composition of participants, a flexible and minimalist institutional structure was chosen for the subregion: without formal membership status, but with a number of decision-making bodies, including a leaders' summit, a ministers' conference, and a secretariat whose functions are performed by the Asian Development Bank (Nadalutti and Rüland 2024).

The Greater Mekong model can potentially be considered as an alternative to the mesoregional format supported by the EU under the Interreg program. What deserves particular attention is that it has ensured long-term and sustainable cooperation between territories of countries with different, predominantly authoritarian, political regimes. This experience could potentially be used in creating a Kazakhstan–Kyrgyzstan–Uzbekistan region on the Syr Darya River. The range of its priorities could either generally reproduce the Mekong model or be narrowed to several key areas, above all water-resource management and agriculture. The Asian Development Bank, which plays a key role in the Greater

Mekong Subregion, could act as the main expert partner in a hypothetical "Greater Syr Darya" project.

Trends in the development of cross-border cooperation in Latin America are ambivalent. On the one hand, it is favored by its inclusion in the agenda of integration processes taking place in the region, as well as in the activities of specific integration associations such as Mercosur, the Andean Community, the Central American Integration System, and others. The development of such cooperation is also facilitated by the absence of a language barrier among the populations of most countries in the region, the relatively democratic character of most political regimes, the high degree of openness of many states to adapting EU experience of cross-border cooperation, and, in a number of cases, the existence of pairs of "twin cities" on the border.

At the same time, in most countries of the region political systems are highly centralized, and regions have weak autonomous powers in managing international cooperation. In addition, relations between neighboring countries are often characterized by instability because of periodically arising ideological polarization, when a clearly left-wing government comes to power in one country and a right-wing government in another (Dilla, Cabezas, and Figueroa 2022).

In Kazakhstan's cross-border cooperation with its Central Asian neighbors, both the positive and the negative experience of Latin America could be taken into account. In particular, countries of the region have implemented a number of projects for the development of transboundary infrastructure relatively successfully, developed mechanisms for providing the population of adjacent territories with access to medical and educational services, and, with support from international organizations, created several transboundary protected areas (Golunov and Bitabar 2025).

At the same time, Latin American experience also contains opposite examples, pointing to the fragility and instability of institutions created by integration associations to promote cross-border cooperation, as well as to the possibility of scaling back cross-border projects when the political situation deteriorates. Such scenarios need to be taken into account when planning far-reaching and costly CBC development initiatives.

Finally, the specificity of African experience of cross-border cooperation lies in the fact that it is strongly influenced by the EU experience, with the EU promoting its own approaches and providing significant financing for the implementation of relevant projects. African experience is of interest in at least two respects: the possibility of adapting a modified European model to substantially different conditions (including a higher degree of political centralization and a low standard of living), and the orientation of a significant part of such cooperation toward obtaining external funding.

Conclusion

When attempting to use foreign experience of cross-border cooperation, Kazakhstan and its neighboring Central Asian states should take into account its Eurocentrism: a significant part of conceptual works and practical manuals is based on the experience of the European Union. This experience deserves the most serious attention and may be useful, for example, in searching for ways to mitigate obstacles to cooperation, organizing competitive selection of projects for grants, and creating cross-border mesoregions in the desert zone of the borderland and in the Syr Darya River basin. At the same time, the EU experience must be approached with caution, since European political and economic conditions differ substantially from Central Asian ones.

The experience of EU cross-border cooperation, as well as that of other countries and regions, may be especially useful in specific areas. These include monitoring cross-border flows (the United States and Canada); planning and developing transboundary transport infrastructure (the EU, the United States and Canada, Latin America, Southeast Asia); creating and operating transboundary protected areas (the United States and Canada, Latin America); organizing trilateral cooperation based on complementary resources (Southeast Asia); forming economic corridors along transport routes crossing borders (Southeast Asia); creating border trade and production zones (China); water-resource management (the EU, the United States and Canada); creating mesoregions (the EU, Southeast Asia); attracting external funding (Africa); and others.

Conclusion

Kazakhstan's cross-border cooperation with neighboring Central Asian countries develops under the influence of a specific combination of factors.

First, it is shaped by the authoritarian and strongly centralized character of the political regimes in the region. Central governments exercise rather strict control over the international ties of regional authorities, and the capacity of those authorities to organize joint projects with foreign partners on their own is usually seriously limited.

Second, for similar reasons, cross-border activity by non-governmental organizations, which plays a visible role in European and North American cross-border cooperation, remains generally weak in Central Asia.

Third, the conceptual understanding of cross-border cooperation, as well as the thematic and geographic focus of projects that can be placed under this heading, is often blurred. Infrastructure projects and interregional forums, for example, frequently involve both border and non-border territories.

Fourth, funding for such projects in Central Asia is usually modest and cannot be compared with the financial scale of European or Chinese cross-border cooperation projects.

Fifth, external actors from outside the region play a substantial role in the Central Asian context, and their influence is less visible in European or North American cross-border cooperation. This factor is reflected in the role assigned to some border territories as logistics hubs in interregional corridor projects intended to give Kazakhstan and its Central Asian neighbors access to ocean ports; in the presence of Chinese, Russian, European, and Iranian interests in a number of projects implemented in border regions; and in the active role

of international organizations that have initiated many of the existing cross-border cooperation projects.

Sixth, cross-border cooperation is partly linked to the informal economy, above all small-scale cross-border trade and passenger transport. The ability of such actors to participate fully in legitimate cross-border cooperation depends to a considerable extent on the economic policies of neighboring countries, which may either suppress and even criminalize such activity or move toward its broad legalization.

The situation along Kazakhstan's individual Central Asian borders is highly specific. The landscape conditions of the Kazakhstan–Turkmenistan borderland, most of the Kazakhstan–Uzbekistan borderland, and the eastern part of the Kazakhstan–Kyrgyzstan borderland are relatively unfavorable. At the same time, zones of intensive contact exist on the eastern section of the Kazakhstan–Uzbekistan border and in the central part of the Kazakhstan–Kyrgyzstan borderland. The political background also differs markedly. In the Kazakhstan–Kyrgyzstan case, it is the most open, including in the public discussion of cooperation-related issues, but it also contains some conflictual elements. In the Kazakhstan–Uzbekistan case, it is more closed informationally, but also clearly constructive and oriented toward reducing the acuteness of potential disagreements. In the Kazakhstan–Turkmenistan case, it is the most closed, including serious restrictions on cross-border mobility.

The landscape and political conditions of the Kazakhstan–Turkmenistan borderland are the least favorable for cross-border cooperation. At the same time, the parties have no territorial or other claims against each other, and shared interests in interregional transit along the North–South corridor create a stable basis for cooperation. This cooperation includes the development of logistics hubs in border regions, many of them

oriented toward the neighboring side, as well as joint action to preserve the ecosystems of the Caspian Sea and the Ustyurt Plateau.

Although most of the Kazakhstan–Uzbekistan border is weakly connected because of desert landscapes and the long distances between settlements, the intensity of cross-border cooperation in contact zones, especially in the east of the border, is relatively high. The location of Uzbekistan's capital region, the most dynamically developing part of the country, near the border largely compensates for interstate inequality. Cooperation is especially active in trade, logistics, the exchange of agricultural experience and technologies, the management of protected natural areas, and tourism. Although the two governments actively encourage interregional contacts, the effectiveness of this format raises some questions. The results of joint production projects and projects for developing intraregional economic corridors are also mixed. Information support for cooperation remains insufficient, above all because of Uzbekistan's relatively high level of media closure. The cross-border activity of non-governmental organizations also remains quite low, not only in sociopolitical fields but also in depoliticized areas.

Cross-border cooperation between Kazakhstan and Kyrgyzstan is complicated by the mountainous landscape and is concentrated in three valleys, with the main flows passing through the Chuy Valley in the central part of the borderland. As in the Kazakhstan–Uzbekistan case, the border location of the most developed Kyrgyz capital region largely compensates for inequality between the countries. Nevertheless, at the interstate level the two sides possess asymmetric resources, which affects their cross-border relations and the border territories themselves. Kyrgyzstan depends on Kazakhstan as one of its key markets and as a critically important transit territory,

while Kazakhstan's Zhambyl Province is highly dependent on water resources originating in Kyrgyzstan. These mutual and asymmetric dependencies periodically generate disagreements and conflict situations, but they also create preconditions for close cooperation.

Despite the centralized character of both political regimes, the Kazakhstan–Kyrgyzstan pair stands out in Central Asia for its openness to cooperation. It is between these two countries that regional contacts are the most intensive and regular. Their relative media openness is also notable: compared with other states in the region, the media of both countries provide the most detailed information about local problems, including critical coverage. International organizations work in a number of areas in both countries and, despite the increasingly systematic attempts of Central Asian states to confine their activity within national borders, have played an active role in several cross-border projects. One of these is the Chu–Talas Water Management Commission, which is unique in the region in terms of the involvement of local non-governmental actors.

The intensity of cross-border cooperation in individual fields is uneven and depends largely on the specific border. In all three border zones, cooperation is developed in logistics and transport planning, and partly in environmental protection. Along the Kazakhstan–Uzbekistan and Kazakhstan–Kyrgyzstan borders, cooperation is developed in agriculture, water management, tourism, culture and sport, emergency response, law enforcement, and related fields. Cooperation is less active in education, healthcare, and information exchange; cross-border cooperation among non-governmental organizations is usually relatively weak. In agriculture, water management, tourism, and transport, cooperation may be combined with el-

ements of competition and conflict, whereas in other fields these elements are limited.

In most pairs of actively interacting neighboring regions, agriculture is one of the key areas of cooperation. This field is closely linked to trade, the planning of cross-border transport infrastructure, the optimization of border and customs control, water management, and other areas. Unlike many other fields, agricultural cooperation is less hierarchical. Although some activities and projects, such as the development of joint production facilities and locust control, are coordinated from above, grassroots initiatives involving the exchange of technologies, seeds, breeding stock, plant and animal raw materials, and agricultural products are extremely important. In some cases, these grassroots initiatives prove more effective than large-scale projects planned at a high level.

Because of the landscape conditions, especially the prevalence of natural hazards in mountainous areas, cross-border cooperation in emergency management is most developed along the Kazakhstan–Kyrgyzstan border. Unlike agricultural cooperation, it is much more formally organized, hierarchical, and centralized. In this case, however, centralization does not obstruct cooperation, because the field is depoliticized and the operational joint activity required for monitoring emergencies and dealing with their consequences makes constant coordination essential. In the Kazakhstan–Kyrgyzstan borderland, an advanced system of intensive cooperation has developed among emergency agencies, including operational communication channels, data exchange, exercises, and rescue operations.

Researchers and the media have paid relatively little attention to the proximity of the capitals of Uzbekistan and Kyrgyzstan to small settlements located nearby but on the other side of the border, namely Saryagash and Kordai. The

potential of the parties appears too asymmetric to conceptualize the Tashkent–Saryagash and Bishkek–Kordai pairs as twin cities. Yet despite this obvious asymmetry and the attraction of the neighboring capitals for residents of Kazakhstan's borderland, the pull is not entirely one-sided. Saryagash and Kordai serve travelers from neighboring states as gateways to Kazakhstan, including as important transport hubs and, at least in the case of Kordai, as entry points to the Kazakh market.

Several directions can be identified for unlocking the still underused conceptual and practical potential of Kazakhstan's cross-border cooperation with neighboring Central Asian countries, taking into account both international experience and the regional Central Asian context.

First, researchers and official bodies should define more clearly the operational meaning, conceptual understanding, and goals of cross-border cooperation. Existing Eurocentric definitions, which emphasize the role of administrative regional authorities and the creation of cross-border institutions, may conflict with the realities of authoritarian and strongly centralized political systems and with the cautious attitude of governments toward transboundary institutions they do not control sufficiently. At the same time, a definition more suitable for Central Asian realities could be more inclusive: geographically, it would focus on border territories; thematically, it would focus on joint efforts in the interests of the population of these territories and the protection of their natural resources.

Second, since the geographic focus of many projects is currently blurred, governments in the region could be advised to develop strategies for the joint development of border territories specifically. Such strategies could help use the advantages of border location for more dynamic development, combine capacities to solve common problems and produce

innovative solutions, plan shared-use infrastructure more effectively, and ultimately advance regional integration.

Third, to overcome the Eurocentrism of existing conceptual and methodological work on cross-border cooperation, international experience should be examined carefully and systematically, without either uncritically borrowing it or dismissing it superficially as unsuitable for local conditions. European experience deserves particular attention for its competitive support for cross-border cooperation projects and its methods for removing barriers to cooperation. North American experience is useful for the joint monitoring of border-crossing problems and the planning of transboundary transport infrastructure. ASEAN experience is relevant for economic corridor projects. Chinese experience is useful for the selective expansion of regional powers to implement cross-border cooperation projects and for the development of border trade and production zones. African experience is instructive in fundraising for cooperation projects. Most of the regions considered here also offer valuable experience in water-resource management and in the creation of transboundary protected areas.

Fourth, international organizations such as UN agencies, the OSCE, the Asian Development Bank, and others play a significant role in promoting projects related to cross-border cooperation in Central Asia. They can act as generators of ideas and project initiators, mediators, disseminators of innovations and technologies, and sources of funding. Governments in the region would benefit from establishing a more systematic multilateral dialogue with international organizations on the implementation of projects related to cross-border cooperation.

Fifth, the experience of the European Union and Southeast Asian countries in creating mesoregions that include groups of

regions on both sides of a border and focus on common problems deserves attention. In Kazakhstan's Central Asian borderlands, such regions could be created in the western desert zone, involving weakly connected regions of Kazakhstan and Uzbekistan, and in the Syr Darya basin, involving regions of Kazakhstan, Uzbekistan, and Kyrgyzstan. At the initial stage, these regions could address a relatively narrow set of depoliticized problems, including agriculture, logistics, and innovation. Combining their material and intellectual capacities would make it possible to address these problems in a more concentrated and cooperative manner. The experience of the Greater Mekong Subregion in Southeast Asia shows that this type of mesoregion can be an acceptable format for states with different political regimes, including authoritarian and centralized ones.

Sixth, the potential of pairs of settlements located close to each other on opposite sides of the border, especially Tashkent–Saryagash and Bishkek–Kordai, remains weakly used. Kazakh authorities could be advised to develop strategies for these border settlements in order to realize their potential more fully.

The authors do not claim that this study is final or exhaustive. They nevertheless hope that it will encourage further and more detailed conceptual work in the directions outlined above.

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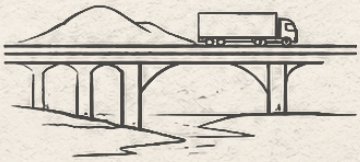
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