CAREC CORRIDOR PERFORMANCE MEASUREMENT AND MONITORING

ANNUAL REPORT 2023

CAREC INSTITUTE

CAREC
Central Asia Regional Economic Cooperation Program

CAREC CORRIDOR PERFORMANCE MEASUREMENT AND MONITORING

ANNUAL REPORT 2023

Disclaimer

The views expressed in this publication are those of the authors and do not necessarily reflect the views and policies of the Asian Development Bank (ADB), CAREC Institute (CI), or its Governing Council or the governments they represent.

ADB and CI do not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use. The mention of specific companies or products of manufacturers does not imply that they are endorsed or recommended by ADB and CI in preference to others of a similar nature that are not mentioned.

By making any designation of or reference to a particular territory or geographic area in this document, ADB and CI do not intend to make any judgments as to the legal or other status of any territory or area. The boundaries, colors, denominations, and any other information shown on all maps do not imply, on the part of the ADB and CI, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries, colors, denominations, or information.

Contact Information:
Central Asia Regional Economic Cooperation (CAREC) Institute
21st Floor, Commercial Building Block 8, Vanke Metropolitan,
No. 66 Longteng Road, Shuimogou District, Urumqi, Xinjiang, the PRC, 830028
f: +86-991-8891151
LinkedIn: carec-institute
km@carecinstitute.org
www.carecinstitute.org

Notes:
In this report, "$" refers to United States dollars.
ADB recognizes "China" as the People's Republic of China.

Contents

Appendixes

Tables, Figures, and Boxes

Tables

Figures

Boxes

Foreword from the Director, CAREC Institute

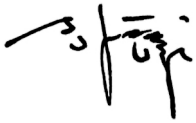
It is my great honor to present the *Corridor Performance Measurement and Monitoring (CPMM) Annual Report 2023*. This year marks a new chapter, with the CAREC Institute taking the lead in preparing and publishing the report, while the Asian Development Bank's CPMM team continues to perform the vital functions of data collection, monitoring, and primary analysis. This partnership ensures both the technical rigor of CPMM and a broader platform for sharing its insights across the CAREC region.

This transition reflects the natural evolution of the CPMM initiative, as the CAREC Institute strengthens its role in knowledge generation and policy support for the region. By assuming the lead in preparing and publishing the Annual Report, the Institute builds on over a decade of ADB's technical leadership and proven methodology. The Asian Development Bank's CPMM team will continue to perform the critical functions of data collection, monitoring, and core analysis, ensuring that the report remains grounded in the same high standards of accuracy and rigor that have defined it since 2010. This new arrangement allows the CAREC Institute to focus on expanding the report's reach, contextualizing its findings, and fostering dialogue among policy-makers and stakeholders across the CAREC region.

Launched by ADB in 2010, CPMM has become a key instrument for assessing and improving transport and trade facilitation across the region. Using the time/cost–distance (TCD) methodology developed by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), CPMM measures the time and cost of freight movements along CAREC corridors. The data reveal bottlenecks, inefficiencies, and opportunities for policy and infrastructure improvements that can reduce transaction costs and enhance regional connectivity. With the CAREC Institute now leading the report's preparation, we are committed to working closely with ADB's CPMM team to maintain the highest standards while expanding the analytical scope to address emerging trends and challenges. Together, we aim to provide actionable insights that will inform policies, strengthen cooperation, and promote sustainable development across the CAREC region.

The significance of CPMM extends beyond its role as a monitoring tool; it serves as a catalyst for generating research ideas and validating development strategies. The rich dataset amassed through CPMM offers a fertile ground for academic inquiry and policy analysis, facilitating evidence-based decision-making. Moreover, the longitudinal nature of the data allows for the assessment of progress over time, thereby enabling stakeholders to gauge the effectiveness of implemented measures and recalibrate strategies as necessary.

In conclusion, the CAREC Institute's stewardship of the CPMM represents a pivotal advancement in our collective endeavor to promote seamless connectivity and economic integration within the region. We remain steadfast in our mission to provide robust analytical support to member countries, fostering an environment conducive to sustainable growth and shared prosperity. We extend our gratitude to all partners and stakeholders, particularly ADB, for their continued collaboration and support in this vital undertaking.



Charymuhammet Shallyyev
Director, CAREC Institute
June 2025

Acknowledgments

The Corridor Performance Measurement and Monitoring Annual Report is a yearly publication that highlights CAREC Corridor efficacy. The report emphasizes using actual commercial shipments as samples and assessing the time and cost indicators. These quantitative data are also compared across the six corridors and over the recent past to report on the trend. In particular, the report places strong focus on the performance at the border-crossing points (BCPs). As many of the CAREC countries are landlocked, much of the transit inefficiency stems from the problems experienced at the BCPs.

This report was prepared by the CAREC Institute, led by Ghulam Samad, under the guidance and overall supervision by Kuat Akizhanov. ADB supported data collection and validation in CAREC countries, provided insights regarding the trends, and also reviewed the report. The report was led by Zulfia Karimova, supported by Julius Santos in data aggregation and analysis, and CPMM field consultants Max Ee and Andy Sze in analysis and insights. Xin Lei and Chen Long from the CAREC Institute contributed to typesetting review and report editing coordination.

Ali Raza Hanjra, the Director of Regional Improvement in Border Services (RIBS) from Pakistan's Federal Board of Revenue, contributed to the review of the case study as well as insights.

Finally, special thanks to the national transport and trade associations who participated in this Annual Report 2023. These CPMM partners are listed in Appendix 2 of this report. They contributed immensely to the data collection and verification, through surveys conducted with drivers and freight forwarders. In particular, Georgia International Road Carriers Association (GIRCA) and Xinjiang Uygur Autonomous Region Logistics Association (XULA) provided valuable information on the box stories.

Abbreviations

ADB	–	Asian Development Bank
AFG	–	Afghanistan
APTTA	–	Afghanistan–Pakistan Transit Trade Agreement 2010
AZE	–	Azerbaijan
BCP	–	border-crossing point
BTK	–	Baku–Tbilisi–Kars Line
CAREC	–	Central Asia Regional Economic Cooperation
CPMM	–	Corridor Performance Measurement and Monitoring
CRE	–	China Rail Express
EAEU	–	Eurasian Economic Union
GEO	–	Georgia
KAZ	–	Kazakhstan
KGZ	–	Kyrgyz Republic
MON	–	Mongolia
PAK	–	Pakistan
PRC	–	People's Republic of China
RIBS	–	Regional Improvement in Border Services
RUS	–	Russian Federation
SWD	–	speed with delay
SWOD	–	speed without delay
TAJ	–	Tajikistan
TCD	–	time/cost-distance
TFI	–	trade facilitation indicator
TIR	–	Transports Internationaux Routiers (International Road Transport)
TITR	–	Trans-Caspian International Transport Route
TKM	–	Turkmenistan
TTFS	–	Transport and Trade Facilitation Strategy
TUR	–	Türkiye
UZB	–	Uzbekistan
Y-o-Y	–	Year on Year

Units of Measure

km	–	kilometer
km/h	–	kilometers per hour
m	–	meter
mm	–	millimeter
TEU	–	20-foot equivalent unit
ton-km	–	ton-kilometer
hr	–	hours
$	–	US dollars
mt	–	million tons

Executive Summary

Chapter 1: Introduction

The Corridor Performance Measurement and Monitoring (CPMM) mechanism, established by the Central Asia Regional Economic Cooperation (CAREC) Program in 2009, is an evidence-based system that evaluates transport and trade efficiency along six key regional corridors. Utilizing real shipment data collected at border-crossing points (BCPs), CPMM tracks four trade facilitation indicators—border-crossing time and border crossing cost, transport cost, and corridor speed—to identify bottlenecks and monitor the impact of infrastructure and policy reforms. Its methodology, based on actual commercial operations, offers a robust alternative to perception-based surveys, making its findings highly reliable. Aimed at informing public sector decision-makers, the CPMM Annual Report highlights trends and challenges derived from private sector operations, translating empirical insights into actionable recommendations for regional connectivity and trade facilitation improvements.

Chapters 2–4: Regional Developments, Policies, and BCP Performance

Chapters 2 to 4 of the CPMM Annual Report 2023 highlight key developments in transport corridors, national policies, and border-crossing performance across the CAREC region. The Route Monitor (Chapter 2) features strategic infrastructure initiatives, including major progress along the Middle Corridor, the PRC–Kyrgyz Republic–Uzbekistan and Pakistan–Afghanistan–Uzbekistan rail links, and corridor development in STKEC and ABEC regions. China–Europe block train traffic continued to grow in volume and relevance, while challenges such as gauge differences and return load imbalances persisted. Chapter 3 (Policy Monitor) outlines the national-level reforms, with significant strides in digital trade facilitation, customs modernization, and logistics infrastructure across Azerbaijan, Georgia, Kazakhstan, Mongolia, and others. Chapter 4 (BCP Monitor) identifies the most time-consuming and costly border-crossing points by transport mode and direction, citing persistent issues such as throughput mismatches, manual inspections, and transloading inefficiencies, particularly at Khorgos, Dostyk, and Tsiteli Khidi. These chapters collectively underscore the importance of harmonized procedures, multimodal connectivity, and digital transformation for efficient regional trade.

Chapter 5: Trade Facilitation Indicators

Chapter 5 of the CPMM Annual Report 2023 analyzes the performance of the Trade Facilitation Indicators (TFIs) using 2,420 shipment samples collected across CAREC corridors. Road transport dominated the dataset (comprising approximately two-thirds), with rail and multimodal shipments covering the remainder. The findings reveal a mixed progress in cross-border trade performance, with small efficiency gains in some areas and persistent bottlenecks in others.

For road transport, average border-crossing time (TFI1) rose to 11 hours (hr) owing to congestion in specific corridors, such as Corridor 2 (e.g., Tsiteli Khidi and Krasnyi Most) and Corridor 5 (e.g., Torkham, Chaman). However, border-crossing costs (TFI2) dropped significantly from $208 to $131, driven by reductions at Khorgos following eased COVID-19-era protocols. Total shipment cost (TFI3) fell from $945 to $814, particularly along the Urumqi–Almaty and Tianjin–Ulaanbaatar routes. Speeds improved marginally: speed with delay (SWD) increased to 24.9 km/h, and speed without delay (SWOD), to 43.7 km/h. By contrast, rail transport recorded a 28% decrease in border-crossing time (TFI1), averaging 29.3 hr in 2023. Time savings happened most notably at Alashankou, Khorgos, and Erenhot; Zamiin-Uud experienced severe delays due to transshipment constraints. Border-crossing cost (TFI2) remained

stable, but shipment cost (TFI3) increased to $916, largely due to higher containerized rail tariffs between Tianjin and Ulaanbaatar (Corridor 4b). While SWD remained at 12.4 km/h, SWOD declined to 45.7 km/h, suggesting longer waiting or queuing times despite faster travel segments.

The data underscores the ongoing need for targeted reforms and infrastructure upgrades. Road corridors require harmonization of permits, modernized inspection processes, and digital tools for greater efficiency. Rail corridors, especially those serving Mongolia, demand urgent attention to relieve capacity and handling constraints. Overall, Chapter 5 highlights areas of improvement, while advocating for sustained policy coordination and smart investments to enhance the resilience and competitiveness of CAREC trade corridors.

Chapter 6: Country Updates

Chapter 6 provides country-specific observations based on CPMM's Trade Facilitation Indicators (TFIs) across the 11 CAREC member countries. Using disaggregated data from 2021 to 2023 by transport mode (road and rail) and direction (inbound and outbound), the analysis reveals diverse performance trends in trade and transport facilitation.

Azerbaijan demonstrated some improvements in trade facilitation, particularly in outbound road shipments. However, there are systematic inefficiencies that not only lengthened the border-crossing time at Krasyni Most but also affected the release of trucks from the Georgian BCP Tsiteli Khidi. The problems are described in the story, "Inside Krasyni Most BCP".

Georgia reported a surge in the waiting time, due to the outbound traffic. Border-crossing time also increased noticeably, but TFI3 showed a small reduction. The increase in TFI1 led to a drop in speeds.

Kazakhstan showed a mixed performance. While the TFIs for road improved, those for rail showed increased time and cost. Road transport speed showed a small decline, while rail speed improved slightly. The data suggest that infrastructure is improving, but procedural bottlenecks at key BCPs like Dostyk and Altynkol remain a challenge.

The Kyrgyz Republic showed divergent outcomes, as road transport reported reduced border-crossing time but rail transport showed an increase. The reduced border-crossing time led to an increase in road transport speeds.

Mongolia's rail corridor performance is a concern. Rail TFI1 remains high. However, rail shipment costs (TFI3) surged due to high containerization costs on the Tianjin–Ulaanbaatar corridor. Road shipments were more stable, with moderate costs and steady processing times. Nonetheless, Mongolia's reliance on a single border gateway (Zamiin-Uud) creates vulnerability to disruption and capacity issues.

Pakistan reported an increase in TFI1 and this led to a drop in the speeds. Cost indicators such as TFI2 and TFI3 remained stable. Torkham and Chaman remained among the most time-consuming BCPs. The implementation of Pakistan Single Window and investment in road infrastructure are expected to address the challenges in transit and border-crossing.

People's Republic of China (PRC) exhibited noticeable improvement in border-crossing performance for both road and rail traffic. These improvements are described in the story "Border-Crossing Process Simplification in PRC." Time (TFI1) and cost (TFI2) trended downward, reflecting the procedural improvements at Khorgos and Erenhot. Speeds declined marginally, possibly due to increased volumes or seasonal congestion. With a largely developed infrastructure, the focus is shifting to further streamlining documentation and enhancing automation at border crossings.

Tajikistan demonstrated gradual improvements in border-crossing performance. Most TFIs remained stable, and the bright spot was the considerable increase in SWOD from 2022 to 2023. Continued progress will depend on a deeper integration of customs reforms and infrastructure enhancements under the CAREC framework.

Turkmenistan's performance remained largely stable with slow but positive trends. Road transport showed reduced TFI1 but rail transport showed an increment. Most indicators reported a stable pattern. The core issues are limited transparency and lack of trade facilitation reforms, for example, the continued need for drivers from neighboring countries to obtain visa for transit and entry into Turkmenistan.

Uzbekistan recorded improvements in nearly all TFIs. Its TFI1 was relatively short by Central Asian standards. Cost indicators dropped and speed indicators increased. The country continues to pursue aggressive reforms and modernization in transit and trade facilitation.

Chapter 7: Case Study—Torkham BCP

The final chapter presents a case study of Torkham BCP, a vital border crossing between Pakistan and Afghanistan. Serving both freight and passengers, Torkham plays a critical role in regional connectivity, especially for the Afghanistan Transit Trade and the future Pakistan–Afghanistan–Uzbekistan rail corridor. The chapter examines the BCP's profile, layout, capacity, performance, and systemic challenges. Torkham has a design capacity of 110,000 trucks per year (up to 127,000 at maximum), predominantly handling exports and transit from Pakistan to Afghanistan. However, despite 24/7 operations since 2019, the BCP remains one of the most time-consuming in the CAREC region. Outbound and inbound border-crossing times increased 24% and 22%, respectively, between 2022 and 2023, with costs also rising modestly. To address the operational inefficiencies arising from fragmented institutional coordination, low digitalization, outdated infrastructure, lack of risk-based controls, and minimal private sector engagement, the report recommends adopting coordinated border management, integrating the Pakistan Single Window, upgrading physical infrastructure, and implementing risk-based inspection, digital payments, and stakeholder engagement. These improvements, aligned with the best practices from the CAREC region and beyond, are aimed at transforming Torkham into a modern, efficient, and secure gateway for regional trade.

1 Introduction

Background

The Corridor Performance Measurement and Monitoring (CPMM) mechanism is an empirical tool designed by the Central Asia Regional Economic Cooperation (CAREC) Program to assess the efficiency of its six priority transport corridors.[1] The CAREC corridors link the region's key economic hubs and connect the landlocked member countries to Eurasian and global markets.[2]

This mechanism is used to (i) identify the causes of delay and unnecessary cost in moving cargo along the links and through the nodes of each CAREC corridor, including at border-crossing points (BCPs), and intermediate stops; (ii) help the national authorities in the CAREC countries determine how to address the bottlenecks thus identified; and (iii) assess the impact of initiatives for regional cooperation implemented by the members along these corridors.[3]

Launched in 2009, the CPMM methodology and collection process captures a range of ground-level information by measuring and recording data on actual cargo shipments along CAREC corridors and at high traffic BCPs prioritized by the CAREC member countries.

The CPMM employs the aggregated data collected for the four trade facilitation indicators (TFIs) to evaluate the overall performance and efficiency of the CAREC corridors each year.[4] Measured over the years and across the corridors, the trends in the indicators provide a comparative picture for assessing and determining the effectiveness of transport and trade improvement initiatives in the region. The four TFIs are as follows:

(i) ***TFI1: Time taken to clear a BCP.*** This indicator is the average length of time (in hours) taken to move cargo across a border from the entry to the exit point of each of the two countries' BCPs at that crossing. The entry and exit points are typically primary control centers where customs, immigration, and quarantine are handled. Along with the standard clearance formalities, this includes waiting time, unloading and loading time, time taken to transfer shipments when rail track gauges change at border crossings, and other factors. The aim is to capture both the complexities and inefficiencies in the border-crossing process.

(ii) ***TFI2: Cost incurred at a BCP.*** This is the average total cost in US dollars of moving cargo across a border from entry to exit at a BCP. Both official and unofficial payments are included.

(iii) ***TFI3: Cost incurred to travel a corridor section.*** This is the average total cost in US dollars incurred in transporting one shipment along a corridor section within a country or across borders. One shipment refers to goods carried in a truck, container or a wagon. Since each sample can have different cargo weight and travel through different distances, the weight of the goods are scaled to 20 tons and over 500 km. A corridor section is defined as a stretch of road or railway track of 500 km long. Both official and unofficial payments are included. In practice, however, transport

[1] The CAREC Program is a partnership of 11 countries—Afghanistan, Azerbaijan, Georgia, Kazakhstan, the Kyrgyz Republic, Mongolia, Pakistan, People's Republic of China, Tajikistan, Turkmenistan, and Uzbekistan—working together to promote development, accelerate economic growth, reduce poverty reduction through cooperation. For more information, see CAREC home page www.carecprogram.org.

[2] The CPMM annual report is a technical document and, for the benefit of readers, includes standard explanations and definitions. Parts of the introduction contain standard and recurring descriptions of the CAREC CPMM background, methodology, names of BCPs, and appendixes, and should remain consistent with previous annual reports.

[3] A detailed description of each CAREC corridor is found at www.carecprogram.org/?page_id=20.

[4] The TFIs and their statistical derivations are explained in Appendix 3.

cost figures reported by CPMM refer to transport rates for trucks or railway tariffs for trains due to data collection constraints.[5]

(iv) ***TFI4: Speed to travel along the CAREC corridors.*** This is the average speed in kilometers per hour (km/h) at which a unit of cargo travels along a corridor section within a country or across borders. Speed is calculated by dividing the total distance traveled by the duration of travel. Distance and time measurements include border crossings.

CPMM uses two measures of speed: speed without delay (SWOD) and speed with delay (SWD). SWOD is the ratio of the distance travelled to the time spent by a vehicle in motion between origin and destination (actual traveling time). SWD is the ratio of the distance travelled to the total time spent on the journey, including the time the vehicle was in motion and the time it was stationary. All activities that delay the vehicle (customs controls, inspections, loading and unloading, and police checkpoints, among others) are recorded by drivers. SWOD represents a measure of the condition of physical infrastructure (such as roads and railways), while SWD is an indicator of the efficiency of BCPs along the CAREC Corridors.

The data for TFI1 and TFI2, which respectively measure the time and cost at a BCP, have three components: (i) the time from when the shipment on a truck or train begins to queue outside the gate to the time when it enters the BCP; (ii) the time it takes for the activities inside a BCP (which are typically customs, immigration, and transport inspections); and (iii) the time it then takes for the shipment to gain authorization to leave the BCP. Notably, a BCP can serve inbound as well as outbound traffic, depending on the direction of travel, inbound traffic referring to a shipment entering the BCP (import), and outbound traffic referring to a shipment leaving it (export). TFI1 and TFI2 are disaggregated at each BCP as the values differ depending on the travel direction.

Furthermore, time and cost indicator data for individual activities at each BCP are collected and assessed. The same are carried out for other intermediate stops, such as toll booths and security inspections.[6] This helps to identify the location and the nature of the delays along a corridor.

Objectives

The objectives of the CPMM are:

(i) implementing a robust and practical approach to evaluate corridor performance that are derived from and relatable to actual commercial shipments;

(ii) analyzing the data and information using pre-defined indicators so that any changes to the corridors' performance could be identified and explained;

(iii) reporting the findings to policymakers who can assess the need for infrastructure or policy changes or appraise the success of past efforts in modernizing infrastructure or policies.

While there are many other tools and methodologies used by other international development organizations, CPMM is unique because of the extremely large sample size (more than 2,000 samples per year) collected every month. This frequency is important because other studies tend to focus on a certain point in time and cannot not detect seasonal or monthly changes. Another unique strength of the CPMM is its samples of actual commercial shipments across CAREC corridors, collected from transport operators. Actual time and cost data for shipments that have travelled along CAREC corridors are used,

[5] Transport cost is viewed from the perspective of the shipper and/or receiver, and represents the market rate paid to move the cargo, rather than the carrier's cost of providing the service.

[6] Activities encompass all anticipated checks and procedures, both at BCPs and at intermediate stops along the transit corridor (see Appendix 4). Appendix 5 provides a list of CAREC BCPs covered by the CPMM.

and not those collected from surveys or polls of perceptions. This empirical method makes CPMM's findings more reliable than surveys that ask for opinions and perceptions.

Target Readers

CPMM Annual Reports are developed with the primary aim to serve policymakers and stakeholders in the public sector. When ADB funds technical or financial assistance to projects in CAREC, the projects are formulated and determined with policymakers as close partners. CPMM serves as a monitoring and evaluation tool to appraise the effectiveness of development efforts. Thus, the contents are tailored to report important trends, developments and performance metrics to the public sector. The aggregated nature of the findings is less useful to the private sector, which is more interested in specific origin-destination pairs and routes. This is not to reduce the significance of the private sector because the sources of the data and information originate from the transport operators representing the private sector. Some recommendations also originate from dialogues with and feedback from the private sector.

Thus, CPMM Annual Reports could be seen as a platform to gather findings from the private sector, and presenting the key messages, supported by empirical evidence, to the policymakers. This is an important way to avoid potential conflicts of interest. This is because the CPMM estimations (e.g. border-crossing time and cost) could be influenced by poor decisions in infrastructure design, or cumbersome procedures that originate from stakeholders in the public sector. Tasking these agencies to measure their own performance might not present a transparent and fair set of results.

2 Route Monitor

This chapter is a new addition to the CPMM Annual Report 2023 to highlight important and interesting developments in new and existing transport routes in CAREC. ADB established six routes collectively known as the CAREC Corridors (Figure 2.1). These were first conceived in 2005 based on a variety of factors and have been periodically revised since to include new routes. For example, Corridor 2 was extended to include Georgia after its entry into CAREC, and now serves as an important reference for analyzing the Middle Corridor. Other ongoing exciting developments in the region are elaborated in the subsequent sections.

Table 2.1: Summary of Key CAREC Transport Routes (2023)[7]

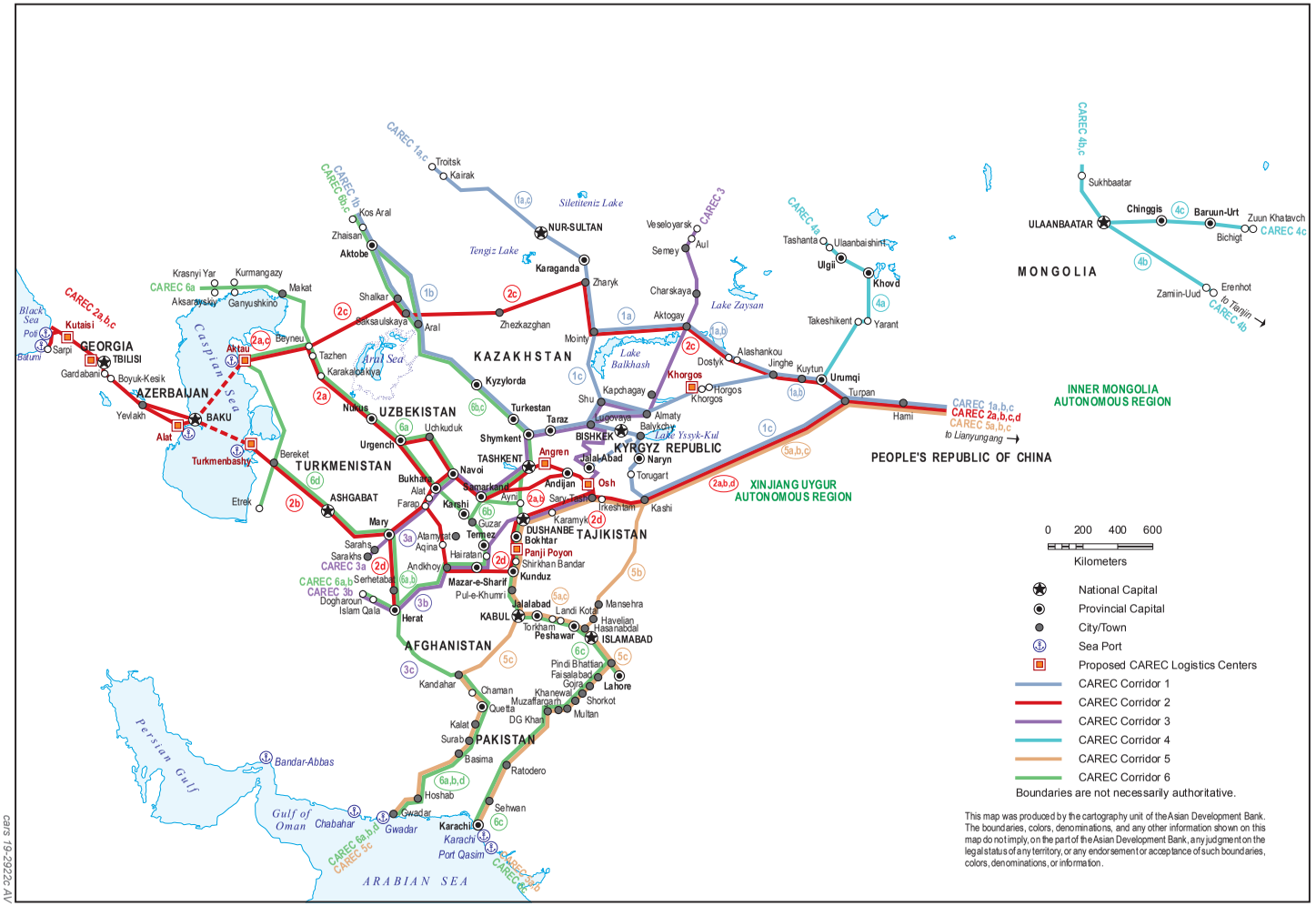
Route	CAREC Countries	Description
Middle Corridor (TITR)	Kazakhstan, Azerbaijan, Georgia, Turkmenistan	This multimodal corridor connects East Asia to Europe via Central Asia and the Caspian Sea, bypassing Russia. Traffic surged by 86% in 2023, but capacity constraints emerged at ports (Aktau and Alat) and BCPs (Tsiteli Khidi and Krasnyi Most). The 2022–2027 roadmap covers upgrading infrastructure and harmonizing procedures.
PRC–Kyrgyz Republic–Uzbekistan Railway	PRC, Kyrgyz Republic, Uzbekistan	This is a planned 486-km railway, with $4.6 billion of funding and expected to transform Central Asia's access to PRC. Most of the route passes through Kyrgyz Republic. Once operational, it will serve the Fergana Valley and connect to PRC's rail grid via Kashgar.
Pakistan–Afghanistan–Uzbekistan Railway	Pakistan, Afghanistan, Uzbekistan	The trilateral 760-km rail project to connect Tashkent to Peshawar via Kabul and Torkham aims to carry up to 15 million tons (mt) annually by 2030. The route offers Central Asia direct access to ports in Pakistan, shortening access to maritime trade and Middle East markets.
Shymkent–Tashkent–Khujand Economic Corridor (STKEC)	Kazakhstan, Uzbekistan, Tajikistan	The corridor is a subregional initiative to integrate the cities of Shymkent, Tashkent, and Khujand through trade, logistics, and industrial cooperation. In 2023, a joint ICIC facility was discussed with 63 co-investment projects and support for priority industries such as food, textiles, and pharmaceuticals.
Almaty–Bishkek Economic Corridor (ABEC)	Kazakhstan, Kyrgyz Republic	This pilot economic corridor will link Almaty and Bishkek to develop shared services in tourism, healthcare, and agriculture. In 2023, bilateral meetings reaffirmed the joint commitment to infrastructure planning and economic integration.
PRC–Mongolia Route	PRC, Mongolia	The Tianjin–Zamiin-Uud–Ulaanbaatar corridor saw worsening rail congestion in 2023. Zamiin-Uud's limited capacity (7 trains/day) contrasts sharply with Tianjin and Erenhot's handling capability. Long delays led to increased use of costly road transport via a newly modernized truck terminal.
China–Europe Container Block Trains (CRE)	PRC, Kazakhstan, Mongolia, Russia, Belarus, Europe	The CRE network grew to 17,523 trains and 1.9 million TEUs in 2023, linking 110 PRC cities to over 200 European ones. Delays at gauge change points (e.g., Dostyk and Brest) and uneven adoption of electronic data systems remain bottlenecks, though digital trade facilitation efforts are underway.
Baku–Tbilisi–Kars (BTK) Railway	Azerbaijan, Georgia, Türkiye	This is a strategic rail line linking the Caspian Sea to Europe without crossing Russia. After year-long renovations, full service resumed in 2024. It integrates with the Middle Corridor and targets a 5–17 mt capacity. Gauge-change delays at Akhalkalaki remain a constraint.

Source: Compiled by CAREC Institute.

The review of individual routes provides the following insights that highlight the trends of 2023.

[7] Refer to Appendix 1 for the details of each route.

Figure 2.1: Six Central Asia Regional Economic Cooperation Corridors



CAREC = Central Asia Regional Economic Cooperation.
Source: Asian Development Bank, Six Central Asia Regional Economic Cooperation Corridors. https://www.carecprogram.org/uploads/2017-carec-corridor-map-FIN.pdf.

Redirection of Transit and the Rise of the Middle Corridor

The Russia–Ukraine conflict continued to reconfigure Eurasian freight flows, catalyzing a second consecutive year of growth for the Middle Corridor (Trans-Caspian International Transport Route). The route, which bypasses Russian territory, gained momentum as international shippers sought alternative paths to Europe. Cargo volumes surged 86% year-on-year, confirming the Middle Corridor's growing strategic importance.

However, the increase brought unintended stress across key nodes. Seaports such as Aktau, Kuryk and Alat faced capacity bottlenecks, while border-crossing points such as Tsiteli Khidi (Georgia) and Krasnyi Most (Azerbaijan) were overwhelmed. At Tsiteli Khidi, average crossing times more than doubled owing to throughput mismatches with downstream nodes and a surge in road permits required for transit traffic. To become a viable alternative, the Middle Corridor has to overcome limitations in port infrastructure, interoperability, and coordinated customs regimes.

Railway Expansion as a Strategic Tool

The geopolitical urgency to diversify trade corridors also reignited interest in rail connectivity. The following two significant developments stood out in 2023:

- The 486-km **PRC–Kyrgyz Republic–Uzbekistan railway** was formally agreed upon and financed last year. Representing more than physical infrastructure, it is a long-anticipated pivot for Central Asia to tap into PRC's domestic markets and logistics capacity. The rail line aims to link Central Asia's heartland to PRC without routing through Kazakhstan, thereby easing pressure on northern gateways like Dostyk and Alashankou.
- The **Pakistan–Afghanistan–Uzbekistan railway** project advanced after a trilateral protocol to connect Tashkent to Peshawar via Kabul. When complete, it would open up southern maritime access to Central Asia through Pakistani ports, namely Karachi, Gwadar, and Port Qasim. This new route offers shorter and cheaper alternatives to Tianjin or Black Sea routes.

These projects indicate a strategic rebalancing of regional access by shifting from dependency on Kazakhstan and Russia to a multi-vector approach involving PRC, Pakistan, Türkiye, and the Caspian Sea.

Growing Strain on Legacy Infrastructure

While new corridors were being planned, legacy infrastructure struggled to keep pace with volume spikes and modernization needs. The China–Europe block train network (CRE), with over 17,500 trains and 1.9 million TEUs in 2023, highlighted both success and stress. Key transshipment points such as Dostyk, Altynkol, and Khorgos continued to face delays from change-of-gauge operations and insufficient container handling capacity. Despite progress in digitalization and harmonization, the 24–48 hr transloading delays remained unresolved, underscoring the need for smart logistics systems rather than just physical infrastructure.

At the same time, Zamiin-Uud in Mongolia became emblematic of systemic rail bottlenecks. Designed to handle just seven trains a day, it received heavier traffic from PRC ports capable of dispatching 45. The result was severe congestion, with delivery times lengthening from 14 days to over three months. This logistical gridlock forced many Mongolian shippers to revert to expensive road transport to maintain supply chain continuity, an ironic reversal in modal shift amid a containerization push.

Urban Corridors as Economic Clusters

Another emerging trend is the pivot from linear transport corridors to urban economic corridors, particularly in more densely populated areas. The Shymkent–Tashkent–Khujand Economic Corridor (STKEC) and Almaty–Bishkek Economic Corridor (ABEC) exemplify this shift. These initiatives are no longer just about improving transport; they aim to create regional production hubs and logistics catchment areas, with joint industrial parks, logistics centers, and harmonized regulation to attract trade and investment. ADB's support for the ICIC (International Centre for Industrial Cooperation) near Atameken-Gulistan, and upcoming Trade and Logistics Centers in Khujand, marks a new direction where connectivity serves industrialization, not just transit.

Policy Gaps and Structural Fragility

Despite an ambitious infrastructure pipeline, the year 2023 exposed chronic policy mismatches. Customs harmonization remains patchy. Gauge differences, transloading protocols, and divergent SPS standards continue to constrain seamless trade. A case in point is **Khorgos**, one of the busiest BCPs in the region that still lacks synchronized inspection systems between PRC and Kazakhstan. Similarly, the BTK rail line, an anchor of the Middle Corridor, resumed services in 2024, but still faces challenges at **Akhalkalaki** due to gauge conversion inefficiencies and fragmented digital tracking. Moreover, the lack of digital integration across many BCPs remains a thorny issue. The success of the Pakistan Single Window and Georgian E-clearance initiatives heavily contrast with the manual inspection regimes, plagued by time-consuming and corruption-prone procedures, in places such as Chaman or Torghondi.

3 Policy Monitor

This chapter is a new addition to the CPMM Annual Report 2023 aimed at highlighting existing and new policies and regulations. These are presented at country levels. Each section contains the date of the announcement or event, the public stakeholders involved, and high-level descriptions of the policy or regulation. The range of policies covered in this chapter includes transport, transport facilitation, trade, and trade facilitation policies.[8]

In 2023, member countries of the CAREC program implemented an array of trade, transport, transit, and customs-related reforms. These measures respond to the persistent challenges documented in the CPMM reports, highlighting border delays, high compliance costs, and fragmented procedures as key impediments to regional trade. Encouragingly, many governments have demonstrated a commitment to digitalization, regulatory alignment, and corridor development, all of which are core strategies that reduce the time and cost incurred on the corridors. This chapter synthesizes the notable national policy advancements and assesses their likely impact on cross-border efficiency and regional integration.

Digitalization and Single Window

A striking theme in 2023 has been the proliferation of digital trade platforms. Azerbaijan, Turkmenistan, Pakistan, Kazakhstan, Mongolia, Tajikistan, and Uzbekistan introduced or expanded national single-window systems, port community systems, or customs automation platforms.

Azerbaijan's Digital Trade Hub and the Green Corridor for Trusted Traders are examples of mature digital policy instruments. These systems enable the electronic submission of documents, simplified customs inspections, and accelerated border clearance. Azerbaijan's leadership in digital trade is directly aligned with CPMM indicators (particularly border-crossing time and cost), which these systems are designed to reduce through automation and predictability.

Similarly, Mongolia's Customs Automated Information System (CAIS) and Pakistan's National Single Window (NSW) are pivotal to reducing manual paperwork and enhancing transparency. Mongolia's CAIS replaces an outdated system, offering over 40 online services for traders and businesses. Pakistan's NSW integrates regulatory bodies and enables seamless filing of customs, port, and quarantine documents, a reform likely to decrease both clearance time and informal payments.

Even countries historically cautious in digital reforms have made strides. Turkmenistan's adoption of the Automated System for Customs Data (ASYCUDA) World-based National Trade Single Window demonstrates its intention to modernize. This reform contributed to the country scoring highly in the 2023 UN Global Survey on Digital and Sustainable Trade Facilitation, signaling alignment with international best practices.

Corridor Modernization and Infrastructure-Linked Policy

Physical bottlenecks remain a central concern in CAREC. Border congestion, especially at multimodal hubs or isolated BCPs, stems often not from lack of investment but from inadequate policy alignment. In 2023, several countries took steps to address this through corridor-specific policies.

[8] Refer to Appendix 2 for the list of policies.

Mongolia completed substantial modernization of the Zamiin-Uud border-crossing point (BCP), expanding vehicle gates and upgrading infrastructure. This investment responds directly to delays recorded in the CPMM, where Zamiin-Uud has historically shown high average border-crossing time, especially for PRC–Mongolia trade.

In Georgia, the government pursued the expansion of the Trans-Caspian International Transport Route (TITR), alongside Azerbaijan and Kazakhstan. Policies supporting the TITR include the formation of a multimodal transport operator and a unified tariff structure, eliminating two of Middle Corridor's consistent pain points—tariff inconsistency and poor route coordination between different stakeholders.

The Kyrgyz Republic's enhancement of the Bishkek–Osh corridor and Tajikistan's rehabilitation of the Dushanbe–Khujand road target critical domestic links that feed into CAREC corridors. By improving road quality and reducing travel time, these projects will likely improve corridor speed, a core CPMM trade facilitation indicator.

Notably, Turkmenistan introduced a revised tariff system at the Turkmenbashi Port, aiming to boost throughput and attract cargo from Russia and Central Asia. Coupled with discussions on trust management of port terminals, this marks a policy shift toward commercializing state-managed logistics assets.

Institutional Cooperation and Customs Harmonization

Several CAREC members focused in 2023 on reducing policy fragmentation and harmonizing customs protocols with neighbors. These softer institutional reforms are as vital as infrastructure reforms and often more cost-effective.

A standout case is the **bilateral agreement between Tajikistan and Uzbekistan**, eliminating cargo permit requirements (*dozvols*) for mutual trade. This targeted policy intervention reduces compliance costs, shortens transit time, and lowers risks of cargo damage or informal levies. However, the exclusion of third-country transit highlights persistent gaps in regional harmonization.

Uzbekistan and Turkmenistan also launched a digital transport registration platform for bilateral cargo. This not only enables paperless trade but also strengthens coordination across their customs agencies—an efficiency-enhancing measure aligned with CPMM goals.

The Kyrgyz Republic and Uzbekistan, too, signed customs cooperation protocols focusing on information exchange and financial compliance. These steps complement each country's national reforms and help close the gap between formal rules and on-the-ground implementation.

Trade Incentives and Regulatory Liberalization

Numerous reforms in 2023 aimed at creating a more attractive regulatory environment for international trade. Countries reduced trade barriers, adjusted tax policies, and created incentives for trusted operators.

Uzbekistan reduced VAT from 15% to 12% for imported goods and exempted foreign-investor imports from customs duties. This not only encourages FDI but also lowers trade-related costs and is especially relevant for SMEs and new market entrants. The measures are timely as well, given Uzbekistan's increasing role as a trade hub in the Central-South Asia corridor.

Kazakhstan proposed a "green lane" for perishables at the Kyrgyz Republic border, reflecting a pragmatic response to seasonal congestion. Long border delays for perishable goods erode trade value and cause spoilage. A separate lane with expedited clearance protocols could significantly reduce border time for food shipments, an issue highlighted by CPMM surveys and corridor-specific time-and-cost analysis.

In **PRC**, the creation of the **Xinjiang Pilot Free Trade Zone** and the new **export control regimes** represent both trade facilitation and regulatory tightening. The FTZ offers customs streamlining in remote border areas like Horgos and Kashgar, critical transit points for PRC–CAREC trade. At the same time, stricter controls on strategic minerals suggest China's dual-track approach: liberalizing routine trade while safeguarding sensitive sectors.

The 2023 policy landscape across CAREC countries illustrates a positive trajectory toward trade facilitation and corridor efficiency. Digitalization, regulatory coordination, and infrastructure-driven reform are becoming the norm rather than the exception.

These trends align well with the CPMM's mandate to track and improve cross-border performance. Policies like single windows, green corridors, and tariff liberalization demonstrably contribute to lower border-crossing time and cost, especially when supported by multilateral harmonization and stakeholder engagement. For instance, digital reforms in Azerbaijan and Pakistan reduce documentation handling time, while Tajik–Uzbek permit removal slashes procedural delays and improves delivery reliability.

Looking ahead, sustained policy momentum and cross-border cooperation will be crucial to converting these reforms into durable efficiency gains. By aligning national strategies with CPMM insights, CAREC countries can advance not only physical connectivity, but also institutional and procedural integration, making the dream of a unified CAREC trading bloc a tangible reality.

4 BCP Monitor

This chapter, another new addition to this annual report, examines BCP performance, decomposed by road and rail transport, and further delineated by the direction of traffic (inbound or outbound). The most problematic BCPs were identified and are listed here.

Road BCPs

In 2023, the most time-consuming BCP in the outbound direction was Tsiteli Khidi, averaging 54.9 hr. It is a high-traffic BCP used for transporting goods between the Caucasus and Central Asia. Georgian and Turkish drivers route shipments here but require road permits to enter Azerbaijan and Kazakhstan. The long border-crossing time occurs for two reasons, the first being the throughput mismatch between Tsiteli Khidi and Krasnyi Most. Georgia Customs have adopted risk-based management and designed the layout, facilities and processes to accommodate a one-stop shop. Drivers spent 5–10 min in clearance, where shipping documents are submitted to the customs officer at eye level. Unfortunately, the throughput rate at the Azerbaijani side requires more time and cleared trucks on the Georgia side cannot be released until the Azerbaijani side clear the trucks inside Krasyni Most. The second issue is the time taken to apply and obtain the road permits to enter Azerbaijan and Kazakhstan. The shortage of road permits, caused by the surge in transit traffic after the Ukraine War began in February 2022, results in a longer waiting time to obtain the permits. Thus, drivers have to wait on the Tsiteli Khidi side until they receive the permit.

Khorgos was the second most time-consuming BCP, averaging 51.4 hr. This is a busy land BCP with dense freight traffic serving bilateral goods movement between PRC and Kazakhstan, as well as transit traffic for Chinese exports to Central Asia. Chinese trucks are generally prohibited to operate in Central Asia, forcing the trucks to unload the goods in temporary warehouses in Khorgos and wait for the Kazakhstan trucks to collect the goods on the Chinese side. The waiting time is the main reason for the delays.

Chaman surfaced as the third most time-consuming BCP, with 48.3 hr. Chaman and Torkham are the two main BCPs that serve the Afghan Transit Trade, where goods move from Karachi to these BCPs before terminating in Kabul or Kandahar. Unlike Tsiteli Khidi and Khorgos, the main delay at Chaman (and Torkham) was due to customs inspection. Generally, there are high incidences of full physical examination and cumbersome paperwork. ADB has financed a modernization initiative under Regional Improvement in Border Services (RIBS) at Chaman, and CPMM would monitor to see if there is significant improvement once the modernization is completed.

The remaining BCPs too continue to be time-consuming owing to long waiting time, customs controls, or loading and unloading delays. Sarpi-Sarp and Krasnyi Most are affected by the traffic diverted owing to the Ukraine War. Afghanistan's BCPs, Shirkhan Bandar and Torghondi, are generally time-consuming due to weak institutional capacity and under-funded infrastructure.

Dostyk was the most time-consuming BCP for inbound direction, with 22.2 hr. Nur Zholy was ranked third, with 16.5 hr. Both of them are in Kazakhstan, opposite PRC, and serve as important nodes for bilateral and transit trade. Long queues were the prime reason for the delays. There is a mismatch in throughput as the infrastructure and materials handling equipment are more limited here than in the Chinese BCPs.

With 19 hr on average to complete border-crossing, Torkham in Afghanistan was placed second. A perennially time-consuming BCP, it is a beneficiary under ADB Regional Improvement in Border Services (RIBS). Although the plan is to expand Torkham to six lanes on the Pakistan side, the Afghanistan side

Table 4.1: The Most Time-Consuming Road BCPs, Outbound (hours)

BCP	Country	Corridor	Mean	Median
Tsiteli Khidi	GEO	2	54.9	48.2
Khorgos	PRC	1	51.4	31.7
Chaman	PAK	5,6	48.3	53.1
Alashankou	PRC	1,2	37.2	27.8
Torkham	PAK	5,6	30.0	27.2
Sarp	TUR	2	17.4	18.4
Krasnyi Most	AZE	2	16.5	9.2
Sarpi	GEO	2	16.3	16.3
Shirkhan Bandar	AFG	2,5,6	14.2	14.1
Torghondi	AFG	2,6	11.3	11.2

AFG = Afghanistan, AZE = Azerbaijan, GEO = Georgia, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MON = Mongolia, PAK = Pakistan, PRC = People's Republic of China, TAJ = Tajikistan, TUR = Türkiye, TKM = Turkmenistan, UZB = Uzbekistan.
Source: CAREC Institute.

Table 4.2: The Most Time-Consuming Road BCPs, Inbound (hours)

BCP	Country	Corridor	Mean	Median
Dostyk	KAZ	1,2	22.2	12.8
Torkham	AFG	5,6	19.0	12.1
Nur Zholy	KAZ	1	16.5	15.9
Spin Buldak	AFG	5,6	10.7	8.1
Yarant	MON	4	7.1	2.6
Panji Poyon	TAJ	2,5,6	7.1	6.2
Fotehobod	TAJ	2,3,6	6.3	6.3
Farap	TKM	2,3	5.5	5.5
Krasnyi Most	AZE	2	5.2	4.7
Dautota	UZB	2,6	4.5	6.3

AFG = Afghanistan, AZE = Azerbaijan, GEO = Georgia, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MON = Mongolia, PAK = Pakistan, PRC = People's Republic of China, TAJ = Tajikistan, TUR = Türkiye, TKM = Turkmenistan, UZB = Uzbekistan.
Source: CAREC Institute.

remains limited to one lane, which signals a major concern as the throughput mismatch could lead to sub-optimal performance.

The BCPs located in Afghanistan, Mongolia and Tajikistan require investment to modernize their infrastructure and expand capacity. Finally, the average durations at Farap, Krasyni Most and Dautota have reduced from past levels.

In 2023, the top three costliest BCPs in the outbound direction were Alashankou, Khorgos, and Takeshikent, all PRC BCPs. The dense traffic through Alashankou and Khorgos is a factor that increased border fees. For Takeshikent BCP, which handles many coal shipments from Mongolia, the costs originated from loading and unloading fees. Costs increased for Shirkhan Bandar and Torghondi (both in Afghanistan) owing to the need to perform transloading operations because of Afghan trucks being prohibited from crossing the border. At Peshawar, customs controls fee was the main cost driver, while at Tsiteli Khidi, the main expense was the payment for road permits and road tolls.

The costliest BCPs for inbound traffic tend to be the adjacent nodes to the costly BCPs identified for the outbound direction. Dostyk is opposite Alashankou, and Nur Zholy is opposite Khorgos. Customs controls fee was the main cost driver. Irkeshtam is a busy BCP in Kyrgyz Republic serving the transit traffic

Table 4.3: The Costliest Road BCPs, Outbound ($)

BCP	Country	Corridor	Mean	Median
Alashankou	PRC	1,2	821	821
Khorgos	PRC	1	723	723
Takeshikent	PRC	4	416	416
Shirkhan Bandar	AFG	2,5,6	295	295
Torghondi	AFG	2,6	272	272
Peshawar	PAK	5,6	270	270
Tsiteli Khidi	GEO	2	160	160
Hairatan	AFG	3,6	141	141
Saryasia	UZB	3	122	122
Kuryk	KAZ	2	86	86

AFG = Afghanistan, AZE = Azerbaijan, GEO = Georgia, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MON = Mongolia, PAK = Pakistan, PRC = People's Republic of China, TAJ = Tajikistan, TUR = Türkiye, TKM = Turkmenistan, UZB = Uzbekistan.
Source: CAREC Institute.

Table 4.4: The Costliest Road BCPs, Inbound ($)

BCP	Country	Corridor	Mean	Median
Dostyk	KAZ	1,2	601	600
Irkeshtam	KGZ	2,5	583	950
Nur Zholy	KAZ	1	319	320
Yarant	MON	4	199	199
Panji Poyon	TAJ	2,5,6	185	163
Fotehobod	TAJ	2,3,6	185	185
Torkham	AFG	5,6	183	159
Kuryk	KAZ	2	157	148
Sarpi	GEO	2	100	100
Tsiteli Khidi	GEO	2	97	133

AFG = Afghanistan, AZE = Azerbaijan, GEO = Georgia, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MON = Mongolia, PAK = Pakistan, PRC = People's Republic of China, TAJ = Tajikistan, TUR = Türkiye, TKM = Turkmenistan, UZB = Uzbekistan.
Source: CAREC Institute.

of Chinese exports to Uzbekistan and Turkmenistan. Transit fee per truck through Irkeshtam was the highest in 2023.

Operations at Yarant, Panjo Poyon, Fotehobod and Torkham were costly due to the customs control fee. Kuryk, Sarpi and Tsiteli Khidi serve the Middle Corridor and the surge in transit traffic pushed up border-crossing expenses. The fees at Kuryk covered only the land operations and did not include sea-related expenses (e.g., fare for crossing the Caspian Sea).

Rail BCPs

Alashankou and Khorgos, two high-traffic BCP that serve rail freight traffic, topped the list of the most time-consuming BCPs in 2023. However, in terms of the magnitude of the time taken, the adjacent inbound BCPs showed greater delays. While the outbound stations in PRC showed the average duration at 12.5 hr–17.5 hr, the inbound stations in Kazakhstan showed 74.3 hr–76.9 hr. The differences in rail gauge standards led to the need for changing gauge operations at the receiving stations, which caused the longer timings at the Kazakhstan BCPs.

Table 4.5: The Most Time-Consuming Rail BCPs, Outbound (hours)

BCP	Country	Corridor	Mean	Median
Alashankou	PRC	1,2	17.5	19.5
Khorgos	PRC	1	12.5	6.5
Sarygash	KAZ	3,6	11.1	13.3
Naushki	RUS	4	6.5	2.5
Zamiin-Uud	MON	4	6.3	1.8
Erenhot	PRC	4	5.3	2.5
Turksib	KAZ	1,3	4.9	1.7
Torghondi	AFG	2,6	4.0	4.0
Aktau	KAZ	2	3.7	3.7

AFG = Afghanistan, AZE = Azerbaijan, GEO = Georgia, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MON = Mongolia, PAK = Pakistan, PRC = People's Republic of China, TAJ = Tajikistan, TUR = Türkiye, TKM = Turkmenistan, UZB = Uzbekistan.
Source: CAREC Institute.

Table 4.6: The Most Time-Consuming Rail BCPs, Inbound (hours)

BCP	Country	Corridor	Mean	Median
Altynkol	KAZ	1	76.9	66.0
Dostyk	KAZ	1,2	74.3	73.1
Zamiin-Uud	MON	4	30.6	19.7
Erenhot	PRC	4	16.3	11.9
Termez	UZB	3,6	8.0	8.1
Sukhbaatar	MON	4	5.9	1.8
Keles	UZB	3,6	5.3	3.6
Serkhet Abad	TKM	2,6	3.9	3.9
Turksib	KGZ	1,3	1.3	1.0

AZE = Azerbaijan, GEO = Georgia, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MON = Mongolia, PAK = Pakistan, PRC = People's Republic of China, TAJ = Tajikistan, TUR = Türkiye, TKM = Turkmenistan, UZB = Uzbekistan.
Source: CAREC Institute.

Comparing the average border-crossing cost between road and rail transport, the former showed a higher level, substantiating the common knowledge that rail transport in theory should be cheaper than road transport. For outbound traffic, Torghondi BCP was the most expensive at $225, followed by Aktau ($220), Sarygash ($125), and Naushki ($55).

The inbound stations generally showed a higher cost, driven by the need to complete change gauge operations. Not surprisingly, Dostyk and Altynkol emerged as the most expensive BCPs, at $378 and $285 respectively.

Table 4.7: The Costliest Rail BCPs, Outbound ($)

BCP	Country	Corridor	Mean	Median
Torghondi	AFG	2,6	225	233
Aktau	KAZ	2	220	220
Sarygash	KAZ	3,6	125	125
Naushki	RUS	4	55	50

AFG = Afghanistan, AZE = Azerbaijan, GEO = Georgia, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MON = Mongolia, PAK = Pakistan, PRC = People's Republic of China, TAJ = Tajikistan, TUR = Türkiye, TKM = Turkmenistan, UZB = Uzbekistan.
Source: CAREC Institute.

Table 4.8: The Costliest Rail BCPs, Inbound ($)

BCP	Country	Corridor	Mean	Median
Dostyk	KAZ	1,2	378	425
Altynkol	KAZ	2,5	285	425
Keles	UZB	1	150	150
Termez	UZB	4	121	122
Erenhot	PRC	2,5,6	91	127
Serkhet Abad	TKM	2,3,6	81	81
Zamiin-Uud	MON	5,6	38	29
Sukhbaatar	MON	2	10	–

AZE = Azerbaijan, GEO = Georgia, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MON = Mongolia, PAK = Pakistan, PRC = People's Republic of China, TAJ = Tajikistan, TUR = Türkiye, TKM = Turkmenistan, UZB = Uzbekistan.
Source: CAREC Institute.

5 Corridor Performance

CPMM samples comprise commercial shipments moving through Central Asia. Although most of these shipments originate or end in CAREC countries, some origins and destinations are located outside the region, such as the EU, Iran, the Russian Federation, and Türkiye.

Data Samples

A total of 2,420 samples were collected in 2023. Eleven partners (associations) participated in CPMM. These associations come from nine countries. There were no CPMM partners in Azerbaijan and Turkmenistan. The performance of these two countries was analyzed by transit shipments from other CPMM partners that shipped through these two countries.

Table 5.1: CPMM Partners

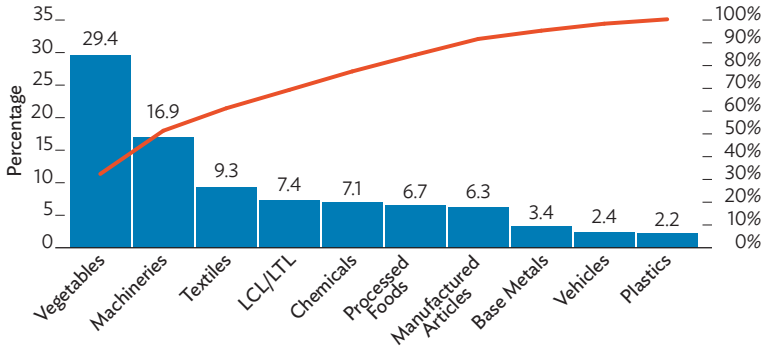
	Country	Association	Abbreviation
1	Afghanistan	Association of Afghanistan Freight Forwarding Companies	AAFFCO
2	PRC	Xinjiang Uygur Autonomous Region Logistics Association	XULA
3	Georgia	Georgia International Road Carriers Association	GIRCA
4	Kazakhstan	Association of National Freight Forwarders of the Republic of Kazakhstan	KFFA
5	Kyrgyz Republic	Freight Operators Association	FOA
6	Mongolia	Mongolia Chamber of Commerce and Industry	MNCCI
7		National Road Transport Association of Mongolia	NARTAM
8	Pakistan	Pakistan International Freight Forwarders Association	PIFFA
9	Tajikistan	Association of Road Transport Operators of Republic of Tajikistan	ABBAT
10	Uzbekistan	Association for Development of Business Logistics	ADBL
11		Association of International Road Carriers of Uzbekistan	AIRCUZ

Source: Asian Development Bank.

Shipments studied in CPMM showed a wide variety of merchandise being transported. The top 10 items accounted for 91% of all merchandise. Vegetables was the top-ranking category (29.4%), followed by machineries (16.9%) and textiles (9.3%). LCL (less than a container load) or LTL (less than a truck load) represented assortment items, where the train or truck carried mixed goods, unlike the first three categories where only one product type was carried. Chemicals (7.1%), processed foods (6.7%), manufactured items (5.3%), base metals (3.4%), vehicles (2.4%) and plastics (2.2%) completed the top 10 products list.

CPMM samples contained mainly road transport, contributing two-thirds of all samples. Rail transport contributed another 20%. Multimodal shipments formed the remaining 13%. Perishables shipments accounted for 31% of all shipments. These were mainly sent on road transport. Shipments that used TIR accounted for one-third of all road samples.

Figure 5.1: The Most Common Items Transported in CPMM Samples in 2023



Source: CAREC Institute.

Figure 5.2: Transport Modes

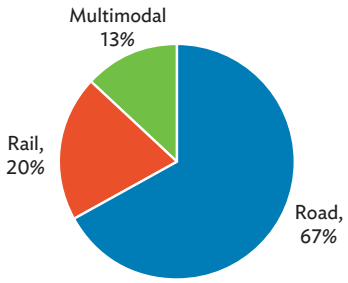


Figure 5.3: Perishables

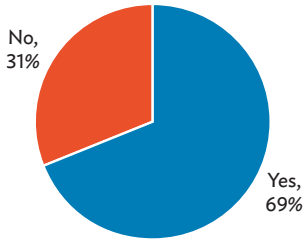
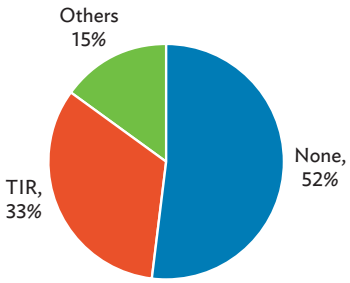


Figure 5.4: Transit Schemes



Source: CAREC Institute.

Road Transport

Road transport in terms of TFIs reported mixed performance in 2023 over the previous year. Average border-crossing time increased 11% to 11 hr, while average border-crossing cost decreased 37% to $131. Total shipment cost decreased 14% to $814. Both SWOD and SWD rose in 2023.

TFI1 (road) reported an increase from 9.9 hr (2022) to 11.0 hr (2023). While the duration at Corridor 1 decreased, those at Corridor 2 and 5 increased, pushing up the average TFI1.

- TFI1 for Corridor 2 rose from 7.5 hr to 10.4 hr. In the period 2022 to 2023, **Tsiteli Khidi**'s duration rose from 24.2 hr to 54.9 hr. **Krasnyi Most**'s duration increased from 13.6 hr to 16.5 hr.
- TFI1 at Corridor 5 rose from 18 hr to 22.9 hr due to the longer time taken at **Torkham** and **Chaman–Spin Buldak**. Torkham (Pakistan) reported an increase in time from 24.2 hr to 30.0 hr, Chaman from 54.0 hr to 48.3 hr and Spin Buldak from 7.6 hr to 10.7 hr.

Figure 5.5: TFI1 (Road)

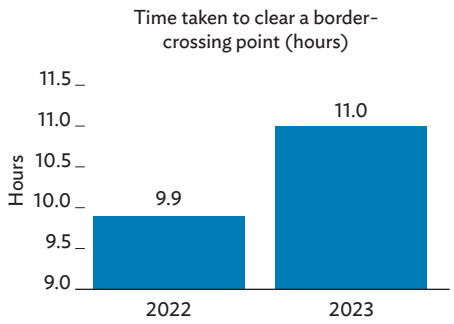
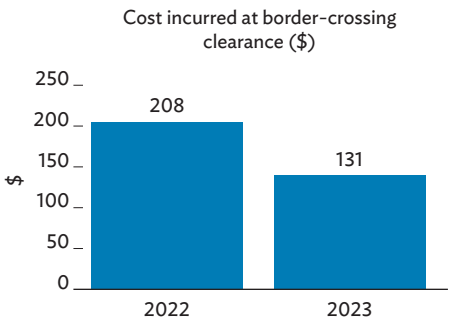


Figure 5.6: TFI2 (Road)



Source: CAREC Institute.

TFI2 (road) reported a decrease from $208 (2022) to $131 (2023). This was led by the drop in the fee size at Corridor 1 from $1,107 to $347.

- **Khorgos** was the main reason for the cost reduction. The fee size decreased from $1,861 (2022) to $723 (2023) owing to lower loading and unloading costs. The relaxation of the strict epidemiological tests and the cargo transfer instituted in 2020 to 2022 to combat the COVID-19 pandemic contributed to the reduced cost of border-crossing.

TFI3 (road) reported a decrease from $945 (2022) to $814 (2023). This was led by the drop in the transport rate at Corridor 1 (from $2,387 to $1,517) and Corridor 4 (from $1,566 to $1,250).

- **Corridor 1b** showed the largest fee drop from $3,362 to $1,536. This implied that the road freight cost in the section from Urumqi to Almaty has decreased in 2023.
- **Corridor 4a** also showed a notable drop, from $2,732 to $1,292 in terms of the coal shipments from Mongolia's western region to PRC, crossing Yarant–Takeshikent BCPs.
- **Corridor 4b** also showed some cost reduction, from $1,469 to $1,248. This corridor is a busy section of freight movements between Tianjin to Ulaanbaatar.

Figure 5.7: TFI3 (Road)

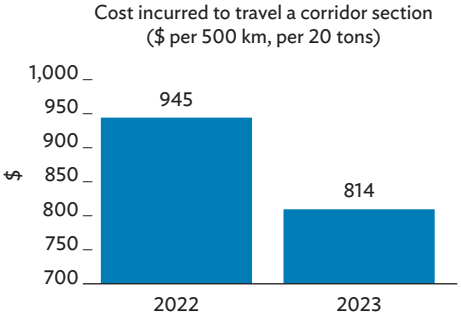
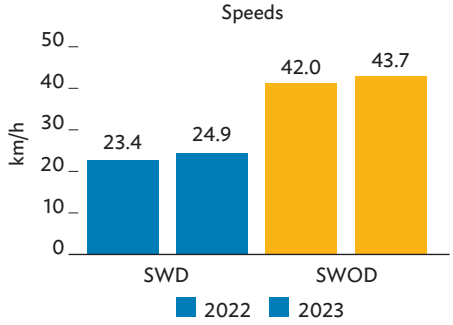


Figure 5.8: TFI4 (Road)



Source: CAREC Institute.

SWOD and SWD reported marginal improvement. In the period 2022 to 2023, SWOD increased from 42 km/h to 43.7 km/h, while SWD rose from 23.4 km/h to 24.9 km/h.

- For SWOD, **Corridor 3** showed the best improvement, rising from 35.9 km/h to 55.0 km/h. **Corridor 1** registered the fastest SWOD at 62 km/h, and **Corridor 5** showed the slowest at 34.4 km/h.
- For SWD, **Corridor 3 and 4** showed the best improvement. **Corridor 3** moved up from 25.4 km/h to 37.6 km/h, while **Corridor 4** from 27.6 km/h in 2022 to 36.5 km/h in 2023.

Rail Transport

Rail transport TFIs reported mixed performance in 2023 over the previous year. Average border-crossing time decreased 28% to 29 hr, while average border-crossing cost increased 5% to $225. Total shipment cost increased 14% to $916. SWOD decreased while SWD remained the same.

Figure 5.9: TFI1 (Rail)

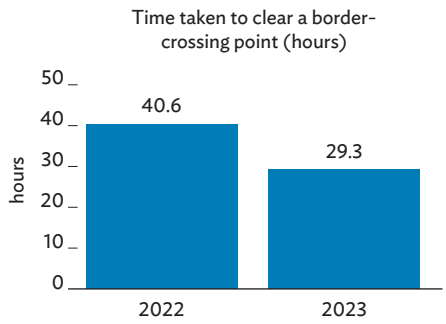
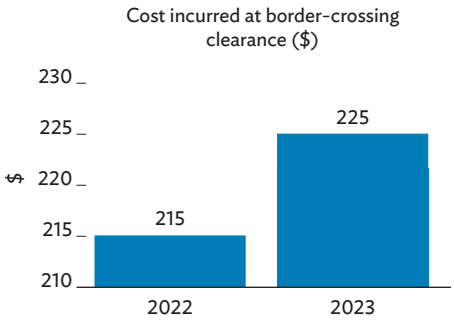


Figure 5.10: TFI2 (Rail)



Source: CAREC Institute.

TFI1 (rail) reported a decrease from 40.5 hr (2022) to 29.3 hr (2023). Both Corridors 1 and 4 showed improvement. The duration at Corridor 1 decreased from 52.1 hr (2022) to 43.0 hr (2023).

- This was led by the reduction of border-crossing time at Alashankou (30.5 hr to 17.5 hr) and Khorgos (34.8 hr to 12.5 hr) year on year.
- The duration at **Corridor 4** decreased. This was an improvement due to Erenhot (44.4 hr to 5.3 hr) and Zamiin-Uud (20.1 hr to 6.3 hr) in the outbound direction.
- In the inbound direction, Erenhot also shrunk from 54.9 hr to 16.3 hr).
- However, Zamiin-Uud increased from 7.9 hr to 30.6 hr, as the rail transshipment center worked under strained capacity. A worrisome observation was that Dostyk and Altynkol still reported elevated border-crossing time in 2022 and 2023.

TFI2 (rail) reported similar levels, from $215 (2022) to $225 (2023).

- The high cost mainly accrued from gauge change operations at Dostyk and Altynkol.
- The cost of correcting documentation errors at Dostyk was considerable, indicating that such errors should be investigated by the authorities and eliminated.

Figure 5.11: TFI3 (Rail)

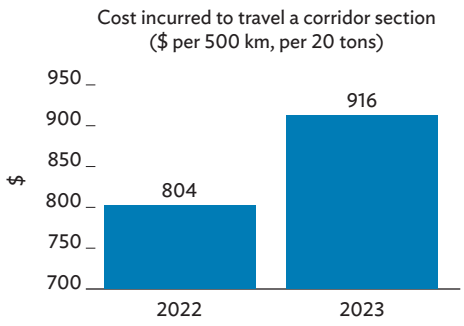
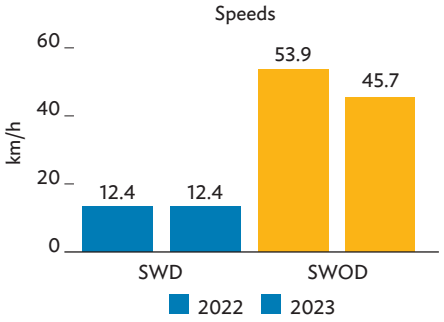


Figure 5.10: TFI4 (Road)



Source: CAREC Institute.

TFI3 (rail) reported an increase from $804 in 2022 to $916, led by the surge in the transport rate at Corridor 4 (from $454 to $963)

- **Corridor 4b** was responsible for the surge in the transport rate. Rail freight was driven upward by the increase in rail tariffs to ship containerized goods between Tianjin and Ulaanbaatar.
- Containers bound for Ulaanbaatar remained stuck in Tianjin seaport for 3–4 months, causing a congestion problem. This was mentioned in Annual Report 2022, and remained unresolved in 2023, resulting in higher rail freight tariffs as import demand for container freight picked up.
- This demand, unfortunately, can be relatively inelastic. Mongolia does not have many options for cross-border trade and relies heavily on the Tianjin seaport, its gateway for both imports and exports.

SWOD declined from 53.9 km/h to 45.7 km/h in 2023, but SWD remained the same at 12.4 km/h.

- **Corridor 4** was responsible for the reduced speed under SWOD, which showed a drop from 16 km/h to 10.5 km/h.
- For SWD, the corridors demonstrated similar speeds in both years.
- Relieving bottlenecks and congestion on the Tianjin to Ulaanbaatar route (**Corridor 4b**) is essential to increasing speeds.

Conclusion

The 2023 CPMM findings underscore the persistent importance of corridor performance monitoring in the CAREC region, especially as member countries seek to recover from recent global disruptions and strengthen regional connectivity. The analysis in this chapter highlights both the progress and the persistent challenges in cross-border trade and transport and provides two key insights.

First, while average border-crossing times have improved slightly, significant disparities among corridors and modes remain. The longest delays continued to occur at specific BCPs due to procedural inefficiencies, lack of digitalization, and limited infrastructure capacity. Delays affecting container traffic, especially, reveal systemic bottlenecks in the way of seamless multimodal integration (e.g., Corridor 4b).

Second, the cost indicators present a mixed picture. Despite a general stabilization in transport and border crossing costs in 2023 compared to previous years, inflationary pressures and currency volatility still affected affordability and predictability—especially for Central Asian shippers engaged in regional trade. Road transport costs remained relatively stable, while rail costs showed a notable increase.

In summary, the CPMM 2023 analysis calls for a renewed commitment from CAREC countries to prioritize trade facilitation reforms, invest in smart logistics systems, and enhance regional cooperation. Progress is evident, but sustained improvement will require both strategic investment and policy coordination. These efforts will be essential to fostering a more resilient, efficient, and competitive CAREC transport network.

6 Country Updates

This chapter presents an analytical review of transport and trade facilitation performance in each CAREC country, using the CPMM indicators TFI1 to TFI3 and TFI4 speed performance (SWD and SWOD). The analysis also provides insights into evolving trade logistics efficiency in light of the external regional dynamics and domestic infrastructure developments in each country.

Azerbaijan

Azerbaijan plays a central role in the Middle Corridor (TITR), linking Central Asia to the Caucasus and onward to Europe via the Caspian Sea. Its multimodal infrastructure includes a 20,000-km road network, a growing container-capable rail system, and the modern Alat Port, which—alongside Baku Port—handled over 70% of national container traffic in 2023. With over 17 mt of transit cargo moved in 2023, Azerbaijan is positioning itself as a key Eurasian logistics hub.

The country has the advantage of having the Alat Port on the Caspian Sea, facilitating key transit route linking the Caucasus to Europe and Central Asia. However, despite significant investments in port and rail infrastructure, procedural inefficiencies at the Krasny Most BCP undermine competitiveness.

Recent trends show growing outbound efficiency but rising inbound border-crossing times and costs, thereby reversing some earlier gains. These asymmetries are reflected in the TFIs: while outbound TFI1 and TFI2 improved, inbound delays and congestion reduced speed and increased costs. Coordinated reforms across border agencies and improved interoperability with Georgian counterparts remain essential to sustaining Azerbaijan's role as a reliable transit gateway.

Fluctuating Performance

Table 6.1: Trade Facilitation Indicators for Azerbaijan (2021–2023)

Trade Facilitation Indicators		Road Transport			
		2021	2022	2023	% change
TFI1	Time taken to clear a border-crossing point (hour)	5.8	4.0	4.3	6.3%
	Outbound	*7.5*	*5.3*	*4.4*	*–17.2%*
	Inbound	*3.6*	*2.5*	*4.1*	*66.8%*
TFI2	Cost incurred at border-crossing clearance ($)	106	52	56	5.9%
	Outbound	*100*	*42*	*46*	*9.0%*
	Inbound	*112*	*63*	*67*	*5.7%*
TFI3	Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo)	27	50	58	15.4%
SWD	Speed to travel on CAREC Corridors (km/h)	39.1	28.9	22.0	–23.9%
SWOD	Speed without Delay (km/h)	52.3	53.3	50.0	–6.5%

Source: CAREC Institute.

Azerbaijan experienced a fluctuating TFI1, after a notable improvement from 5.8 hr in 2021 to 4.0 hr in 2022 (a 30.6% reduction). In 2023, the average time increased to 4.3 hr (+6.3%), mainly because of increased inbound clearance time, which jumped 66.8% from 2.5 hr in 2022 to 4.1 hr in 2023. By contrast, outbound clearance continued to improve, declining to 4.4 hr (a 17.2% reduction). The overall increase in inbound processing time is attributed to internal inefficiency related to border-crossing procedures.

Box 6.1: Inside the Krasyni Most BCP

According to the Georgian Revenue Service, the Krasny Most BCP has been officially renamed Kırmızı Körpü. However, most drivers surveyed were unaware of this change. In practice, drivers, shippers, and consignees continue to refer to the BCP by its more familiar names—"Red Bridge" or "Krasny Most" (Russian). For consistency and clarity, this report will continue using the name "Krasny Most."

Reasons for the Slower Operations at Krasny Most (Azerbaijan) Compared to Tsiteli Khidi (Georgia)

1. **Infrastructure Design of the Service Counter**

   At the Tsiteli Khidi BCP, the infrastructure is designed to facilitate efficient processing by enabling drivers to remain inside their vehicles. An elevated service counter allows documents to be handed directly to customs officers without requiring drivers to disembark. By contrast, at Krasny Most, drivers are required to park their vehicles, exit the cabin, and queue at the service counter to complete document processing. This additional procedural step introduces avoidable delays ranging from several minutes to hours. During peak periods, particularly in August and September, these delays are magnified, as high traffic volumes lead to bottlenecks and prolonged waiting times.

2. **Absence of an Integrated One-Stop-Shop Mechanism**

   The one-stop-shop model is officially promoted by Azerbaijani authorities, but its implementation at Krasny Most is limited. Drivers must navigate a sequential process involving multiple agencies, including immigration, transport, customs, and SPS inspections. This fragmented approach is in sharp contrast to the Tsiteli Khidi operational model, where customs officers are authorized to conduct multiple control functions, including immigration procedures. Such an integration streamlines processing and enhances overall efficiency at the Georgian BCP.

3. **Redundant Exit Scanning Procedure**

   Upon completion of all customs formalities at Krasny Most, drivers must return to their vehicles and proceed to the exit gate, where customs officers scan a barcode on the exit ticket. This step is redundant, as vehicle control procedures are subsequently repeated by traffic police stationed beyond the customs zone. This duplication of control measures is an additional layer of delay and undermines the efficiency of the overall border-crossing process.

Source: CAREC Institute.

TFI2 values follow a similar trend. Between 2021 and 2022, costs decreased by over 50% from $106 to $52. However, in 2023, the cost increased by 5.9% to $56. This uptick was consistent for both outbound (+9.0%) and inbound (+5.7%) traffic. The increase is attributed to rising service fees, inflationary effects, and potential cost recovery adjustments following post-COVID-19 fiscal tightening at border agencies. Compared to the 2021 levels, however, the costs remained significantly lower, suggesting that Azerbaijan retained some gains from earlier trade facilitation reforms.

TFI3 data highlight a consistent rise in corridor travel costs. The cost per 500 km for a 20-ton cargo increased from $27 in 2021 to $50 in 2022, and further to $58 in 2023 (+15.4%). While this indicates rising transport costs, it also originates from higher fuel prices, freight demand imbalance, limited truck fleet availability, or supply chain bottlenecks. External cost pressures, including global logistics inflation and regional trade realignments due to the war in Ukraine, likely influenced these trends.

Speed performance deteriorated sharply in 2023. SWD dropped from 28.9 km/h in 2022 to just 22.0 km/h in 2023 (–23.9%). This decline signals worsening travel efficiency, due to port congestion, roadworks, and suboptimal coordination among logistics stakeholders. SWOD also declined, from 53.3 km/h to 50.0 km/h (–6.5%), indicating that even when delays are excluded, underlying infrastructure or operational inefficiencies are contributing to slower transport.

Georgia

Georgia is a vital land and maritime transit country in the Middle Corridor (TITR), connecting Central Asia to Europe via the East–West Highway and Poti and Batumi ports. Road transport dominates, with over 60% of transit trade routed through the E-60/E-70 corridor. The BTK railway enhances rail connectivity to Türkiye, though its limited utilization stems from cargo imbalances and infrastructure constraints.

In 2023, Poti Port processed nearly 600,000 TEUs, while plans are underway to expand capacity to 1.1 million TEUs by 2026.[9] However, the Tsiteli Khidi BCP is reliant on the throughput capacity of the Krasyni Most BCP, and the slower rate at the latter affected the both of their overall border-crossing performance.

Surging outbound traffic, driven by rerouting from the Northern Corridor, overwhelmed Georgia's infrastructure, sharply increasing border-crossing times (TFI1) and clearance costs (TFI2). Speeds (SWD/SWOD) plummeted in 2023, with SWD dropping to 9.1 km/h, highlighting systemic congestion and inadequate corridor coordination.

Georgia is active in aligning with EU standards and implement customs digitalization. The expansion of the ports' capacity and addressing the border delays at Tsiteli Khidi and Krasyni Most are critical for the country to fulfill its strategic potential as the Black Sea gateway for CAREC trade.

A General Decline

Table 6.2: Trade Facilitation Indicators for Georgia (2021–2023)

Trade Facilitation Indicators		Road Transport			
		2021	2022	2023	% change
TFI1	Time taken to clear a border-crossing point (hour)	3.6	18.0	34.8	93.3%
	Outbound	*4.2*	*23.3*	*45.3*	*94.4%*
	Inbound	*1.3*	*1.6*	*1.6*	*-0.3%*
TFI2	Cost incurred at border-crossing clearance ($)	49	83	121	45.0%
	Outbound	*37*	*81*	*123*	*51.4%*
	Inbound	*94*	*94*	*114*	*21.4%*
TFI3	Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo)	562	1,485	1,371	-7.6%
SWD	Speed to travel on CAREC Corridors (km/h)	25.0	14.0	9.1	-35.1%
SWOD	Speed without Delay (km/h)	32.6	40.6	35.2	-13.4%

Source: CAREC Institute.

Georgia experienced a sharp and concerning deterioration in border clearance times in 2023. The average time to clear a BCP rose from 3.6 hr in 2021 to 18.0 hr in 2022 and escalated further to 34.8 hr in 2023—an overall increase of 93.3% year-on-year. The sharpest rise was in outbound clearance time, from 4.2 hr in 2021 to 23.3 hr in 2022 and then doubling again to 45.3 hr in 2023 (+94.4%). By contrast, inbound clearance times remained relatively stable at around 1.5 hr across the three years.

Such prolonged outbound delays originated from severe bottlenecks at the Krasyni Most BCP in Azerbaijan, and were compounded by limited processing capacity, increased transit cargo, and inefficient coordination among border agencies. Traffic rerouting from the Northern Corridor to the Middle Corridor following geopolitical disruptions (notably, the Russia–Ukraine war) also intensified traffic flows through Georgia, adding pressure to border infrastructure and operations. (For more details, refer to the Box Story on Krasyni Most in the country section on Azerbaijan).

[9] Ports of Europe, https://www.portseurope.com/georgias-port-of-poti-handled-66-more-containers-in-2023/.

Corresponding with the rising delays, border clearance costs surged significantly. TFI2 increased from $49 in 2021 to $83 in 2022 and soared further to $121 in 2023—a 45% year-on-year increase. Outbound clearance costs witnessed the steepest climb, from $37 in 2021 to $81 in 2022 and then $123 in 2023 (+51.4%). Inbound costs also rose from $94 to $114 (21.4%).

The border fees originated from the documentary procedures incurred at Krasyni Most. Georgian and Turkish drivers mainly use this BCP for onward shipment to Central Asia, and pay for the road permit into Azerbaijan and Kazakhstan and other transit fees. For shipment of large or irregular shaped items (common for infrastructure projects such as irrigation dams and power stations), the drivers need to have a special permit and sometimes even require customs escort. As such, these are not strictly border fees but transit fees, which increased in 2023.

TFI3 data points to persistently high transport costs in Georgia. From $562 in 2021, costs spiked to $1,485 in 2022 but moderated slightly to $1,371 in 2023, reflecting a 7.6% decrease. Although this is a positive shift, the figures still represent extremely high corridor costs relative to regional averages. Such elevated costs highlight inefficiencies in the trucking sector, high fuel and maintenance costs, and insufficient infrastructure along corridor routes. Port congestion and uncoordinated multimodal linkages (especially at the Alat and Kuryk ports) exacerbated the situation. Increased cargo traffic following global supply chain disruptions may have strained existing infrastructure and contributed to price hikes.

Speed performance in Georgia deteriorated sharply as well. SWD declined from 25.0 km/h in 2021 to just 9.1 km/h in 2023—a 64% overall decline over three years and a 35% drop from 2022. This suggests worsening congestion, insufficient road capacity, and inadequate scheduling or coordination mechanisms. SWOD also dropped from 40.6 km/h in 2022 to 35.2 km/h in 2023, reflecting a 13.4% decline.

Kazakhstan

Kazakhstan is a core transit country in the CAREC region, anchoring the TITR, Northern Corridor, and other east–west and north–south trade routes. With a 96,000-km road network and over 16,000 km of railways, it is the region's most extensive overland transport system. Seaports at Aktau and Kuryk on the Caspian Sea support maritime links to Azerbaijan, while major investments are expanding multimodal hubs and container terminals.

The country transported 980 mt of goods in 2023, of which 416 mt of cargo was transported via rail and the bulk of the remaining by road.[10] Besides the huge land mass that serves transit traffic, Kazakhstan also leverages its Caspian Sea ports—Aktau and Kuryk—for trade. These ports have a combined capacity of 21 mt per year, handling oil, grain, and general cargo. The merchant fleet includes 20 vessels, with tankers operating in the Caspian, Black, and Mediterranean seas. Kazakhstan is expanding its maritime capacity, with dredging projects underway at Aktau and plans to increase its port throughput to 32 mt annually by 2029.

In 2023, Kazakhstan showed a divergent pattern between road and rail transport. Road transport performance improved significantly with steep reductions in clearance time and cost, and TFI3 for road fell by 31%. By contrast, rail TFIs deteriorated, with longer delays and rising costs, especially at key BCPs such as Dostyk and Altynkol, where gauge change operations and documentation issues persist. To consolidate its position as a regional logistics hub, Kazakhstan is aggressively modernizing rail terminals, expanding container-handling capacity, and promoting the TITR as a viable alternative.

[10] Bureau of National Statistics of Kazakhstan, https://stat.gov.kz/en/industries/business-statistics/stat-transport/publications/113952

Moderate Improvement

Table 6.3: Trade Facilitation Indicators for Kazakhstan (2021–2023)

Trade Facilitation Indicators		Road Transport				Rail Transport			
		2021	2022	2023	% change	2021	2022	2023	% change
TFI1	Time taken to clear a border-crossing point (hour)	8.2	4.3	4.2	–2.7%	57.2	67.4	69.7	3.5%
	Outbound	*5.9*	*4.0*	*3.9*	*–1.6%*	*11.4*	*6.8*	*10.6*	*55.6%*
	Inbound	*9.5*	*4.6*	*4.4*	*–3.4%*	*61.8*	*78.0*	*74.7*	*–4.2%*
TFI2	Cost incurred at border-crossing clearance ($)	567	317	89	–72.0%	308	297	331	11.5%
	Outbound	*30*	*19*	*26*	*38.4%*	*139*	*185*	*132*	*–28.5%*
	Inbound	*875*	*504*	*125*	*–75.2%*	*319*	*313*	*344*	*9.9%*
TFI3	Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo)	2,422	1,493	1,030	–31.0%	924	883	1,053	19.3%
SWD	Speed to travel on CAREC corridors (km/h)	28.6	31.2	28.9	–7.3%	8.9	10.4	10.5	0.8%
SWOD	Speed without delay (km/h)	49.9	51.1	44.7	–12.6%	49	57.9	63.7	10.0%

Source: CAREC Institute.

TFI1 for road transport improved modestly, with average clearance time reducing from 8.2 hr in 2021 to 4.2 hr in 2023, reflecting a 48% overall decrease. Inbound and outbound times also improved, decreasing from 9.5 hr to 4.4 hr, and 5.9 hr to 3.9 hr, respectively. The gains reflect efficiency upgrades in customs processes and better lane management at key BCPs such as Nur Zholy and Dostyk.

For rail transport, however, the trend diverged. Rail border-crossing time rose from 67.4 hr in 2022 to 69.7 hr in 2023 (+3.5%). Outbound clearance time increased significantly from 6.8 hr to 10.6 hr in 2023 (+55.6%), potentially due to growing freight volumes, limited gauge-change capacity, or increased documentation time at the China–Kazakhstan border. While inbound rail clearance decreased slightly (–4.2%), overall rail TFI1 remains a concern.

Road transport costs at border-crossing points dropped significantly, from $317 in 2022 to $89 in 2023 (–72%). This drastic decline may be attributed to reforms in customs procedures, improved private-sector logistics service provision, and possibly the digitalization of customs clearance. Inbound cost saw a sharper reduction (from $875 to $125), whereas outbound cost slightly increased in 2023 ($26).

Rail transport costs, however, increased by 11.5% year over year from $313 in 2022 to $331 in 2023. Notably, outbound cost declined by 28.5%, while inbound costs rose by 9.9%. The higher inbound cost could reflect longer clearance times and higher operational fees. The cost disparity between road and rail indicates a shift in logistics favorability toward road transport in Kazakhstan.

Corridor travel costs for road transport showed a significant improvement, falling from $1,493 in 2022 to $1,030 in 2023, showing a 31% reduction. This could indicate improved road conditions, fleet modernization, and more competitive trucking markets. By contrast, rail transport costs increased from $924 to $1,053 (+19.3%), reflecting a reversal in cost efficiency, potentially due to higher fuel prices, rolling stock limitations, or increasing rail freight demand.

For road transport, SWD slightly declined by 7.3%, from 28.6 km/h to 28.9 km/h in 2023, indicating that road infrastructure still faces congestion issues. SWOD fell more significantly, from 51.1 km/h to 44.7 km/h (–12.6%), suggesting broader constraints such as poor pavement, speed limitations, and traffic bottlenecks.

Rail transport SWD marginally increased from 10.4 to 10.5 km/h (0.8%), while SWOD rose from 57.9 to 63.7 km/h (10%), signaling improved track conditions, locomotive speeds, and better operational scheduling. However, these gains have yet to fully translate into reduced clearance times.

Kyrgyz Republic

The Kyrgyz Republic serves as a key overland transit country connecting western PRC to Uzbekistan and Tajikistan via CAREC Corridors 1, 3, and 5. Road transport dominates due to its flexibility and coverage. The fragmented rail network, split into the northern and southern segments that are still not connected, has limited efficiency for domestic and transit traffic.

Recent efforts to modernize 151 km of railway lines and advance the China–Kyrgyz Republic–Uzbekistan (CKU) railway display a strategic push to integrate the republic into regional containerized rail systems. However, containerization remains limited, with pilot shipments and test corridors only beginning to take shape.

TFI trends highlight a positive shift in road transport performance, particularly a 54% reduction in TFI1, driven by improved lane management at BCPs such as Irkeshtam and Torugart. However, TFI2 for inbound road traffic spiked in 2023 due to inconsistent fee structures, undermining cost competitiveness. To consolidate its regional role, the Kyrgyz Republic is committed to completing the China–Kyrgyz Republic–Uzbekistan railway infrastructure, expand intermodal facilities, and harmonize transit regulations to reduce cost volatility and unlock multimodal potential.

A Mixed Picture

This section evaluates the trends from 2021 to 2023, comparing road and rail transport performance and identifying the potential causes behind the observed patterns.

Table 6.4: Trade Facilitation Indicators for the Kyrgyz Republic (2021–2023)

		Road Transport				Rail Transport			
Trade Facilitation Indicators		2021	2022	2023	% change	2021	2022	2023	% change
TFI1	Time taken to clear a border-crossing point (hour)	3.7	2.8	1.3	–53.7%	1.6	1.0	1.3	36.2%
	Outbound	*4.7*	*2.1*	*1.0*	*–50.7%*	–	–	–	–
	Inbound	*2.8*	*3.2*	*1.4*	*–55.2%*	*1.6*	*1.0*	*1.3*	*36.2%*
TFI2	Cost incurred at border-crossing clearance ($)	23	31	116	276.6%	175	–	–	–
	Outbound	*22*	*26*	*19*	*–28.0%*	–	–	–	–
	Inbound	*25*	*34*	*186*	*446.0%*	*175*	–	–	–
TFI3	Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo)	2,194	1,888	1,505	–20.3%	413	556	–	–100.0%
SWD	Speed to travel on CAREC corridors (km/h)	27.0	26.5	32.0	20.7%	19.4	24.5	23.9	–2.7%
SWOD	Speed without delay (km/h)	52.5	51.8	54.1	4.5%	21.2	30.1	32.4	7.6%

Source: CAREC Institute.

The Kyrgyz Republic recorded substantial improvement in road border clearance times. TFI1 fell from 2.8 hr in 2022 to 1.3 hr in 2023, marking a 53.7% decrease. Outbound clearance saw even sharper decline (–50.7%), from 4.7 hr in 2021 to just 1.0 hr in 2023. Inbound clearance also improved by 55.2%. These positive changes suggest enhanced customs processing, improved inter-agency coordination, and more efficient lane management at key BCPs such as Irkeshtam and Torugart.

Rail transport data show a more complex picture. Border clearance time declined from 1.6 hr in 2021 to 1.0 hr in 2022, but rose to 1.3 hr in 2023 (+36.2%), with the overall values staying relatively low. The fluctuation stemmed from procedural adjustments, such as increased document checks or operational limitations at interchange points with Uzbekistan or Kazakhstan.

TFI2 trends for road transport depict a dramatic rise in 2023, with border clearance cost escalating from $31 in 2022 to $116 in 2023 (+276.6%). While outbound costs decreased by 28%, inbound costs surged by 446% to $186. This disparity implies potential overcharging or inefficiencies in inbound processing due to fee hikes, increased inspection costs, and inconsistent service charges.

Corridor travel costs for road transport declined significantly, from $1,888 in 2022 to $1,505 in 2023, a 20.3% reduction from improved fleet efficiency, competitive freight market pricing, and better road maintenance.

Corridor speed metrics for road transport showed improvement. SWD increased from 26.5 km/h in 2022 to 32.0 km/h in 2023 (+20.7%), suggesting reduced waiting time at borders and fewer bottlenecks. SWOD rose marginally from 51.8 to 54.1 km/h (+4.5%), reflecting the modest road infrastructure upgrades.

Rail transport saw a slight decrease in SWD from 24.5 to 23.9 km/h (–2.7%), but SWOD rose from 30.1 to 32.4 km/h (+7.6%), signaling improved rail operation speeds. These trends suggest that despite increasing average running speeds, occasional delays continue to hinder consistent performance.

Mongolia

Mongolia, a landlocked country between PRC and the Russian Federation, relies heavily on Corridor 4 for trade, with a strategic emphasis on the Zamiin-Uud–Erenhot rail and road crossing. Rail is the dominant mode for long-haul freight, particularly on the Tianjin–Ulaanbaatar corridor, while road transport supplements with time-sensitive trade shipments. Zamiin-Uud is the busiest BCP in Mongolia, and suffers from chronic congestion and limited transshipment capacity.

Cross-border shipments remain constrained by infrastructure bottlenecks, outdated cargo-handling equipment in Ulaanbaatar, and Mongolia's dependence on Tianjin Port. Although the road BCP at Zamiin-Uud was upgraded in 2023, rail capacity remains a serious concern, with only 7 trains processed per day compared to 20 at Erenhot and 45 at Tianjin Port.

TFIs underscore this imbalance: road TFIs improved significantly in both time and cost, with TFI1 falling by 50% and SWD speed more than doubling. By contrast, rail TFI1 and TFI3 surged, with inbound clearance times tripling and costs rising due to delays and handling fees. SWOD for rail declined sharply to 14 km/h. To maintain trade reliability, Mongolia must expand rail capacity, diversify port access, and strengthen multimodal integration to balance road gains with rail reform.

Continuing Imbalance

TFI1 results for road transport indicate considerable improvement in efficiency. Average clearance time decreased by 50%, from 4.0 hr in 2022 to 2.0 hr in 2023. Inbound clearance followed the same trend, declining sharply from 6.6 hr to 2.0 hr over the same period. This improvement was realized due to the upgradation of the road BCP at Zamiin-Uud, financed by the Chinese government in 2023.

Rail transport presented mixed results. While outbound clearance time decreased from 20.1 hr in 2022 to 6.3 hr in 2023 (–68.9%), inbound clearance times deteriorated drastically from 9.3 hr to 22.4 hr (+140%). This long duration in inbound rail processing was caused by the relatively long change of gauge operation and waiting time at Zamiin-Uud.

Road clearance costs declined by 22%, from $22 in 2022 to $17 in 2023, suggesting more competitive pricing and reduced administrative charges. Again, only inbound costs were recorded for 2023, with outbound costs absent. The consistent reduction in inbound cost aligns with the declining clearance time, indicating synergy between time and cost improvements in road transport.

Table 6.5: Trade Facilitation Indicators for Mongolia (2021–2023)

Trade Facilitation Indicators		Road Transport				Rail Transport			
		2021	2022	2023	% change	2021	2022	2023	% change
TFI1	Time taken to clear a border-crossing point (hour)	6.3	4.0	2.0	–50.1%	11.8	12.2	16.0	31.2%
	Outbound	*2.7*	–	–	–	*9.8*	*20.1*	*6.3*	*–68.8%*
	Inbound	*6.6*	*4.0*	*2.0*	*–50.1%*	*12.9*	*9.3*	*22.4*	*139.8%*
TFI2	Cost incurred at border-crossing clearance ($)	37	22	17	–22.0%	32	20	41	104.6%
	Outbound	*12*	–	–	–	*5*	*5*	*25*	*387.8%*
	Inbound	*37*	*22*	*17*	*–22.0%*	*42*	*25*	*41*	*63.3%*
TFI3	Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo)	1,632	1,455	1,242	–14.6%	360	440	982	123.3%
SWD	Speed to travel on CAREC corridors (km/h)	20.8	31.4	41.1	30.8%	13.0	12.6	8.8	–30.3%
SWOD	Speed without delay (km/h)	35.4	52.2	57.3	9.7%	21.9	21.2	14.1	–33.5%

Source: CAREC Institute.

Rail border clearance costs, however, more than doubled, rising from $20 in 2022 to $41 in 2023 (+104.6%). Inbound rail costs surged by 63%, while outbound costs jumped almost fourfold. This may reflect additional cargo handling charges, increased service fees, or inefficiencies in customs clearance processes at major rail terminals such as Zamiin-Uud.

TFI3 trends show improvement in road transport costs, which decreased from $1,455 in 2022 to $1,242 in 2023 (–14.6%), attributable to improved road conditions, better vehicle utilization, and increasing competition among logistics service providers. For rail transport, TFI3 surged from $440 in 2022 to $982 in 2023 (+123%), reflecting higher operational costs, possibly driven by fuel price volatility, wagon shortages, and limitations in multimodal transfer facilities.

Road transport speed improved significantly. SWD increased from 31.4 km/h in 2022 to 41.1 km/h in 2023 (+31%), while SWOD increased from 52.2 to 57.3 km/h (+9.7%). These improvements reflect reduced delays and better road infrastructure along key corridors such as Altanbulag–Ulaanbaatar–Zamiin-Uud. Digital traffic management systems and streamlined border protocols may have further contributed to this trend.

Conversely, rail transport performance declined. SWD dropped from 12.6 km/h in 2022 to 8.8 km/h in 2023 (–30.3%), and SWOD declined by 33.5%. The declines are indicative of congestion, inefficient yard operations, and possibly poor locomotive performance. The reduced rail performance contrasts starkly with the gains in road logistics.

Pakistan

Pakistan serves as a key southern gateway for CAREC corridors 5 and 6, offering vital access to Arabian Sea ports, namely Karachi, Port Qasim, and Gwadar. With over 95% of freight moved by road, the country's 263,000-km road network forms the backbone of domestic and regional trade. Rail contributes only 5% of the freight volume, hindered by aging infrastructure and limited freight capacity.

Despite the modal imbalance, Pakistan's role in regional transit is expanding, especially on the Pakistan–Afghanistan–Uzbekistan corridor and under Afghanistan Transit Trade. However, logistical inefficiencies, fragmented regulations, and institutional overlaps continue to delay cargo flows and inflate costs.

Pakistan's TFIs reflect persistent structural issues. TFI1 rose by 17% in 2023, with average border-crossing time exceeding 33 hr, especially at Torkham and Chaman BCPs, still among the most time-consuming in the region. TFI2 and TFI3 remained flat. Speeds (SWD and SWOD) declined marginally, reflecting the impact of congestion, worn infrastructure, and low fleet productivity.

With the Pakistan Single Window (PSW) now operational and major road upgrades underway, further efficiency gains depend on fully integrating digital platforms, streamlining border procedures, and expanding multimodal infrastructure to rebalance the logistics system toward rail and port connectivity.

Structural Problems

Table 6.6: Trade Facilitation Indicators for Pakistan (2021–2023)

		Road Transport			
Trade Facilitation Indicators		2021	2022	2023	% change
TFI1	Time taken to clear a border-crossing point (hour)	35.3	28.2	33.1	17.4%
	Outbound	*35.2*	*28.2*	*33.1*	*17.4%*
	Inbound	*120.0*	–	–	–
TFI2	Cost incurred at border-crossing clearance ($)	274	238	238	0.2%
	Outbound	*274*	*238*	*238*	*0.2%*
	Inbound	*525*	–	–	–
TFI3	Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo)	620	546	569	4.1%
SWD	Speed to travel on CAREC Corridors (km/h)	11.8	13.3	11.4	–14.4%
SWOD	Speed without Delay (km/h)	27.3	25.2	24.8	–1.5%

Source: CAREC Institute.

TFI1 values reflect persistent inefficiencies in Pakistan's border clearance processes. Average time to clear a BCP stood at 35.3 hr in 2021, decreased to 28.2 hr in 2022, and was back to 33.1 hr in 2023, recording a 17.4% year-on-year increase. Outbound clearance time followed the same pattern, as inbound data was not reported for 2022 and 2023. The rebound in clearance time suggests a decline in operational efficiency due to procedural bottlenecks, resurgent congestion at border terminals, and a lack of coordinated inter-agency processing.

TFI2 data shows relative cost stability over the period. Border clearance cost declined from $274 in 2021 to $238 in 2022, before increasing marginally to $238 in 2023, recording a 0.2% increase. The stagnation reinforces the perception of persistent cost burdens without corresponding service improvements. Outbound cost trends mirrored the overall pattern, while no inbound cost data were reported for 2022 and 2023.

Corridor travel costs for road freight in Pakistan remain high. TFI3 declined from $620 in 2021 to $546 in 2022 but rose again in 2023 to $569 (+4.1%). Factors contributing to high corridor costs include poor road conditions, fuel price fluctuations, lack of fleet modernization, and informal service charges. While the small decline in 2022 was encouraging, the increase in 2023 indicates unresolved systemic inefficiencies in transport logistics.

Pakistan's corridor speed performance declined over the review period. SWD fell from 13.3 km/h in 2022 to 11.4 km/h in 2023 (–14.4%). The low SWD underscores significant time losses due to checkpoints, poor infrastructure, and traffic bottlenecks. SWOD also declined from 27.3 km/h in 2021 to 25.2 km/h in 2022 to 24.8 km/h in 2023 (–1.5%), reflecting limited improvement in road quality and journey reliability.

People's Republic of China (PRC)

PRC anchors the eastern end of all CAREC corridors, serving as a critical origin and transit hub for goods moving westward to Central Asia, the Caucasus, and Europe. Key BCPs such as Alashankou, Khorgos, and Erenhot facilitate massive containerized and bulk cargo flows into the region. Its key China Railway Express (CRE) initiative moved 1.9 million TEUs via 17,523 block trains in 2023, connecting more than 110 Chinese cities to 200 European and Asian destinations. Inland logistics hubs in Xi'an, Chongqing, and Zhengzhou play a key role in CRE's container block train operations.[11]

PRC's trade facilitation performance shows marked improvements across all TFIs. Rail TFI1 dropped by 59%, and costs fell significantly due to streamlined customs, digital documentation, and the lifting of COVID-era restrictions. Road transport also saw a 41% drop in TFI3 and improved speed (SWD rose to 31.4 km/h). These gains reflect investments in automated border systems, modernized border-crossing facilities, and excellent road and rail transport infrastructure.

All-round Progress

Table 6.7: Trade Facilitation Indicators for the People's Republic of China (2021–2023)

Trade Facilitation Indicators		Road Transport				Rail Transport			
		2021	2022	2023	% change	2021	2022	2023	% change
TFI1	Time taken to clear a border-crossing point (hour)	23.3	20.7	16.8	–19.0%	83.8	35.4	14.4	–59.4%
	Outbound	*27.8*	*20.8*	*17.0*	*–18.7%*	*64.7*	*33.9*	*14.0*	*–58.6%*
	Inbound	*2.3*	*0.3*	*2.1*	*614.3%*	*149.6*	*53.7*	*16.3*	*–69.7%*
TFI2	Cost incurred at border-crossing clearance ($)	1,219	638	357	–44.1%	137	120	90	–25.4%
	Outbound	*1,413*	*638*	*358*	*–43.9%*	*28*	*53*	*40*	*–25.0%*
	Inbound	*170*	–	*233*	–	*266*	*130*	*91*	*–30.4%*
TFI3	Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo)	3,979	3,445	2,042	–40.7%	896	763	612	–19.8%
SWD	Speed to travel on CAREC corridors (km/h)	22.3	26.1	31.4	20.3%	14.6	13.5	15.0	11.3%
SWOD	Speed without delay (km/h)	78.8	83.5	80.5	–3.6%	64.5	82.4	80.2	–2.6%

Source: CAREC Institute.

TFI1 trends in PRC show marked improvement over the three-year period, especially for rail transport. Road transport border clearance time declined from 23.3 hr in 2021 to 20.7 hr in 2022 to 16.8 hr in 2023 (–19%). Outbound clearance time dropped by 39% over the period, while inbound time fluctuated, declining to 0.3 hr in 2022 and rebounding to 2.1 hr in 2023.

Box 6.2: Border-Crossing Process Simplification in the People's Republic of China

PRC had instituted strict measures in border-crossing in 2020 following the COVID-19 pandemic. For crossing borders via roads, the transloading process was complicated by the prohibition of direct contact between the local and foreign drivers. A special zone manned by dedicated workers handled the transloading process between vehicles. This additional step was removed on 8 January 2023. As such, Kazakh drivers and Kazakh-registered trucks can drive straight to the temporary warehouses in Horgos (in PRC) and directly load the goods bound for Almaty. This helped to realize the steady improvement in TFI1, TFI2 and TFI3 for road transport over 2021–2023.

Source: CAREC Institute.

[11] China Rail Express, https://www.crexpress.cn.

Rail transport saw a dramatic reduction in clearance times, from 83.8 hr in 2021 to 35.4 hr in 2022 to just 14.4 hr in 2023 (–59.4%). This represents one of the most substantial improvements across CAREC corridors. Inbound rail clearance decreased even more significantly by nearly 70%, likely due to optimized transshipment procedures, digital integration at border-crossing points (BCPs), and enhanced cooperation with neighboring countries such as Kazakhstan and Mongolia.

TFI2 data for PRC also indicates encouraging progress. Road transport costs at border-crossings dropped from $1,219 in 2021 to $638 in 2022 to $357 in 2023, a sharp 44% decline. While outbound cost decreased substantially, inbound cost rose in 2023, reaching $233.33 (from $0 in 2022), indicating a correction in pricing or changes in customs fee structures. For rail, costs decreased more modestly—down from $137 in 2021 to $120 in 2022 to $90 in 2023 (–25%). The improvement reflects reduced clearance time, better infrastructure at dry ports, and possibly harmonization of rail handling fees with CAREC corridor partners.

Transport costs along CAREC corridors within China remain high but have shown marked reductions. Road transport costs per 500 km per 20-ton cargo fell by 41% from $3,979 in 2021 to $3,445 in 2022 to $2,042 in 2023. This improvement may be attributed to infrastructure modernization, improved road quality, digital fleet management, and improved fuel efficiency. Rail transport corridor cost also dropped by 19.8% from $896 in 2021 to $763 in 2022 to $612 in 2023, likely due to increasing container block train services, optimized route scheduling, and cost-sharing agreements under the Belt and Road Initiative.

Corridor speed performance indicators show mixed results. For road transport, SWD improved by 20.3% from 22.3 km/h in 2021 to 31.4 km/h in 2023, indicating fewer interruptions or faster customs and handling processes. However, Speed Without Delay (SWOD) slightly declined (–3.6%) over the period, suggesting that while delays have been reduced, average cruising speeds remain relatively stable.

Rail SWD increased slightly from 13.5 km/h to 15.0 km/h (+11.3%), showing modest progress in transit efficiency. SWOD, however, fell marginally (–2.6%), suggesting that while operational speeds are steady, bottlenecks exist, mostly at border interchange points where gauge changes or inspections are required.

Tajikistan

Tajikistan, a landlocked and mountainous country, is connected to regional markets via CAREC Corridors 2, 3b, 5, and 6c, relying heavily on road transport, which carries over 94% of freight. The limited and aging rail network accounts for just 5% of its cargo volume and lacks direct connectivity to PRC or Afghanistan. Harsh terrain and seasonal road closures challenge logistics, but upgrades to key links like Dushanbe–Khujand are improving reliability.

TFI indicators show gradual but uneven improvements. Border-crossing time (TFI1) remained stable around 4.2 hr, while SWOD speed nearly doubled in 2023, indicating better road infrastructure and less delay. However, TFI2 and TFI3 rose, especially inbound costs, pointing to persistent inefficiencies, informal fees, and limited harmonization with neighboring systems. To enhance its role in CAREC corridors, Tajikistan needs to modernize border infrastructure, expand dry port capacity, and institutionalize digital trade systems to reduce costs, improve speed, and attract greater multimodal freight flows.

Stability Reigns

TFI1 data reflects a relatively stable trend in border clearance time. Average clearance time decreased from 4.7 hr in 2021 to 4.1 hr in 2022, before increasing to 4.2 hr in 2023 (+2.2%). Outbound clearance time increased from 3.0 hr to 3.6 hr in 2023 (+21.6%), while inbound clearance improved only a little, falling from 4.7 hr to 4.5 hr (–4.4%). These changes suggest some variability in outbound procedural efficiency, possibly due to shifting inspection requirements, increased traffic volumes, or inconsistent border staffing.

Table 6.8: Trade Facilitation Indicators for Tajikistan (2021–2023)

Trade Facilitation Indicators		Road Transport			
		2021	2022	2023	% change
TFI1	Time taken to clear a border-crossing point (hour)	4.7	4.1	4.2	2.20%
	Outbound	*3.3*	*3.0*	*3.6*	*21.62%*
	Inbound	*5.3*	*4.7*	*4.5*	*–4.38%*
TFI2	Cost incurred at border-crossing clearance ($)	86	85	94	10.6%
	Outbound	*27*	*23*	*23*	*–0.36%*
	Inbound	*114*	*116*	*130*	*12.2%*
TFI3	Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo)	609	579	643	11.0%
SWD	Speed to travel on CAREC Corridors (km/h)	20.0	20.1	26.8	33.3%
SWOD	Speed without Delay (km/h)	35.8	34.6	58.2	68.1%

Source: CAREC Institute.

Despite modest fluctuations, the overall time performance indicates room for improvement. Automation of customs documentation and streamlined multi-agency inspections can help reduce time delays, especially for outbound consignments.

TFI2 data shows a gradual rise in border clearance costs. The average cost increased from $85 in 2022 to $94 in 2023, reflecting a 10.6% growth over the period. While outbound costs remained largely stable (no change from $23 in 2022 to $23 in 2023), inbound clearance costs rose significantly from $114 to $130 (+12.2%).

This increasing inbound cost may be driven by higher administrative fees, evolving inspection procedures, and informal payments. In the absence of harmonized cost structures, such volatility can act as a deterrent for regional trade and undermines trade facilitation efforts.

TFI3 data indicates a rising cost trend for road transport over the three-year period. The cost per 500 km for a 20-ton cargo increased from $579 in 2022 to $643 in 2023 (+11%). Contributing factors include fuel price inflation, poor road quality, limited competition in freight services, and high vehicle operating costs, reinforcing the need for upgrading road infrastructure and reducing logistics overheads to reduce the cost burden on traders and exporters.

Tajikistan's transport speed indicators reflect significant progress. SWD improved by 33.3%, from 20.1 km/h in 2022 to 26.8 km/h in 2023. Strikingly, SWOD nearly doubled, increasing from 34.6 km/h in 2022 to 58.2 km/h in 2023 (+68.1%).

This sharp improvement points to better road conditions, traffic management enhancements, and streamlined logistics coordination along CAREC corridors. SWOD progress indicates higher baseline infrastructure quality, while SWD gains suggest a reduction in waiting times and checkpoint delays.

Turkmenistan

Turkmenistan occupies a strategic location bridging Central Asia to the Caspian Sea, with links westward via the Turkmenbashi Port and eastward via Corridors 2, 3, and 6. The Turkmenbashi Port, opened in 2018, has a design capacity of 17 mt and 400,000 TEUs, but remains underutilized due to strict transit regimes and limited multimodal integration.

In road transport, strict visa requirements for drivers, opaque fee structures, and a complex permitting system deter regional transit. Notwithstanding the challenges, Uzbeki drivers actively transit through Turkmenistan to access Iranian ports such as Bandar Abbas. The Alat–Farap BCP is a vital node for this

transit. For rail shipments, goods move from Afghanistan and land at the Torghundi–Serkhed Abat BCP to be loaded in trains for Ashgabat.

TFI results reflect mixed performance. Road TFI1 dropped sharply by 46%, indicating faster clearance, yet TFI2 and TFI3 remained high, and rail transport showed rising time and cost. Speeds (SWD and SWOD) are stagnant, hinting potential infrastructure fatigue and bottlenecks.

Limited Progress

Table 6.9: Trade Facilitation Indicators for Turkmenistan (2021–2023)

Trade Facilitation Indicators		Road Transport				Rail Transport			
		2021	2022	2023	% change	2021	2022	2023	% change
TFI1	Time taken to clear a border-crossing point (hour)	6.9	10.1	5.5	–45.7%	3.7	3.7	3.9	5.2%
	Outbound	*3.6*	*34.6*	–	*–100.0%*	–	–	–	–
	Inbound	*7.1*	*5.0*	*5.5*	*9.8%*	*3.7*	*3.7*	*3.9*	*5.2%*
TFI2	Cost incurred at border-crossing clearance ($)	–	62	70	12.2%	81	81	81	–
	Outbound	–	*52*	–	*–100.0%*	–	–	–	–
	Inbound	–	*70*	*70*	–	*81*	*81*	*81*	–
TFI3	Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo)	564	604	591	–2.2%	1,349	1,308	1,357	3.7%
SWD	Speed to travel on CAREC corridors (km/h)	21.9	26.4	25.3	–4.2%	14.0	13.9	13.5	–2.9%
SWOD	Speed without delay (km/h)	53.9	53.5	45.4	–15.2%	29.0	29.3	29.3	0.2%

Source: CAREC Institute.

TFI1 data for road transport indicates fluctuating performance. After an increase from 6.9 hr in 2021 to 10.1 hr in 2022, the average border clearance time dropped significantly to 5.5 hr in 2023 (–45.7%). This improvement likely reflects a partial easing of bottlenecks at border control points and possibly streamlined inspection processes. However, inbound clearance time rose by 9.8% from 5.0 hr to 5.5 hr in 2023, suggesting persistent procedural or staffing issues at certain border stations.

Rail transport clearance time slightly increased over the period, rising from 3.7 hr in 2022 to 3.9 hr in 2023 (+5.2%). Although this change is marginal, it reflects a need to improve rail terminal handling speed and coordination with customs agencies to avoid potential backlogs.

TFI2 values for road transport show an upward trend. From no cost in 2021, border clearance cost increased to $62 in 2022 and $70 in 2023 (+12.2%). While some increment can be attributed to service fee rationalization and inflationary trends, it raises concerns about cost transparency and value-for-money service provision. Inbound cost remained constant at $70 between 2022 and 2023. Outbound cost was recorded as zero in 2023, which may reflect administrative waivers or a data anomaly.

Rail transport costs remained consistent, at approximately $81 per transaction throughout the period, with only a negligible change (+0.01%). While this stability can be seen as a positive sign of predictable pricing, it may also indicate an insufficient review of fee structures, potentially masking inefficiencies.

TFI3 results show relatively stable costs for road transport. The cost per 500 km for 20-ton cargo increased from $564 in 2021 to $604 in 2022, and slightly declined to $591 in 2023 (–2.2%), possibly reflecting improved road utilization or cost saving by logistics providers.

However, rail corridor transport costs increased from $1,308 in 2022 to $1,357 in 2023 (+3.7%). The consistently high cost structure in rail transport may be attributable to outdated rolling stock, inefficient cargo handling practices, or underutilization of rail capacity. Investment in modernization and intermodal solutions could help reverse this trend.

SWD in road transport improved from 21.9 km/h in 2021 to 26.4 km/h in 2022, then dipped to 25.3 km/h in 2023 (–4.2%). This suggests that while travel delays have been addressed to some extent, improvements have been inconsistent. SWOD declined more significantly from 53.5 km/h in 2022 to 45.4 km/h in 2023 (–15.2%), possibly due to deteriorating road quality, increased traffic congestion, or regulatory speed restrictions.

Rail transport SWD decreased modestly from 13.9 to 13.5 km/h (–2.9%), while SWOD similarly rose from 29.3 km/h to 29.3 km/h (+0.0%), suggesting that operational performance in rail corridors remains largely static, with minimal progress on speed-related efficiencies.

Uzbekistan

Uzbekistan is emerging as a regional logistics and transit hub, strategically located at the crossroads of multiple CAREC corridors (2, 3, 5, and 6). The country boasts a growing network of dry ports and logistics centers in Tashkent, Navoi, and Angren. Road transport plays a major role. A limiting factor is the shortage of compliant trucks and specialized terminals to support containerization, which impedes the use of the Middle Corridor.

Uzbekistan is actively developing multimodal corridors, including routes via Turkmenistan and Iran, as well as new connections to China and Türkiye. These efforts are supported by national strategies like the Transport System Strategy 2035 and Uzbekistan 2030, which aim to increase container share and logistics efficiency.

TFIs confirm broad-based improvements. TFI1 and TFI2 for road transport fell, especially outbound costs (–44%), while SWD rose to 33.2 km/h, indicating more reliable corridor performance. Rail performance remained steady.

Broad-based Improvement

Table 6.10: Trade Facilitation Indicators for Uzbekistan (2021–2023)

Trade Facilitation Indicators		Road Transport				Rail Transport			
		2021	2022	2023	% change	2021	2022	2023	% change
TFI1	Time taken to clear a border-crossing point (hour)	7.6	4.2	4.7	11.9%	6.2	6.8	6.7	–2.3%
	Outbound	*6.6*	*3.5*	*4.9*	*40.7%*	*6.0*	–	–	–
	Inbound	*9.1*	*5.5*	*4.4*	*–19.3%*	*6.2*	*6.8*	*6.7*	*–2.3%*
TFI2	Cost incurred at border-crossing clearance ($)	92	74	50	–32.5%	133	133	132	–0.2%
	Outbound	*114*	*87*	*49*	*–44.0%*	–	–	–	–
	Inbound	*74*	*63*	*53*	*–16.2%*	*133*	*133*	*132*	*–0.2%*
TFI3	Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo)	674	687	568	–17.3%	665	635	626	–1.5%
SWD	Speed to travel on CAREC corridors (km/h)	27.9	29.6	33.2	12.0%	11.2	11.8	11.9	1.1%
SWOD	Speed without delay (km/h)	46.9	45.6	47.4	3.9%	13.3	13.1	13.2	0.9%

Source: CAREC Institute.

In road transport, TFI1 trends showed a mixed performance. Border clearance time improved significantly from 7.6 hr in 2021 to 4.2 hr in 2022 but increased to 4.7 hr in 2023 (+11.9%). Outbound clearance time went up by 40.7% in 2023 after earlier gains, while inbound time declined by 19.3%, reflecting improved efficiency on the import side but growing delays for export cargo. Such divergence may be due to increased outbound freight volume, insufficient staffing at BCPs, or lack of harmonized inspection protocols.

Rail transport performance remained relatively steady, with TFI1 decreasing slightly from 6.2 hr to 6.7 hr (–2.3%) over the period. Outbound rail clearance data was not available for 2022 and 2023, limiting the analysis of rail export clearance efficiency.

TFI2's performance for road transport showed a remarkable improvement. Average clearance cost dropped from $74 in 2022 to $50 in 2023 (–32.5%). The most significant improvement was in outbound cost, which declined from $87 to $49 (–44%). Inbound costs also declined but at a slower rate (–16.2%), but the reduction reflects progress in fee rationalization, digitization of customs, and possibly a more competitive logistics service market.

In rail transport, clearance costs remained mostly unchanged—$133 in 2021 compared to $132 in 2023. The static trend may indicate a lack of pricing reforms, which limits Uzbekistan's rail freight competitiveness, especially in a market increasingly shifting toward containerized and multimodal transport.

TFI3 for road transport decreased from $687 in 2022 to $568 in 2023 (–17.4%), signaling improved road logistics efficiency. The positive outcome was likely influenced by better fleet utilization, reduced fuel consumption per ton-km, and expanding road upgrades on CAREC corridors.

Rail transport cost per corridor section also improved modestly from $635 in 2022 to $626 in 2023 (–1.5%), relative to road improvements, and points to moderate gains in cargo throughput and cost recovery strategies that require further optimization.

Uzbekistan's road transport speed performance improved notably. SWD rose from 29.6 km/h in 2022 to 33.2 km/h in 2023 (+12%), indicating fewer delays and improved coordination along corridors, while SWOD) increased slightly from 45.6 km/h to 47.4 km/h (+3.9%), signaling incremental infrastructure and traffic management improvements.

In rail transport, SWD improved from 11.8 km/h to 11.9 km/h (+1%), while SWOD also improved marginally from 13.1 km/h to 13.2 km/h. Though marginal, these indicators suggest that operational practices in rail corridors are stabilizing, but more aggressive interventions are needed to bring rail transport speed closer to regional best practices.

7 Case Study: Torkham BCP

The concluding chapter analyzes the performance of Torkham BCP, a vital hub in Pakistan's terrestrial trade with Afghanistan and Central Asia channeling significant volumes of both passenger and freight traffic. Torkham plays a crucial role in facilitating existing transit traffic, including road transport associated with Afghanistan Transit Trade (ATT) and routes to Central Asia, as well as the prospective trilateral rail corridor linking Pakistan, Afghanistan, and Uzbekistan. This chapter examines the current capacity and performance of Torkham BCP and related issues and provides insights and recommendations. The case study examines the Pakistan side of Torkham only.

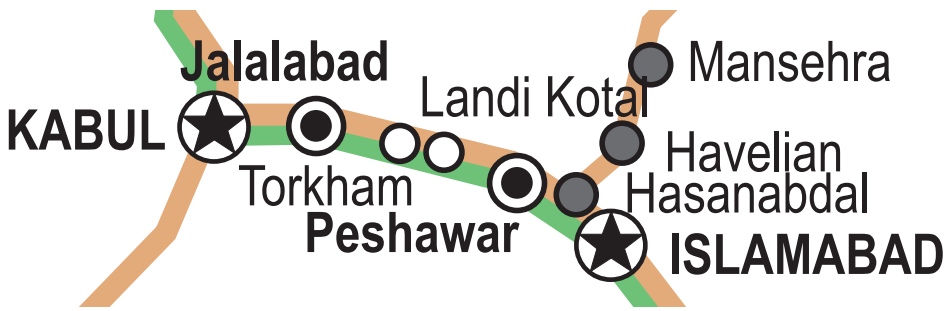
Profile of Torkham BCP

Geography and History

Torkham BCP is situated at the Afghanistan-Pakistan border, approximately 54 km and an 1.5-hour drive from Peshawar, the nearest city. Peshawar's proximity positions Torkham as a transport hub for goods between Afghanistan and other regions. Goods in transit from southern ports and exports from other Pakistani cities converge in Peshawar prior to their movement to the BCP. Similarly, goods imported or in transit from Afghanistan are collected here before proceeding to their final destination.

Torkham BCP began operations with the establishment of the Durand Line in 1893. In July 2019, the BCP began 24-hour operations as policymakers from Kabul and Islamabad sought to alleviate congestion and significant crossing delays. Recognized as one of the most time-intensive BCPs in the CAREC region, Torkham's sub-optimal layout, inadequate handling capacity due to insufficient equipment and scanners, lack of segregation between passenger and freight traffic, and inefficient border-crossing procedures are attributed for the delays. A significant contributing factor was the existence of numerous police checkpoints along the 55-km stretch between the border stations of Afghanistan and Pakistan, where trucks were required to halt for physical inspections by security personnel. This led to a high level of corruption, as transport operators paid varied sums to secure advantageous positions in the queue or receive expedited treatment during inspections. Following the Taliban's takeover of Kabul in August 2021, border crossing durations decreased as corrupt officials departed the country.

Figure 7.1: Location of Torkham BCP



Source: Consultant.

Physical Layout

Torkham BCP is situated in the mountainous Khyber Valley region. A single public road links the highway to Torkham BCP. In Pakistan, there are five lanes designated for vehicle movement: three lanes for outbound traffic and two lanes for inbound traffic. The Afghanistan side has a single lane for vehicles traveling in both directions, constrained by a solitary bridge, which further limits the width of the road shoulder. The design capacity for outbound traffic is 1,200 vehicles per day, and 550 vehicles per day for inbound traffic.

Before RIBS, there was no parking facility for heavy transport vehicles. Trucks queued outside the BCP in a very disorganized manner. The new design after RIBS offers a dedicated parking space for vehicles.

Figure 7.2: Layout of Torkham's BCP

Source: CAREC and FBR https://www.carecprogram.org/uploads/RIBS-Pakistan-Module-1.pdf.

Figure 7.3: Torkham in 2021

Source: Federal Board of Revenue, Pakistan.

Figure 7.4: Torkham after RIBS Improvement

Source: Federal Board of Revenue, Pakistan.

Design Capacity

The annual design capacity of Torkham BCP is 110,000 trucks, with a maximum capacity of 127,000 trucks. Freight movements from Pakistan to Afghanistan constitute 50% of the traffic, with transit accounting for 35% and imports for 15%. The infrastructure at Torkham is optimized to accommodate increased truck traffic from Peshawar in Pakistan to Jalalabad and Kabul in Afghanistan. Due to Afghanistan's significant reliance on imports, transit shipments proceed from Pakistan to Afghanistan.

Table 7.1: Design Capacity of Torkham BCP (number of trucks per year)

Direction of Trade	Annual Design Capacity	Maximum Capacity
Import	16,500	19,050
Export	55,000	63,500
Transit	38,500	44,450
Total	110,000	127,000

Source: CPMM Survey[12]

Stakeholders

Due to the critical significance of the Torkham BCP, multiple border agencies operate here, showcasing a complex institutional landscape.

Table 7.2: Border Agencies and Responsibilities at Torkham BCP

Agency	Key Responsibilities
Pakistan Customs	• Clearance of import/export goods – Inspection and examination – Processing transit cargo – Revenue collection
Federal Investigation Agency (FIA)	• Immigration control (entry/exit of persons) – Human trafficking prevention – Visa/stay permit checks
National Logistics Cell (NLC)	• Terminal management – Cargo handling – Warehousing – Support to border operations
Frontier Corps/Pakistan Army	• Security of the border crossing – Coordination with Afghan border forces – Monitoring of sensitive areas
Anti-Narcotics Force (ANF)	• Narcotics and contraband control – Search and seizure operations
Quarantine Department	• Sanitary and phytosanitary checks – Certification of agricultural/food products
Animal Quarantine Department	• Health inspections of live animals – Issuance of animal health certificates
Plant Protection Department	• Inspection of plants/plant products – Pest control compliance
Health Department	• Health screenings (especially during outbreaks) – Issuance of health certificates

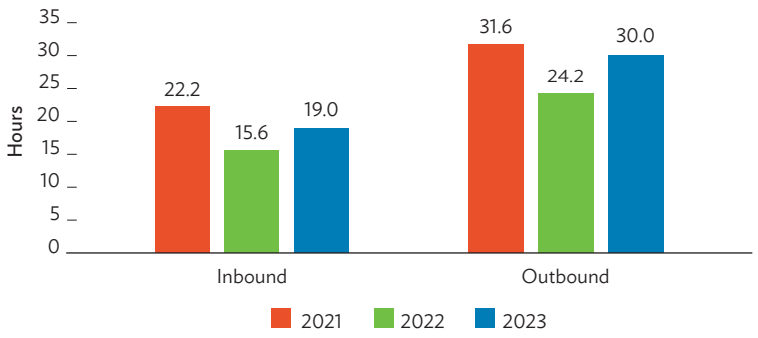
Source: The information is compiled and consolidated by the CAREC Institute.

[12] The data on capacity was obtained through a special survey commissioned by ADB in 2024 to supplement the CPMM work. This survey was implemented by the CPMM partners on Torkham to collect qualitative and quantitative information on the BCP.

BCP Performance

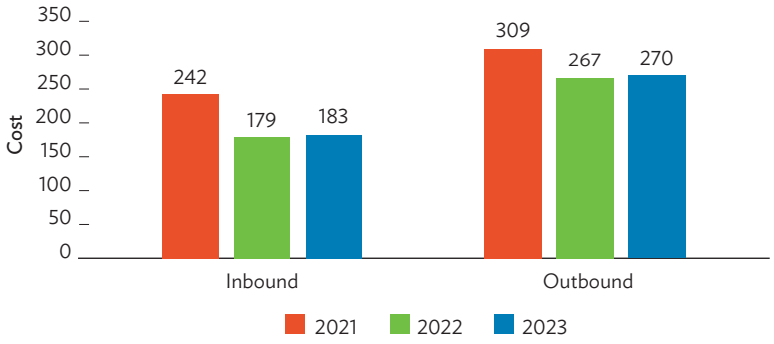
The border-crossing duration at Torkham indicates that shipments experienced extended completion times on the Pakistan side (outbound) during 2021–2023, varying approximately from 31.6 hr to 30.0 hr. The average duration increased by 24%, from 24.2 hr in 2022 to 30.0 hr in 2023. The border-crossing time for inbound traffic was shorter, ranging from 15.6 hr to 22.2 hr during the same period. Border-crossing time increased by 22%, rising from 15.6 hr in 2022 to 19.0 hr in 2023. Both inbound and outbound shipments at Torkham BCP showed a year-on-year increase. Its recent performance shows an improvement over 2021, when strict border controls were implemented as a result of COVID-19 measures. Border-crossing cost at Torkham exhibits a similar pattern, ranging from $179 to $242 for inbound, and $267 to $309 for outbound. Between 2022 and 2023, the costs remained almost steady. For inbound, the cost increased 2% from $179 in 2022 to $183 in 2023, while the cost for outbound increased 1% from $267 in 2022 to $270 in 2023.

Figure 7.5: Border-Crossing Times at Torkham BCP, 2021 to 2023



Source: CPMM.

Figure 7.6: Border-Crossing Costs at Torkham BCP, 2021 to 2023



Source: CPMM.

Issues

The Torkham BCP, while essential for regional trade, suffers from various operational, physical, and institutional challenges that compromise its reliability. Inadequate task execution and disparities in accessibility impede the smooth facilitation of cross-border trade, even with the ongoing digitalization of and enhancements in infrastructure. This analysis emphasizes the key issues from the perspective of regional and global best practices.

1. **Lack of Cohesive Coordination Among Institutions:** Several border agencies operate at the Torkham BCP, each possessing overlapping responsibilities and exhibiting limited coordination. The absence of a centralized Border Authority or designated lead agency leads to procedural duplication in border trade, inconsistent law enforcement, and avoidable delays in cargo clearance and passenger processing.
2. **Fragmented and Inconsistent Digitalization:** E-portals, including PSW, Web-Based Customs (WeBOC), and National Terminal Operating System (NTOS), have been introduced to provide enhanced online documentation and payment functionalities. However, the integration among all agencies at Torkham is not fully realized, and several processes still require the submission of physical documents. The BCP is currently facing challenges with unreliable high-speed data connectivity, attributed to frequent outages of the existing aerial cables. The situation underscores the necessity of an underground fiber-optic network to guarantee consistent and stable digital operations.
3. **Insufficient Infrastructure and Facilities:** Despite ongoing infrastructure upgrades aligned with the international standards, traffic and cargo congestion continue to be a key challenge due to limited BCP capacity, narrow roads, and insufficient inspection bays. Parking areas and scanning equipment frequently experience underutilization, and traffic flow management tends to be less than optimal, particularly during peak hours.
4. **Underutilized Risk Management and Pre-arrival Processing:** The risk management systems (RMS) are integrated within the WeBOC, enabling targeted inspections and supporting pre-arrival processing. Nevertheless, their practical application continue to be limited, with numerous traders either lacking awareness of or facing challenges in accessing these key resources. Almost all cargo consignments continue to undergo routine inspections, which diminishes the port efficiency advantages of the selectivity tools.
5. **Limited Utilization of Digital Payment Systems and Trade Facilitation Instruments:** While PSW and NTOS provide digital payment options, manual and cash transactions continue to be used. This is generally observed when traders make payments for terminal and inspection fees. Ensuring advocacy and sound implementation of digital payment systems aimed at traders, cargo and logistics providers and small and medium-sized enterprises is critical.
6. **Security Constraints and Operational Disruptions:** Regional security impediments lead to sudden and random closures and restrictions, adversely affecting local and regional trade reliability. These closures also cause major supply chain disruptions and increase logistics costs.
7. **Low Participation of Key Stakeholders and Absence of Procedural Transparency:** Logistics operators, including traders and freight forwarders, indicate a minimal involvement and participation in policy building or reforms implementation. The lack of communication of changes in procedural operational information increases uncertainty, and hampers trust and compliance.

To improve trade facilitation, security, and operational efficiency of the Torkham BCP, the following recommendations, structured on international best practices and regional experiences across CAREC members, are proposed.

Recommendations

1. **Establishing a Coordinated Border Management (CBM) Framework:** Based on the significance of Torkham and other BCPs connecting Central Asia, a designated border management agency or authority may be established to streamline BCP operations, oversee joint inspections, and improve interagency coordination. In terms of best practices, the existing Kazakhstan–China Khorgos BCP Joint Border Commission may serve as a foundation model.
2. **Fully Operationalize E-Platforms:** Though Pakistan has made considerable progress in developing E-platforms such as PSW, WeBOC, and NTOS, their complete integration at the BCPs, including Torkham, is still ongoing. For optimal utilization, all border agencies at Torkham must be fully affluent with these e-platforms. More focus on user training, data exchange among key border-crossing stakeholders, and sound internet infrastructure should be prioritized. To enhance these e-platforms, case studies of Singapore's TradeNet and Azerbaijan's ASYCUDA systems may be considered.
3. **Optimal Utilization of Upgraded Infrastructure:** While the BCP infrastructure is being upgraded at Torkham, continuous monitoring of the newly designed facility must be conducted. The facility must provide expanded inspection areas, state-of-the-art cargo scanners, and distinct lanes for cargo and passenger movement. Strong focus should be placed on the infrastructure for implementing the operational protocols for maintenance, training, and staffing.
4. **Risk-Based Inspections and Pre-arrival Processing:** It is recommended to implement and enhance the usage of RMS modules with the existing WeBOC system to ensure their consistent application by customs and quarantine agencies. Awareness campaigns for traders and other key stakeholders may be initiated to promote prearrival document submission.
5. **Ensure Universal Adoption of Digital Payment Systems:** Institutionalize the use of PSW and NTOS digital payment gateways for all duties, terminal fees, and inspection charges. Monitor compliance and support smaller traders through capacity-building and fallback payment channels. Pakistan can learn from Rwanda's mobile-based e-payment system, which increased transparency and reduced time for cross-border payments in the country.
6. **Enhance Security and Business Continuity Planning:** Complement existing non-intrusive inspection (NII) equipment with formal contingency plans for temporary closures and disruptions. Use real-time monitoring tools to maintain operations during security-related events. The Alashankou–Dostyk BCP (China–Kazakhstan) is a good example to follow, as it balances enforcement with facilitation through RMS and NII, maintaining trade flows during regional volatility.
7. **Improve Stakeholder Engagement and Transparency:** Institutionalize regular public–private dialogue mechanisms involving transporters, traders, and logistics operators. Ensure all procedural changes, estimated processing times, and contact points are made available online and updated regularly.

APPENDIX 1

2023 Updates on Routes

Middle Corridor

The Middle Corridor is a multimodal corridor that connects East Asia to Central Asia, Caucasus and Europe. There is a need to cross the Caspian Sea and possibly the Black Sea, using a road-water or rail-water combination. This route does not traverse across Russian territory and has gained some popularity in 2022 when the Ukraine war began. The Middle Corridor is often used interchangeably with the term Trans-Caspian International Transport Route (TITR). For the CAREC context, the Middle Corridor can refer to two options. The first covers Kazakhstan to Azerbaijan to Georgia, crossing the Capsian Sea through either Aktau or Kuryk ports, and goes through Alat port in Baku. This is the popular option and promoted by the TITR Association where the founding members are the national railway companies, vessel operators and major logistics firms. The second option is the passageway from Turkmenistan to Azerbaijan to Georgia, using the Turkmenbashi port. As Turkmenistan has a stricter visa and transit regime, the first option is more popular especially amongst Turkish and Georgian transport operators.

Figure A1.1: The Middle Corridor

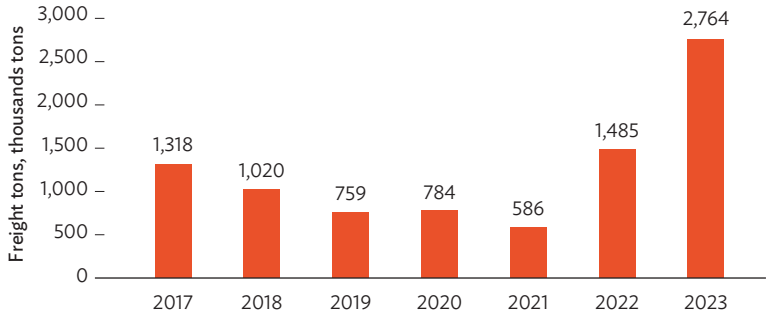
Source: Stiftung Wissenschaft und Politik https://www.swp-berlin.org/10.18449/2022C64/.

The year 2023 marked a significant uptick in cargo transportation along the Middle Corridor. Data from the Trans-Caspian International Transport Route Association indicates that over 2.7 million tons of cargo were transported, reflecting an 86% increase compared to the previous year. This surge underscores the corridor's growing capacity and its escalating prominence as a conduit for transcontinental trade.

Azerbaijan, Georgia and Kazakhstan, as key stakeholders in the Middle Corridor, intensified their collaborative efforts in 2023. In April, these nations committed to fully leveraging the corridor's capacity by implementing the 2022–2027 development roadmap. This strategic plan aims to eliminate infrastructural bottlenecks and enhance the corridor's efficiency, thereby attracting increased international transit traffic.

Significant strides were made in modernizing the corridor's infrastructure. In February 2023, the Kazakh government adopted a comprehensive strategy to develop its transport and logistics potential by 2030. This plan encompasses the enhancement of rail, road, maritime, and air transport modalities, with the Middle Corridor identified as a priority project. The initiative reflects Kazakhstan's commitment to bolstering regional connectivity and facilitating seamless trade flows.

Figure A1.2: : Freight Tons Through Middle Corridor, 2017–2023



Source: TITR Association, https://middlecorridor.com/en/.

The Asian Development Bank (ADB) has provided a series of policy recommendations aimed at amplifying the Middle Corridor's efficiency and economic impact.[13]

1. **Harmonization of Cross-Border Procedures:** Streamlining customs and border protocols across the corridor's nations is essential to reduce transit times and operational costs. Standardizing these procedures can mitigate delays and enhance the corridor's competitiveness.
2. **Public-Private Partnerships (PPPs):** Mobilizing private sector investment through PPPs can address funding gaps in infrastructure development. Collaborative ventures can expedite project completion and introduce innovative solutions to logistical challenges.
3. **Digitalization of Logistics:** Implementing advanced digital technologies, such as electronic data interchange systems and real-time tracking, can optimize supply chain management and improve transparency across the corridor.
4. **Sustainability Measures:** Incorporating environmentally sustainable practices, including the adoption of green technologies and the reduction of carbon emissions, is crucial for the corridor's long-term viability and alignment with global environmental standards.
5. **Capacity Building:** Investing in human capital development through training programs can enhance the operational efficiency of the corridor. Building a skilled workforce is vital for managing complex logistics and adapting to evolving trade dynamics.

Challenges and Strategic Considerations

Despite the notable progress, the Middle Corridor faces several challenges that require strategic attention:

- **Infrastructure Bottlenecks:** Certain segments of the corridor, particularly maritime crossings like the Caspian Sea, experience capacity constraints. Expanding shipping capacity and modernizing port facilities are imperative to accommodate increasing cargo volumes.
- **Regulatory Divergences:** Disparities in regulations and standards among corridor countries can impede seamless transit. Establishing a unified regulatory framework is essential to facilitate smoother cross-border operations.

[13] ADB, The Middle Corridor offers new opportunities and challenges for transport through the Caucasus and Central Asia, https://www.adb.org/publications/unlocking-transport-connectivity-in-the-caucasus-and-central-asia.

- **Geopolitical Dynamics:** The corridor traverses regions with complex geopolitical landscapes. Maintaining stability and fostering cooperative international relations are critical to ensure uninterrupted trade flows.

The developments in 2022 and 2023 have significantly enhanced the Middle Corridor's capacity and efficiency, positioning it as a vital artery in Eurasian trade. Continued investment in infrastructure, harmonization of policies, and strategic collaborations are essential to sustain this momentum. By addressing existing challenges and implementing targeted policy recommendations, the Middle Corridor can realize its full potential, fostering economic growth and regional integration across the Caucasus and Central Asia.

PRC–Kyrgyz Republic–Uzbekistan

The PRC, the Kyrgyz Republic, and Uzbekistan signed an agreement in December 2024 on a trilateral rail network that spans 486 km connecting Kashgar–Torugart–Makmal–Jalal–Abad–Andijan. This followed from another agreement signed between the three countries on 6 June 2024, and a joint railway company was established on 26 July 2024. PRC is the major shareholder of this joint company owning 51%, with the Kyrgyz Republic and Uzbekistan each owning 24.5%. The estimate cost of the construction is projected to be $4.6 billion. PRC will provision a loan to finance half of the estimated construction cost at $2.3 billion. The remaining half will be financed by the three countries according to the shareholding (PRC $1.2 billion, Kyrgyz Republic and Uzbekistan each $573 million). The design capacity of this railway is 12 million tons per annum.

Figure A1.3: The PRC–Kyrgyz Republic–Uzbekistan Trilateral Rail Corridor

Source: Consultant.

Kashgar and Andijan are the start and end nodes in this corridor. Shipments will pass through two BCPs, Torugart (PRC–Kyrgyz Republic) and Jalalabad (Kyrgyz Republic–Uzbekistan). The majority of this section resides in Kyrgyz Republic, 311.75 km long in the entire 486 km of the railway. There will be 18 railway stations, 81 bridges with a total length of 26.1 km and 41 tunnels with a total length of 120.39 km.

The length of bridges and tunnels will be 146.49 km or 47% of the length of the section on the territory of the Kyrgyz Republic.

This trilateral rail corridor is strategic for PRC and Central Asia. For PRC, it is able to channel a new corridor that connects to the fertile Fergana Valley and access economic centers such as Samarkand and Bukhara. Traditionally, the only way to access these markets is to use road transport, or the railway through Kazakhstan. For the Central Asian Republics, this allows them to tap upon the vast transport network in PRC. Kashgar is the terminus for China Railway. By establishing a link between Andijan and Kashgar, the producers and exporters in the greater Fergana Valley (that covers Kyrgyz Republic, Tajikistan and Uzbekistan) can be served with a cost-effective rail option and move the products through trains across PRC and exports to markets such as East Asia and Southeast Asia.

Pakistan–Afghanistan–Uzbekistan

In February 2021, Pakistan, Afghanistan and Uzbekistan agreed a strategic plan to build a new 573 km railway across Afghanistan to connect Central Asia with ports in Pakistan on the Arabian Sea, estimated to cost $4.8 billion and running from Uzbekistan's capital Tashkent via Kabul to Peshawar in Pakistan.

On 18 July 2023, the three countries signed a joint protocol to connect the Uzbek rail network with Pakistan Railway. The route for this connection will pass through Termez in Uzbekistan, Mazar-i-Sharif and Logar in Afghanistan, and culminate in Pakistan via the Torkham border crossing. The line will support both passenger and freight services and would contribute in regional trade and economic growth.[14]

The new railway is expected to be completed by the end of 2027 and could carry up to 15 million tons of freight a year by 2030. The 760 km line would run from Termiz in Uzbekistan, via Mazar-e-Sharif and Logar in Afghanistan, to Kharlachi located near to the border.

This corridor has the potential to be a strategic game-changer for landlocked CAREC members. This is because the ports in Pakistan is the shortest route for Central Asian Republics to access international maritime trade lanes. By facilitating a rail corridor, shipments from Central Asia can use Karachi, Port Qasim or Gwadar to transport their goods to international markets. This route is also effective for accessing the lucrative markets in Middle East. For Central Asia, using the above-named ports is the most efficient. This is because connecting to the ports in the east in PRC is too far away (more than 4,000 km) and using the ports to the west in Georgia has limited connections and need to cross the Black Sea, which has constraints due to congestion at the Bosphorus Strait.

Shymkent–Tashkent–Khujand Economic Corridor (STKEC)

The Shymkent city (in Kazakhstan), Tashkent city (in Uzbekistan), and Khujand city (in Tajikistan) and their surrounding oblasts of Turkestan, Tashkent, and Sughd are strategically located within Central Asia and host 15% of the total population of the region. The countries are rich in core materials such as oil, gas, and uranium. The three STKEC member countries are also important from the perspectives of trade ties, energy, and multilateral cooperation with other countries around the world. In particular, the trade volume between the three countries have expanded rapidly in recent years. ADB supported the requests of Kazakhstan, Tajikistan and Uzbekistan to develop a corridor that covers the three cities and tap on synergistic elements to boost local production and cross-border trade.

In December 2022, the Governments of Kazakhstan and Uzbekistan signed a framework agreement on the establishment of the International Centre for Industrial Cooperation (ICIC). In March 2023,

[14] Ministry of Information and Broadcasting (Pakistan), https://www.moib.gov.pk/News/54669.

the parties chose a location for the ICIC near the Atameken-Gulistan BCP.[15] Each country allocated 50 hectares of land for the ICIC from each side of the border. Subsequently, the governments also agreed on a list of priority industries for the ICIC and identified 63 joint projects to be implemented in the ICIC. The list of priority industries includes food, textile, and pharmaceutical industries.[16]

For Tajikistan, the plan is to develop a modern Trade and Logistics Center in Khujand. This center will serve the regional needs of the Sugd oblast as well as freight traffic with Kazakhstan and Uzbekistan.

Almaty–Bishkek Economic Corridor (ABEC)

Almaty and Bishkek are two economic centers in CAREC region. The distance between the two cities is only 236 km, and the journey could be completed in four hours of driving. The Almaty–Bishkek Economic Corridor (ABEC) is a pilot economic corridor under the Central Asia Regional Economic Cooperation (CAREC) program. ADB serves as the secretariat for the CAREC Program and ABEC Initiative. Implementing an economic corridor between Almaty, Bishkek, and the surrounding regions since 2014, ABEC seeks to connect people, businesses, and ideas to shorten economic distance between the two cities of Almaty and Bishkek. This means reducing travel times; creating one competitive market for health, education, and tourism services; and aggregate agricultural produce in wholesale markets.

The vision of the economic corridor is that the two cities and its surrounding regions can achieve far more together than either can achieve alone. ABEC is guided by the Intergovernmental Council, which is chaired by the two Prime Ministers of the Kyrgyz Republic and Kazakhstan. The Council created the ABEC Subcommittee, a regular official meeting of the two national governments, regional governments, and private sector representatives, which is co-chaired by the Kazakh vice-minister of National Economy and the Kyrgyz deputy minister of Economy and Finance.

On 16–17 February 2023, more than 50 representatives from the governments of Kazakhstan and the Kyrgyz Republic met in Bishkek. CWRD DG E. Zhukov joined the meeting that was co-chaired by Deputy Minister of Economy and Commerce of the Kyrgyz Republic Kanatbek Abdrakhmanov and Vice-Minister of National Economy of Kazakhstan Abzal Abdikarimov. Both countries recorded their agreements in a signed protocol.

PRC–Mongolia

Under the Convention on Transit Trade of Land-locked States (1965), Mongolia as a landlocked country enjoys the right to access a seaport for transit trade.[17] Since Mongolia only has two neighbor countries, the preference is to use PRC ports in the south, rather than the Russian ports in the north. This is because the Chinese ports are nearer to Mongolia, and they can operate in winter with less problems from the freezing of the sea waters. Tianjin is the most popular port for Mongolia and is 980 km to Zamiin Uud, and 1,700 km to Ulaanbaatar. Railway is the preferred option to transport imports and exports between Ulaanbaatar and Tianjin. It is also possible to transport goods by trucks, and the Zamiin-Uud and Erenhot BCPs serve both rail and road transport. However, road transport is more expensive. A rail shipment from Tianjin to Ulaanbaatar typically takes 10 to 14 days in one direction. As PRC and Mongolia use different rail gauge standards, the trains must stop at the border for change of gauge operation, before continuing to the final destination.

Since 2023, shipment time along this route gradually increased to three months, an unbearably long duration. The problem was attributed to the bottleneck and Zamiin-Uud and Ulaanbaatar. While Tianjin

[15] Source: Uz Daily, https://www.uzdaily.uz/en/post/79713, accessed on 9 May 2023.
[16] Source: Spot.uz, https://www.spot.uz/ru/2023/04/25/cooperation-center, accessed on 9 May 2023.
[17] United Nations Treaty Collection, https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=X-3&chapter=10&clang=_en.

port has the capacity to process 45 trains per day, and Erenhot 20 days per day, the Zamiin-Uud BCP is only able to handle 7 trains per day. Furthermore, priority is given to transit trains that move to the Russian Federation and Europe. The problem is further compounded by the low productivity at Ulaanbaatar, where there are 14 stations that handle the incoming goods but are using ageing equipment and cranes that can only unload 1 to 2 trains per day at each station.

The situation has created a demand for road transport, where Mongolian consignees resorted to the use of trucks to collect the pending goods in Tianjin port, and send them to the BCPs. Zamiin-Uud has a newly modernized zone for processing road shipments, financed by the PRC. The use of road transport is expensive but greatly shortens the delivery time.

Figure A1.4: The PRC–Mongolia Trilateral Rail Corridor

Source: Consultant.

China Block Trains

The China–Europe container block train initiative—branded as China Railway Express (CRE), has emerged as a key overland trade artery between East Asia and Europe, offering a faster alternative to maritime transport. It plays an increasingly strategic role for CAREC countries, with several border-crossing points (BCPs) such as **Alashankou, Dostyk, Khorgos, and Altynkol** serving as critical gateways. These trains link over 110 Chinese cities with 200 cities across 25 European countries.

In 2023, the CRE program recorded 17,523 block trains transporting approximately 1.9 million TEUs, registering a 6% increase in train frequency and 5% growth in container volume compared to 2022. While geopolitical uncertainties in Eastern Europe and reduced post-COVID demand slightly tempered earlier exponential growth, the network remains a resilient and essential logistics channel.

The outbound trains from PRC primarily carry **electronics, machinery, garments, and consumer goods**, while inbound trains to PRC deliver **automotive parts, wines, dairy, and industrial equipment**.

The container trains experienced delays at transshipment points due to gauge change operations, especially at Dostyk/Altynkol (Kazakhstan) and Brest/Malaszewicze (Belarus/Poland). These processes

Table A1.1: Different Routes of the China Rail Express (CRE)

Route	Description	Key Border Points	Average Transit Time
Northern Route	Via Mongolia and Russia to Belarus and Poland	Erenhot–Naushki, Manzhouli–Zabaykalsk	16–18 days
Middle Route	Via Kazakhstan and Russia, often using Dostyk or Alashankou	Alashankou–Dostyk, Khorgos–Altynkol	14–16 days
Southern Route	Via Kazakhstan, Caspian Sea, and Türkiye using the Middle Corridor (TITR)	Khorgos–Aktau, BTK railway	15–17 days

Source: Compiled by the Consultant.

typically add 24–48 hours to total transit time. Additionally, disparities in customs clearance procedures and limited adoption of electronic data interchange (EDI) across borders hinder real-time cargo tracking and contribute to inefficiencies.

From a policy perspective, several considerations are highlighted for CAREC member governments and development partners:

- Infrastructure Modernization: Continued investment is needed at major BCPs (e.g., Khorgos, Dostyk, Altynkol) to expand border-crossing capacity, shorten change of gauge duration, and reduce rail congestion.
- Digital Trade Facilitation: Adoption of harmonized customs documentation, pre-arrival processing, and rail cargo tracking platforms will reduce administrative delays and improve cargo throughput.
- Sustainable Logistics Development: CRE offers a low-emissions alternative to maritime transport. Supportive policy instruments—such as carbon pricing incentives and green logistics zones—can reinforce this advantage.
- Diversification via Southern Corridors: To improve resilience, member states should develop alternative multimodal corridors, particularly along the Middle Corridor and through Türkiye, to supplement Northern Route dependence.

In 2023, PRC authorities continued to subsidize inland dry ports (e.g., Xi'an, Chengdu, Zhengzhou), while European partners increasingly encouraged backhaul flows to improve train balance. These dynamics reflect the CRE's role not only as a trade conduit but as a lever for regional economic integration and supply chain resilience.

Baku–Tbilisi–Kars (BTK)

The Baku–Tbilisi–Kars (BTK) railway is a strategic rail corridor linking the South Caucasus and Türkiye, offering a direct overland route between Central Asia, the Caspian Sea region, and Europe without transiting through Russian territory. It is a vital segment of the Middle Corridor (Trans-Caspian International Transport Route, TITR) and provides an alternative connection for container block trains and bulk cargo shipments moving between the People's Republic of China (PRC) and European markets. The BTK line spans 826 kilometers, connecting the Port of Alat (Baku) in Azerbaijan through Tbilisi and Akhalkalaki in Georgia to Kars in Türkiye.

Of the total length, 504 km lies in Azerbaijan, 263 km in Georgia, and 59 km in Türkiye. The line uses standard gauge (1,435 mm) from Kars to Akhalkalaki, where a gauge change terminal facilitates interoperability with the broad-gauge (1,520 mm) systems of Azerbaijan and other former Soviet republics. Originally inaugurated in 2017, the BTK line was temporarily suspended in 2023 for major renovation and expansion

Figure A1.5: The BTK Line

Source: Middle Corridor, https://middlecorridor.com/en/for-clients/info-clients/modernization-work-of-the-baku-tbilisi-kars-btk-railway-line-has-been-completed.

Table A1.2: Specifications of the Baku–Tbilisi–Kars (BTK) Line

Length	826 km (504 AZE, 263 GEO, 59 TUR)
Gauge Interchange	Akhalkalaki (1520 mm ↔ 1435 mm)
Capacity (Design)	5–6 million tons per year (target: 17 million)
2022 Freight Volume (pre-renovation)	Approximately 1.0 million tons
Target Transit Time (China–Europe)	12–15 days

AZE = Azerbaijan, GEO = Georgia, TUR = Türkiye.
Source: Compiled by the Consultant.

work—particularly at Akhalkalaki station and along a 184-km stretch in southern Georgia. Full service resumed in May 2024, restoring freight movement and enhancing overall corridor capacity.

The BTK serves both bulk and container traffic, including metals, construction materials, machinery, and food products. The railway reduces transit times from 30 to 45 days by sea to under 15 days via rail, enhancing competitiveness for time-sensitive and higher-value goods.

From a policy and investment perspective, the BTK's strategic benefits are manifold:

- Geopolitical Diversification: BTK offers an essential bypass of congested or politically sensitive routes (e.g., Northern Corridor via Russia and Belarus), especially relevant following the Ukraine conflict.
- Seamless Multimodal Linkage: The BTK complements Caspian ferry services (Aktau/Kuryk to Baku), enabling multimodal combinations that support East–West freight flows through landlocked Central Asia.
- Regional Integration and Trade Facilitation: The railway strengthens trilateral cooperation among Azerbaijan, Georgia, and Türkiye, and enhances market access for landlocked CAREC economies.

However, challenges remain. The gauge break at Akhalkalaki and the limited wagon exchange capacity continue to constrain throughput. Moreover, customs clearance is not yet harmonized across all three countries, and digital cargo tracking is still under development.

In 2023–2024, the governments of Azerbaijan, Georgia, and Türkiye, with support from international partners, invested over $100 million in BTK rehabilitation, focusing on:

- Railbed strengthening and slope stabilization
- Signal and communication systems upgrades
- Expansion of cargo handling facilities in Akhalkalaki and Kars

For CAREC policymakers, the BTK represents a priority corridor to support East–West trade connectivity. Policy actions to maximize the corridor's potential include:

- Harmonizing customs and transit procedures, possibly through a single window or unified transit regime
- Investing in logistics hubs and dry ports near Akhalkalaki and Kars
- Expanding containerization and multimodal service offerings, including temperature-controlled and fast-track rail services
- Promoting public–private partnerships (PPP) to improve commercial viability and attract freight operators

When the service is fully restored, the BTK is expected to handle up to 5 million tons of cargo annually by 2025, with future upgrades targeting a capacity of 17 million tons per year. As global supply chains recalibrate, BTK has the potential to extend the Middle Corridor, bridging Central Asia to Europe more efficiently and securely.

APPENDIX 2

2023 Updates on Policies

Notable updates on policies in Azerbaijan (2023)

Name	Stakeholders	Description
Green Corridor for Trusted Traders[a]	State Customs Committee	February 2023. Azerbaijan introduced expedited customs procedures for certified traders, aiming to reduce inspection times and enhance transparency.Businesses must demonstrate at least one year of import-export experience, utilize electronic customs services, and maintain compliance with customs regulations. Authorized users enjoy faster border crossings, minimized inspections, and the ability to submit electronic declarations in advance.
Digitalization at the Baku International Sea Trade Port[b]	Ministry of Transport, Communications and High Technologies, Baku International Sea Trade Port	In May 2023, the Port of Baku hosted the 14th International Capacity-Building Seminar on Trade and Transport Facilitation, focusing on the digital transformation of multimodal information exchange. Discussions included the implementation of Port Community Systems and the use of UN/CEFACT standards to enhance interoperability and streamline customs procedures. Additionally, the port continued to develop its Port Community System, integrating various stakeholders to facilitate efficient cargo handling and information sharing. This system supports the digitalization of customs processes, contributing to reduced clearance times and improved transparency.
Digital Trade Hub (DTH) Implementation[c]	Center for Analysis of Economic Reforms and Communication	The Digital Trade Hub is a unified digital platform, it facilitates electronic services for both local and foreign businesses, enabling them to conduct cross-border trade efficiently. The hub provides a secure environment for e-document exchange, digital customs declarations, licensing, and other regulatory compliance processes—all integrated into a single digital window. This significantly reduces bureaucratic delays and transaction costs for traders and logistics operators.

Notable updates on policies in Georgia (2023)

Name	Stakeholders	Description
Implementation of the Trade Facilitation Support Program[d]	Georgia Revenue Service (GRS)	GRS and the World Bank implemented the Trade Facilitation Support Program to improve cross-border trade procedures. The program focuses on aligning Georgia's trade practices with international standards, reducing clearance times, and enhancing transparency in customs operations.
Introduction of Electronic Customs Clearance System[e]	Georgia Revenue Service (GRS)	GRS introduced an electronic customs clearance system to streamline import and export procedures. This system reduces paperwork, accelerates processing times, and enhances the overall efficiency of customs operations, thereby facilitating trade and improving the business environment.
Expansion of the Trans-Caspian International Transport Route[f]	Ministry of Economy and Sustainable Development	Ministry of Economy and Sustainable Development announced plans to expand the capacity of the Trans-Caspian International Transport Route. This expansion aims to accommodate increasing cargo volumes and improve the efficiency of freight transit between Asia and Europe, solidifying Georgia's strategic position in regional logistics.

Notable updates on policies in Kazakhstan (2023)

Name	Stakeholders	Description
Introduction of the National Single Window for Trade[g]	State Revenue Committee of the Ministry of Finance, Ministry of Trade and Integration	Kazakhstan's Ministry of Trade and Integration introduced a National Single Window system to simplify trade processes. This platform allows traders to submit all required documentation electronically, reducing administrative burdens and expediting the movement of goods across borders.
Creation of the Middle Corridor Multimodal[h]	Ministry of Transport, TITR Association	In 2023, the three founding countries of the TITR (Kazakhstan, Azerbaijan, and Georgia) agreed to establish the Middle Corridor Multimodal, a single transportation operator for the TITR. The company will set a unified tariff for multimodal shipments across the TITR.
Proposal to create a green corridor for perishables shipments at the border between Kazakhstan and Kyrgyz Republic[i]	Kyrgyz–Kazakh Business Council	The council submitted a proposal to the governments of both countries to create a separate lane for the movements of perishables. This is because drivers have to wait for several days (up to two weeks) at the border during the peak season for such shipments.

Notable updates on policies in Kyrgyz Republic (2023)

Name	Stakeholders	Description
Implementation of the Authorized Economic Operator Program[j]	State Customs Service	The State Customs Service launched the Authorized Economic Operator (AEO) program to enhance supply chain security and efficiency. Certified operators benefit from simplified customs procedures, reduced inspections, and priority treatment, facilitating smoother trade operations.
Enhancement of the Bishkek–Osh Road Corridor[k]	Ministry of Transport and Roads	The Ministry of Transport and Roads commenced a project to upgrade the Bishkek–Osh road corridor, a vital route connecting northern and southern regions. Improvements include road widening, resurfacing, and the construction of bypasses to reduce travel time and enhance safety.
Kyrgyz Republic–Uzbekistan Customs Cooperation[l]	State Customs Service	In January 2023, the State Customs Service of the Kyrgyz Republic and the Customs Committee of Uzbekistan signed protocols to enhance cooperation. These agreements focus on the exchange of customs statistical data and the prevention of suspicious financial transactions by foreign trade participants.

Notable updates on policies in Mongolia (2023)

Name	Stakeholders	Description
Creation of a Dry Ports Strategy[m]	Ministry of Road and Transport Development, Mongolia Maritime Administration	The Prime Minister ratified an order to revive the inter-agency Working Group on Dry Ports. This group is tasked with coordinating efforts across various government agencies to develop and implement dry port projects. The Dry Ports Unit was established to spearhead the development of dry ports in Mongolia.
Modernization at Zamiin-Uud BCP[n]	Ministry of Road and Transport Development, Mongolian Customs General Administration	The new cargo facility at Zamiin-Uud BCP was upgraded with financial support from PRC. The import vehicle gates increased from three to 22 and export gates from two to five. The facility includes 28 buildings, a full suite of utility infrastructure, an 11-kilometer power supply line, substation, lighting for the premises, and security systems such as cameras and perimeter fencing.
Implementation of Customs Automated Information System (CAIS)[o]	Mongolian Customs General Administration	In December 2023, Mongolia launched the Customs Automated Information System (CAIS) as part of its electronic reforms to improve border services. The new system replaced the outdated platform, offering 13 online services for the public and 33 for enterprises, thereby enhancing efficiency and transparency in customs procedures.

Notable updates on policies in Pakistan (2023)

Name	Stakeholders	Description
Launch of the National Single Window (NSW) System[p]	Pakistan Customs	Pakistan Customs, under the Federal Board of Revenue, launched the National Single Window (NSW) system to streamline trade processes by allowing traders to submit all import, export, and transit documentation through a single digital platform. This initiative aims to reduce cargo clearance times and costs, enhancing trade efficiency and compliance with international standards.
Launch of Port Community System[q]	Pakistan Single Window	PSW initiated the first phase of its Port Community System in June 2023, aiming to enhance seaport operations and logistics efficiency.
Restriction on Afghan Transit Trade[r]	Ministry of Commerce, Federal Board of Revenue	In October 2023, the Federal Board of Revenue (FBR) imposed a ban on 212 items being imported into Afghanistan via Pakistan under the ATT. This decision was formalized through Statutory Regulatory Order (SRO) 1380 issued by the Ministry of Commerce. The banned items included: • Fabrics with 17 different HS codes • Vehicle tires • Three types of black tea • 14 different types of cosmetics and toiletries • Nuts and fruits with 14 different HS codes • Vacuum flasks • Home appliances (completely built units) with 49 different HS codes

Notable updates on policies in the People's Republic of China (2023)

Name	Stakeholders	Description
Establishment of the China (Xinjiang) Pilot Free Trade Zone[s]	Ministry of Commerce	The Ministry of Commerce inaugurated the China (Xinjiang) Pilot Free Trade Zone, the first of its kind in China's northwestern border region. Covering areas in Urumqi, Kashgar, and Horgos, the zone aims to promote trade and investment by offering preferential policies and streamlined customs procedures. This initiative is expected to enhance economic cooperation with neighboring countries and contribute to regional development.
Participation in the Trans-Caspian International Transport Route[t]	Ministry of Transport	China's Ministry of Transport announced plans to enhance the Trans-Caspian International Transport Route, aiming to improve connectivity between China and European countries via Central Asia. This initiative includes infrastructure investments and policy coordination to facilitate smoother and more efficient cargo transit, thereby strengthening trade links along the route.
Strengthening Logistics Along the New International Land-Sea Trade Corridor[u]	General Administration of Customs	In August 2023, the General Administration of Customs (GAC) announced key measures to facilitate cross-border logistics along the New International Land-Sea Trade Corridor. These measures included facilitating customs clearance for intermodal transport, supporting the expansion of international rail transport capacity, and enhancing connections with the China-Europe Railway Express and the Yangtze River. The initiative aimed to support economic and trade growth in regions along the corridor and strengthen customs inspection and quarantine cooperation with ASEAN countries, with the potential to extend to Central Asia.

Notable updates on policies in Tajikistan (2023)

Name	Stakeholders	Description
Introduction of the Single Window System for[v]	Customs Service	The Customs Service under the Government of Tajikistan introduced a Single Window system to streamline import and export procedures. This digital platform allows traders to submit all necessary documentation electronically, reducing processing times and enhancing trade efficiency.
Rehabilitation of the Dushanbe–Khujand Road[w]	Ministry of Transport	The Ministry of Transport initiated the rehabilitation of the Dushanbe-Khujand road, a critical route connecting the capital to the northern regions. The project focuses on road widening, resurfacing, and safety enhancements to facilitate smoother transport of goods and passengers.
Discussion with Uzbekistan to remove the need for cargo permit in bilateral cargo movements[x]	Ministry of Economic Development and Trade	Tajikistan and Uzbekistan discussed a protocol amending their 2018 agreement on international road transport. This amendment eliminated the requirement for permits (commonly known as "dozvols") for mutual cargo transport between the two countries. The change aims to streamline freight movement, reduce delivery times, and lower the risk of cargo damage. The removal of permit requirements applies exclusively to bilateral cargo transport between Tajikistan and Uzbekistan. For transit to third countries via Uzbekistan, the "dozvol" permit remains necessary.

Notable updates on policies in Turkmenistan (2023)

Name	Stakeholders	Description
Implementation of the National Trade Single Window[y]	Customs Service	Turkmenistan launched a national trade single window system in 2023, integrating components of the International Road Transport Union's system within its ASYCUDA World transit module. This digital platform facilitates the electronic exchange of preliminary information concerning upcoming goods transportation by road, enhancing efficiency in customs procedures and transit facilitation. The initiative contributed to Turkmenistan achieving a perfect score in the 2023 United Nations global survey on digital and sustainable trade facilitation.
Introduction of a New Tariff System at Turkmenbashi Port[z]	Turkmenbashi International Seaport	In December 2023, the Turkmenbashi International Seaport introduced a revised tariff system aimed at enhancing its role as a logistics hub. The updated tariffs are designed to attract increased cargo traffic and streamline operations, particularly for transit cargoes. This initiative supports the development of a cargo base within the port and facilitates the movement of goods from neighboring countries to destinations like Russia and Europe.
Strengthening Regional Rail Transport Cooperation[aa]	Transport and Logistics Center of Turkmenistan	In September 2023, Turkmenistan and Kazakhstan held a joint commission meeting in Turkmenbashi, focusing on enhancing transport links. Subsequently, in November, a memorandum of cooperation was signed between Russian Railways Logistics, Kazakhstan Railways, and the Transport and Logistics Center of Turkmenistan. The agreement aims to develop a joint railway service on the international route "North–South," emphasizing Turkmenbashi's strategic role in regional transit.

Notable updates on policies in Uzbekistan (2023)

Name	Stakeholders	Description
Signing of new Bilateral and Multilateral Trade Agreements[bb]	Ministry of Foreign Affairs, Customs Committee	In March 2023, Uzbekistan and Pakistan implemented a Transit Trade and Preferential Trade Agreement to boost bilateral trade. Under this agreement, Uzbekistan's registered vehicles with valid permits can enter Pakistan without submitting financial security for duties and taxes, based on reciprocity. In November 2023, Uzbekistan, Afghanistan, and Pakistan agreed to enhance trilateral trade and improve transit facilities, aiming to strengthen economic cooperation and regional connectivity.
Digitalization of Cross-Border Cargo Processing between Uzbekistan and Turkmenistan[cc]	Customs Committee	In June 2023, Uzbekistan and Turkmenistan launched a digital transport program to facilitate cargo transportation between the two countries. This system enables timely completion of registration processes and supports the adoption of paperless modes in international cargo transportation.
Reduction of Value Added Tax (VAT)[dd]	Ministry of Economy and Finance	Starting in 2023, Uzbekistan reduced the VAT rate from 15% to 12% to lower the cost of imports and encourage trade. Goods imported by foreign investors for their own needs are indefinitely exempt from customs duties.

[a] CAREC, https://www.carecprogram.org/uploads/Session-04_AZE_AEO-Program-Updates_ENG.pdf.
[b] UNECE, https://itt.singlewindow.org/unece-seminar-2023.
[c] Center for Analysis of Economic Reforms and Communication, https://ereforms.gov.az/en/page/reqemsal-ticaret-qovsaqi-9.
[d] World Bank, https://www.worldbank.org/en/programs/trade-facilitation-support-program.
[e] Georgia Revenue Service, https://www.rs.ge/.
[f] Middle Corridor, https://middlecorridor.com/en/.
[g] World Customs Organization, https://www.wcoomd.org/en/media/newsroom/2024/february/wco-supports-single-window-assessment-in-kazakhstan.aspx?p=1&utm_source=chatgpt.com.
[h] Astana Times, https://astanatimes.com/2024/05/kazakhstans-role-in-shaping-trans-caspian-transport-route/.
[i] 24.kg, https://24.kg/english/274705_Green_corridor_proposed_to_be_created_on_Kyrgyz-Kazakh_border/.
[j] CAREC, https://www.carecprogram.org/uploads/Session-04_KGZ_AEO-Program-Updates_ENG.pdf.
[k] National Investment Authority, https://invest.gov.kg/wp-content/uploads/2023/05/EN-47.pdf.
[l] Kun.uz, https://kun.uz/en/news/2023/01/27/uzbekistan-and-kyrgyzstan-exchange-more-than-20-bilateral-documents.
[m] UNESCAP, https://www.unescap.org/sites/default/d8files/event-documents/TS2_Country%20presentation_Mongolia.pdf.
[n] Parliament of Mongolia, https://www.parliament.mn/en/nn/63208/.
[o] CAREC, https://www.carecprogram.org/uploads/Session-05_BM-Modernization-and-Trade-Supply-Chain-DDG-Enkhtaivan.pdf.
[p] FBR, https://www.fbr.gov.pk/national-single-window-nsw-is-a-step-towards-introducing-egovernance-in-the-country/132053.
[q] Pakistan Single Window, https://psw.gov.pk/public/psw-extends-its-digital-trade-network-adding-more-government-departments.
[r] FBR, https://download1.fbr.gov.pk/SROs/20231031610344385SRO-1380(I)2023.pdf.
[s] Ministry of Commerce, https://english.mofcom.gov.cn/PressConferenceHomepage/ForeignTrade/art/2024/art_bb35664c6f7b497a8538024409f825ce.html.
[t] Middle Corridor, https://middlecorridor.com/en/.
[u] State Council, https://english.www.gov.cn/news/202308/05/content_WS64cd8554c6d0868f4e8de5db.html.
[v] Customs Service, https://www.customs.tj/.
[w] Ministry of Transport, https://www.mintrans.tj/.
[x] Asia Plus, https://asiaplustj.info/en/news/tajikistan/economic/20241126/tajikistan-and-uzbekistan-abolish-permits-for-mutual-cargo-transport.
[y] UNCTAD, https://unctad.org/news/turkmenistan-trade-single-window-eases-transit-powers-growth.
[z] Business Turkmenistan, https://www.business.com.tm/post/11148/turkmenbashi-international-sea-port-introduces-new-tariff-system.
[aa] Caspian News, https://www.business.com.tm/post/11148/turkmenbashi-international-sea-port-introduces-new-tariff-system.
[bb] UNESCAP, https://www.unescap.org/sites/default/d8files/event-documents/Apr30-15_Uzbekistan.pdf.
[cc] News Central Asia, https://www.newscentralasia.net/2023/06/05/cargo-transportation-between-turkmenistan-and-uzbekistan-digitized.
[dd] Tax Code, https://lex.uz/ru/docs/4674893#.

APPENDIX 3

Corridor Performance Measurement and Monitoring Methodology

The Corridor Performance Measurement and Monitoring (CPMM) methodology is based on a time/cost–distance (TCD) framework and involves four major stakeholders: (i) drivers, (ii) CPMM partners and coordinators, (iii) field consultants, and (iv) the Central Asia Regional Economic Cooperation (CAREC) Program trade facilitation unit.

The TCD methodology, developed by the United Nations Economic and Social Commission for Asia and the Pacific, focuses on the time and costs involved in transportation and analyzes transport inefficiency and bottlenecks. It lays out the cost and time components of door-to-door movements of a vehicle along a transport corridor, and tracks delays at borders and other inspection points along the corridor.

Under the CAREC CPMM, coordinators of each CPMM partner every month, and randomly select drivers transporting cargoes passing through the six CAREC priority corridors to fill up the drivers' CPMM forms. The coordinators enter data from the drivers' forms into TCD spreadsheets. Each partner association completes about 10–30 TCD forms a month, which are submitted to the field consultants and screened for consistency, accuracy, and completeness.

The TCD data submitted by partner associations is normalized so each TCD sheet can be summed up and analyzed at the subcorridor, corridor, and aggregate level of reporting.

Normalization is done in terms of a 20-ton truck in the case of road transport, or a twenty-foot equivalent unit (TEU) in the case of rail traveling 500 kilometers (km). The number of border-crossing points (BCPs) for subcorridors is also normalized for each 500-km segment.

Normalization of each TCD sheet comprises the following steps:

(i) Each TCD is split between the non-BCP portion and BCP portion in case the shipment crossed borders.

(ii) The time and cost figures for the non-BCP portion are normalized to 500 km by multiplying the ratio of 500 km by the actual distance traveled.

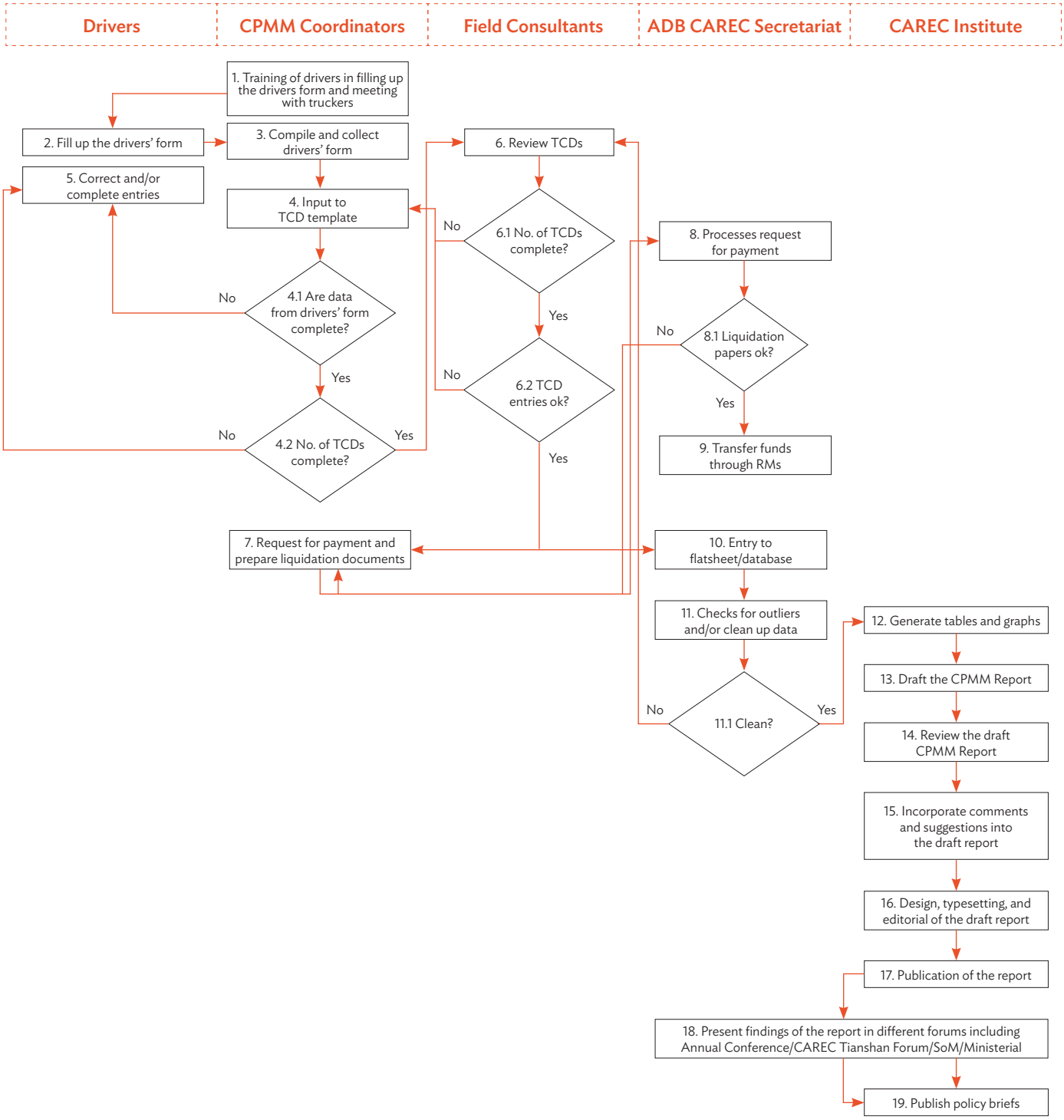
(iii) The time and cost figures for the BCP portion are normalized based on the ratio of a predetermined number of BCPs for each 500-km segment over the actual number of BCPs crossed.

(iv) The TCD is reconstituted by combining the normalized non-BCP portion and the normalized BCP portion.

To measure the average speed and cost of transport for trade, the cargo tonnage or number of TEU containers is used as weights (normalized at 20 tons) in calculating the weighted averages of speed and cost for subcorridors, corridors, and for the overall data, based on normalized TCD samples.

The detailed CPMM flow chart is in Figure A3.

Figure A3: Corridor Performance Measurement and Monitoring Flowchart



ADB = Asian Development Bank, CAREC = Central Asia Regional Economic Cooperation, CPMM = Corridor Performance Measurement and Monitoring, MC = ministerial conference, RM = resident mission, SOM = Senior Officials' Meeting, TCD = time/cost–distance.
Source: Asian Development Bank.

CPMM Partners

CPMM partners are national transport carriers and forwarders selected to work with the CAREC Trade Facilitation Unit in implementing the CPMM. A specific person is assigned by each partner to receive training on the CPMM mechanism, train the drivers, customize the drivers' form, and enter the data into a customized spreadsheet. ADB pays the CPMM partners based on a pre-determined unit rate per survey.

National Association Drivers

To ensure accuracy of CPMM data analysis, raw data should be collected as close to the source as possible. Drivers are asked to record how long (time) or how much (cost) it takes them to move from origin to destination. The drivers use a country-specific driver's form to record and submit data to the CPMM partners.

Field Consultants

Two international field consultants work with the CAREC trade facilitation team to develop the CPMM methodology, and travel to the CAREC countries to standardize implementation. They also analyze the aggregated data and draft CPMM quarterly and annual reports.

CAREC Trade Facilitation Unit

Based in the headquarters of the Asian Development Bank, Manila, the CAREC Trade Facilitation Unit is responsible for collecting and aggregating all completed CPMM spreadsheets. Using specialized statistical software, the team constructs the charts and tables for analysis by the field consultants and assists in CPMM report preparation.

APPENDIX 4

2023 Partner Associations

The Central Asia Regional Economic Cooperation (CAREC) Corridor Performance Measurement and Monitoring (CPMM) partners are national carrier and forwarder associations already established in CAREC member countries and are essential to the success of the CPMM mechanism. Trained to gather CPMM raw data, their key responsibilities include the following:

(i) act as the local focal point to collaborate with the Asian Development Bank (ADB) CAREC trade facilitation team in conducting the CPMM annual exercise;

(ii) organize and train drivers to use customized drivers' forms for data collection;

(iii) review completed drivers' forms to ensure data completeness and correctness;

(iv) input raw data from drivers' forms into the CPMM spreadsheets; and

(v) submit completed CPMM files to CAREC.

Table A4: 2023 Corridor Performance Measurement and Monitoring Partner Associations

	Country	Association		Data Collected in 2023
1	Afghanistan	Association of Afghanistan Freight Forwarding Companies	AAFFCO	360
2	PRC	Xinjiang Uygur Autonomous Region Logistics Association	XULA	520
3	Georgia	Georgia International Road Carriers Association	GIRCA	120
4	Kazakhstan	Association of National Freight Forwarders of the Republic of Kazakhstan	KFFA	60
5	Kyrgyz Republic	Freight Operators Association	FOA	120
6	Mongolia	Mongolia Chamber of Commerce and Industry	MNCCI	160
7		National Road Transport Association of Mongolia	NARTAM	240
8	Pakistan	Pakistan International Freight Forwarders Association	PIFFA	240
9	Tajikistan	Association of Road Transport Operators of Republic of Tajikistan	ABBAT	120
10	Uzbekistan	Association for Development of Business Logistics	ADBL	240
11		Association of International Road Carriers of Uzbekistan	AIRCUZ	240
			TOTAL	**2,420**

PRC = People's Republic of China.
Source: Asian Development Bank.

APPENDIX 5

Trade Facilitation Indicators

Recognizing the pivotal roles of trade facilitation and transport connectivity in the economic growth of the Central Asia Regional Economic Cooperation (CAREC) region, member countries jointly developed and endorsed the CAREC Transport and Trade Facilitation Strategy (TTFS) in 2007. The TTFS had an integrated approach that centered on the development of six priority CAREC corridors through transport infrastructure investments and trade facilitation initiatives. It also mandated the monitoring and periodic measurement of the performance of the six transport corridors to

(i) identify the causes of delays and unnecessary costs along the links and nodes of each CAREC corridor, including border-crossing points (BCPs) and intermediate stops;

(ii) help authorities determine how to address the identified bottlenecks; and

(iii) assess the impact of regional cooperation initiatives.

In 2008, the Asian Development Bank (ADB) developed the CAREC Corridors Performance Measurement and Monitoring (CPMM) methodology that offers an accurate and evidence-based foundation for policies aimed at addressing these objectives. The current CPMM methodology is a result of modifications to the original time/cost-distance (TCD) methodology of the United Nations Economic and Social Commission for Asia and the Pacific, which optimized its ability to measure and monitor effectively the border crossing and corridor performance of CAREC corridors over time. The TCD methodology offers an extensive picture of the time and cost dimensions of transport and trade facilitation, particularly with regard to border crossings and other impediments along a transit corridor. Aside from time and cost, measures derived such as speed can be used to assess traffic density and road quality. With these factors, several measures and indicators can be developed for the monitoring of border-crossing and customs service efficiency, as well as road and rail infrastructure performance along corridors. When the corridors are monitored regularly, policy makers can easily pinpoint areas that need improvement and financial investment.

With data from TCD-format questionnaires, four trade facilitation indicators (TFIs) are monitored regularly to enable assessment of improvements made in the CAREC corridors. However, unlike other indicators, TFIs are less easy to quantify as they depend on a variety of factors such as (i) the quality and availability of physical infrastructure, (ii) national policies and regulations for transit and trade, (iii) border-crossing procedures, and (iv) the degree of harmonization among countries. Figure A5 Source: Asian Development Bank. illustrates the scope and extent measured in each indicator.

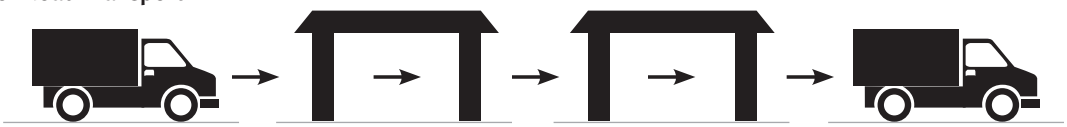
(i) ***TFI1: Time taken to clear a BCP.*** This TFI refers to the average length of time (hours) it takes to move cargo across a border from entry to exit of a BCP. The entry and exit points are typically primary control centers where customs, immigration, and quarantine are handled. Along with the standard clearance formalities, this measurement includes waiting time, unloading or loading time, and time taken to change rail gauges, among other indicators. The intent is to capture both the complexity and the inefficiencies inherent in the border-crossing process.

(ii) ***TFI2: Costs incurred at a BCP.*** This is the average total cost, in United States dollars ($), of moving cargo across a border from entry to exit of a BCP. Both official and unofficial payments are included. This indicator assumes 20 tons of cargo, so that the average costs across various samples are comparable.

The CPMM mechanism also analyzes unofficial payments: these are defined as a sum paid on top of that officially recognized by law, with the aim of gaining favored, preferential treatment in return. No official receipt is given. Tracking an unofficial payment is inherently difficult due to the opaque nature of the transaction.

Figure A5: Measuring the Trade Facilitation Indicators

For Road Transport

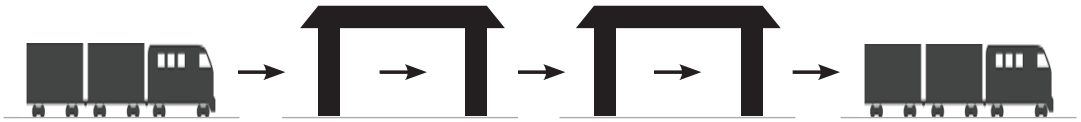


1 At Origin	2 Outbound Border-Crossing Point	3 Inbound Border-Crossing Point	4 At Destination
CPMM starts measurement when goods are loaded at the origin. Often, a truck must stop at intermediate nodes (for activities such as traffic police checkpoints) before reaching the outbound BCP of the country of departure.	The truck driver then waits in line for his turn to enter the BCP. When the truck is admitted into the BCP, the driver has to undergo a series of border activities. For BCPs that offer single-window services, the process could be faster. Any transloading (transfer of goods between trucks)is also done here under customs' supervision. Upon completion of border-crossing procedures, the truck exits the BCP, proceeds through the "no man's land" until it arrives at the inbound BCP of the adjacent country.	The truck driver again waits in line for his turn to enter the BCP. Inside the inbound BCP, the driver completes another series of border activities. Upon completion, the truck exits the BCP and proceeds with its journey. **TFI1 and TFI2 measure the duration and cost, respectively, of the activities upon reaching a BCP, waiting in line, and exiting the BCP.**	The process of exiting a country and entering another is repeated until the shipment reaches the final destination. At the final destination, the goods or containers are offloaded, and this will end the scope of CPMM data collection. In general, CPMM does not include the customs clearance and cargo collection time and cost by the consignee.

TFI3 measures the total transport rate from origin to destination, including cost of activities at BCPs and intermediate stops, per 500 km and per payload of 20 tons.

SWOD is derived from the speed of the truck while it is in transit.
TFI4 is derived by adding the time spent on BCPs and intermediate stops.

For Rail Transport



1 At Origin	2 Outbound Border-Crossing Point	3 Inbound Border-Crossing Point	4 At Destination
CPMM tracks the movement of a specific wagon or container, and not the entire train, as reported by its partner international freight forwarders. CPMM starts measurement when goods are loaded at the origin. Oftentimes, a train stops at intermediate nodes (for activities such as classification and marshalling) before reaching the outbound BCP of the country of departure.	At the outbound BCP, the shipment undergoes customs formalities, as well as other rail operations, to ensure the safety of the train and goods. After completion, the train is released to the inbound BCP of the adjacent country. At times, trains are withheld if the inbound BCP is congested.	At the inbound BCP, the shipment undergoes another set of customs formalities and necessary rail operations. **TFI1 and TFI2 measure the duration and cost, respectively, of the activities upon reaching a BCP, waiting in line, and exiting the BCP.**	The process of exiting a country and entering another is repeated until the shipment reaches the final destination. At the final destination, the wagons or containers are offloaded, and this will end the scope of CPMM data collection. In general, CPMM does not include the customs clearance and cargo collection time and cost by the consignee.

TFI3 measures the total transport rate from origin to destination, including cost of activities at BCPs and intermediate stops, per 500 km and per payload of 20 tons.

SWOD is derived from the speed of the truck while it is in transit.
TFI4 is derived by adding the time spent on BCPs and intermediate stops.

BCP = border-crossing point, CPMM = Corridor Performance Measurement and Monitoring, TFI = trade facilitation indicator.
Source: Asian Development Bank.

(iii) ***TFI3: Costs incurred while traveling along a corridor section.*** This is the average total costs, in $, incurred for a unit of cargo traveling along a corridor section within a country or across borders. A "unit of cargo" refers to a cargo truck or train with 20 tons of goods. A "corridor section" is defined as a stretch of road 500 kilometers (km) long. Both official and unofficial payments are included.

TFI3 is the sum of border-crossing cost and vehicle transport cost. Vehicle transport cost is defined as the variable cost component for a shipment: including remuneration for the driver during the shipment; sustenance cost (food and drink, accommodation); fuel cost; parking fees; and minor repairs.

The cost components must be specific to the shipment. Nonspecific cost items that are overheads or annual fees such as vehicle tax, insurance, depreciation, and one-time vehicle overhaul are not included in the calculation of vehicle transport cost. In general, the main drivers for this cost are driver remuneration and fuel cost.

Many factors can affect vehicle transport cost and, thus, influence the total transport cost. Factors such as distance, weight of cargo, quality of transport infrastructure, number of BCPs, oil price, foreign currency exchange rate, time of year of travel, empty backhaul, market competition, and new legislation can exert a sizable influence on it. All things being equal, vehicle transport cost will be primarily affected by the distance and cargo weight, as this is the basis for the carrier's quote of the shipment price. In practice due to data collection constraints, transport cost figures reported in CPMM refer to transport rates for trucks, or railway tariffs for trains. "Transport cost" is viewed from the perspective of the shipper and/or receiver. It represents the market rate paid to move the cargo—not the carrier's cost of providing the service.

To standardize transport cost, the CPMM adopts 500 km as a unit of distance, and 20 tons as a unit of weight. This standardized unit enables comparisons to be made between road shipments across different corridors with varying distance and weight.

(iv) ***TFI4: Speed of travel along a corridor section.*** This is the average speed, in kilometers per hour (km/h), at which a unit of cargo travels along a corridor section within a country or across borders. Again, a "unit of cargo" refers to a cargo truck or train with 20 tons of goods, and a "corridor section" refers to a stretch of road 500 km long. Speed is calculated by dividing the total distance traveled by the duration of travel. Distance and time measurements include border crossings.

The CPMM uses two measures of speed: speed without delay (SWOD) and speed with delay (SWD). SWOD is the ratio of the distance traveled to the time spent by a vehicle in motion between origin and destination (actual traveling time). SWD is the ratio of distance traveled to the total time spent on the journey, including the time the vehicle was in motion and the time it was stationary. Under the CPMM, all activities that cause delays (customs controls, inspections, loading and unloading, and police checkpoints, among others) are recorded by drivers. SWOD represents a measure of the condition of physical infrastructure (such as roads and railways), while SWD is an indicator of the efficiency of BCPs along the corridors.

Statistical Derivation of the Trade Facilitation Indicators

TFI1: Time Taken to Clear a Border-Crossing Point (hour)

This indicator highlights bottlenecks at BCPs, which typically involve lengthy border-crossing procedures and serious delays. Each component activity can be further examined to pinpoint the principal cause of delays (Table A5.1).

Table A5.1: Statistical Derivation of the Trade Facilitation Indicator 1

	Formula	Remarks
Formula, per TCD calculation	$TFI1_i = \sum_{j=1}^{a} t_j$ t_j = time spent on each activity j j = 1, 2, .., a = number of activities in each border crossing i = 1, 2, .., n = number of TCDs	The sum is taken from all of the activities carried out in each border crossing. However, for comparison, activities recorded under "others" are not included.
Aggregation, average value per corridor and per mode of transport	$\sum_{i=1}^{n} TFI1_i$ n = number of TCDs qualifying a given filter (per mode/per corridor) i = 1, 2, .., n = number of TCDs	The computation of the average is straightforward; no weights are necessary.

Source: Asian Development Bank.

TFI2: Costs Incurred at a BCP ($)

This indicator highlights BCPs that have relatively expensive border-crossing procedures, including unofficial payments. Each component activity can be further examined to pinpoint the drivers of cost (Table A5.2).

Table A5.2: Statistical Derivation of the Trade Facilitation Indicator 2

	Formula	Remarks
Formula, per TCD calculation	$TFI2_i = \sum_{j=1}^{a} c_j$ c_j = cost incurred on each activity j j = 1, 2, .., a = number of activities in each border crossing i = 1, 2, .., n = number of TCDs	The sum is taken from all of the activities carried out in each border crossing. However, for comparison, activities recorded under "others" are not included.
Aggregation, average value per corridor and per mode of transport	$\sum_{i=1}^{n} TFI2_i$ n = number of TCDs qualifying a given filter (per mode/per corridor) i = 1, 2, .., n = number of TCDs	The computation of the average is straightforward; no weights are necessary.

TCD = time/cost–distance.
Source: Asian Development Bank.

TFI3: Costs Incurred Traveling Along a Corridor Section ($)

This indicator provides an insight into the cost structure of a corridor and how it compares with those of other corridors. By examining each component, measures can be developed to minimize transit cost (Table A5.3).

Table A5.3: Statistical Derivation of the Trade Facilitation Indicator 3

	Formula	Remarks
Formula, per TCD calculation	$TFI3_i = v_i + b_i + s_i$ v_i = cost incurred during transit, per 500 km b_i = cost incurred during border crossing, per 500 km s_i = cost incurred during intermediate stops, per 500 km i = 1, 2, .., n = number of TCDs	The normalized cost incurred, per 500 km and per 20 tons of cargo (road) or one 20-foot equivalent unit (rail), in traveling a corridor section is the sum of normalized vehicle-operating or rail wagon-operating cost during transit and normalized cost during intermediate stops and border crossings.
Aggregation, average value per corridor and per mode of transport	$\sum_{i=1}^{n} TFI3_i$ n = number of TCDs qualifying a given filter (per mode/per corridor) i = 1, 2, .., n = number of TCDs	The computation of the average is straightforward; no weights are necessary.

km = kilometer, TCD = time/cost–distance.
Source: Asian Development Bank.

TFI4: Speed of Travel Along a Corridor Section (km/h)

Speed indicators provide insights into the level of infrastructure development of CAREC corridors by providing information on the speeds that cargo trucks and trains can attain while traversing specific corridor sections. Under the CPMM, speed is measured by two indicators: SWOD and SWD.

Another factor to consider is the weighting of the observations in the aggregation. As the computed speed represents the transport of the truck or train, speed should be weighted by the tonnage of cargo to represent the weighted average of speed of the cargo itself.

The **SWOD** (in km/h) is a metric that considers travelling speed only, i.e., when the delivery truck is moving on the road, or when the train is moving on the tracks. When the vehicle or train is stationary, the time is not counted (Table A5.4).

Table A5.4: Statistical Derivation of Speed Without Delay

	Formula	Remarks
Formula, per TCD calculation	$SWOD_i = \frac{D_i}{T_i}$ D = distance traveled from previous stop T = duration of travel i = 1, 2, .., n = number of TCDs	
Aggregation, average value per corridor and per mode of transport	$\sum_{i=1}^{n} (w_i) SWOD_i$ n = number of TCDs qualifying a given filter (per mode/per corridor) $w_i = \frac{c_i}{\sum_{i=1}^{n} c_i}$ i = 1, 2, .., n = number of TCDs	Since computation is per TCD calculation, each TCD is normalized and treated independently. Also, speed average is not weighted by duration of travel (a mathematical computation), and equal weights are given to each record. This method does not give more importance to longer trips than to shorter ones. However, records should be weighted by tonnage to measure the average speed of a unit of cargo, and not of the trips.

km = kilometer, SWOD = speed without delay, TCD = time/cost–distance.
Source: Asian Development Bank.

The **SWD** (in km/h) considers the total time taken for the entire journey, including stoppage time for various reasons (Table A5.5).

Table A5.5: Statistical Derivation of the Trade Facilitation Indicator 4

	Formula	Remarks
Formula, per TCD leg	$SWD_i = \frac{D_i}{T_i + A_i}$ D = distance traveled from previous stop T = duration of travel A = duration of activities (BCP and non-BCP) i = 1, 2, .., n = number of TCDs	
Aggregation, average value per corridor and per mode of transport	$\sum_{i=1}^{n}(w_i)SWD_i$ n = number of TCDs qualifying a given filter (per mode/per corridor) $w_i = \frac{c_i}{\sum_{i=1}^{n} c_i}$ i = 1, 2, .., n = number of TCDs	Since computation is per TCD calculation, each TCD is normalized and treated independently. Also, speed average is not weighted by duration of travel (a mathematical computation), and equal weights are given to each record. This method does not give more importance to longer trips than to shorter ones. But records should be weighted by tonnage to measure the average speed of a unit of cargo, and not of the trips.

km = kilometer, SWD = speed with delay, TCD = time/cost–distance.
Source: Asian Development Bank.

APPENDIX 6

Border-Crossing Activities

Under the Corridor Performance Measuring and Monitoring (CPMM) mechanism, time spent and payments made (official and unofficial) at each stop are recorded by activity. The list of activities encompasses all anticipated checks and procedures, both at border-crossing points (BCPs) and at intermediate stops along the transit corridor. However, as the CPMM focuses on BCPs, the list comprises mainly customs procedures and inspections during border crossings.

Road Transport

(i) ***Border security and control.*** Security personnel (i.e., the police or military) inspecting goods and checking documents at BCPs. Also includes payment of fees that may be official or unofficial.

(ii) ***Customs controls.*** Customs personnel inspecting documents and goods entering or exiting a country. Similar activities are compiling customs forms and paying fees.

(iii) ***Health or quarantine inspection.*** Health authorities checking a person for the presence of malignant or contagious disease. Also includes filling out health or quarantine forms, paying fees, and others.

(iv) ***Phytosanitary inspection.*** Agriculture authorities inspecting cargo for possible presence of harmful pests and plant diseases. Similar activities include filling out phytosanitary forms and paying fees.

(v) ***Veterinary inspection.*** Veterinary authorities inspecting cargo for the possible presence of infectious animal diseases and regulating the flow of animals and animal products to a location. Similar activities are filling out veterinary forms and paying fees.

(vi) ***Visa or immigration.*** Immigration authorities checking visas, and other required activities to apply for a visa to enter and exit the country when the driver has no valid visa. Also includes filling out immigration or visa forms and paying fees.

(vii) ***Traffic inspection.*** Inspection by the Traffic Inspectorate or State Traffic Safety Inspectorate. GAI means *Gosudarstvennya Avtomobilnaya Inspektsyya*.

(viii) ***Police checkpoint or stop.*** Traffic police covering roadblocks or checkpoints along a road that also requires payment to proceed.

(ix) ***Transport inspection.*** Checking the Certificate of Approval or Conformity for the Vehicles. Road passes are also checked.

(x) ***Weight and standard inspection.*** Checking the dimensions and weight of the vehicle with cargo, including queueing, payment of fees, and others.

(xi) ***Vehicle registration.*** Registration of vehicle, and/or payment of applicable road use taxes, and/or transit fees.

(xii) ***Emergency repair.*** Ad hoc repairs on vehicles that may be due to a tire blow-out, broken axle, and other reasons, generally because of bad road conditions. This is different from planned maintenance.

(xiii) ***Escort or convoy.*** A convoy is a row of vehicles that moves together. The vehicles are accompanied by escorts, who can be customs officials or traffic police to ensure that the cargoes reach their destination.

(xiv) ***Loading and/or unloading.*** Loading goods at the point of origin or loading and unloading at intermediate stops to deconsolidate cargo (i.e., transfer goods to another vehicle), or unloading upon delivery at the destination.

(xv) ***Road toll.*** Fees payable when drivers use a special section of roads or highways that are intended to shorten the travel time.

(xvi) ***Waiting and/or queueing.*** Waiting in lines at BCPs. Note that this activity does not include other activities, such as waiting in line to fill out or submit customs documents, which is recorded as part of customs controls.

Rail Transport

(i) ***Load cargoes.*** The movement of goods from storage or warehouse to the train. If the goods are moved to a temporary storage, such as the staging area or loading docks before relocating to the train, then only the time from the staging area or loading docks to the train is considered.

(ii) ***Unload cargoes.*** The movement of goods from the train to storage or warehouse. If the goods are moved to a temporary storage, such as the staging area or loading docks before relocating to the warehouse, then consider only the time from the train to the staging area or loading docks.

(iii) ***Fix cargo shift.*** This refers to the securing of cargoes inside the container or wagon. When items are stuffed into containers, workers may "choke" or secure the cargoes to ensure they stay in position during transit. For instance, automobiles also need additional securing. This is to ensure cargoes stay in position during transit. Normally, this is a problem related to manufactured products transported on pallets or in cartons and may not apply to bulk commodities.

(iv) ***Remove excess cargo.*** The movement of excess goods to comply with the weight requirement. This does not include inspection time. This activity only starts when the officer declares an "overweight" and orders a removal, and ends when the excess goods are relocated from the train.

(v) ***Transload at gauge change point.*** This only happens at the People's Republic of China (PRC) border or Polish border with a Commonwealth of Independent Nations (CIS) country. As the CIS uses 1,520-millimeter (mm) gauge, while non-CIS countries use 1,435 mm gauge, the cargoes need to be transloaded. This is done by changing the wheel sets or relocating the goods using forklifts.

(vi) ***Pickup and deliver wagons.*** The movement of loaded containers and wagons between terminals to the consignee's premises.

(vii) ***Replace or repair inoperable wagon.*** This applies only if one or more train wagons is found to need service because it is significantly damaged and cannot be addressed by emergency repair. The action includes the movement from the tracks to the servicing centers, as well as the actual repair of the wagon in the servicing center.

(viii) ***Emergency repair.*** Servicing of wagons on the tracks in the marshaling yard, without removing the wagon from the train. In this case the wagon is salvageable, in contrast to the more severe problem under the previous activity.

(ix) ***Trains classification.*** The internal regroup of goods, platform, wagons, and containers to form a new train. This is needed as goods are bound for different destinations and leave at different schedules. Normally this happens at major rail terminals.

(x) ***Fix document errors.*** This applies to a special situation when there are errors on the documents (freight bill, cargo manifest, packing list, and others). It does not include normal processing time and starts only when an error is found, and action is taken to correct the error. This activity ends when the authorities confirm the error is corrected. At borders, this correction may require substantial effort and many days to complete.

(xi) ***Reissue transit documents.*** This typically applies to the PRC rail shipments to CIS countries. Not all the PRC railways stations can handle international shipments, but there are occasions when loading and/or unloading is necessary in such domestic stations. Thus, a domestic document is used for movement of cargo from this station to the international terminal (such as Urumqi in the Xinjiang Uygur Autonomous Region), where another set of international documents is used. This is when the data is manually rewritten or translated.

(xii) ***Customs inspection.*** The customs officer assessing compliance with the customs code. The customs officer also checks for any dutiable goods, forbidden items, or dangerous goods.

(xiii) ***Technical inspection.*** Engineers or technicians inspecting to ascertain cargo security and safety, as well as the condition of the train and its equipment.

(xiv) ***Commercial inspection.*** An activity undertaken by a regulatory agency to affirm the quality of the shipment or to ensure that certain restricted material (dual use) is not exported.

(xv) ***Sanitary and phytosanitary control.*** The phytosanitary team regularly checking the train's sanitation standards, as well as the acceptability of goods, such as agriculture, food, meat, and consumable products. This action also covers health issues, such as health certificates of the staff onboard the train.

(xvi) ***Waiting due to various reasons.*** An activity undertaken by a regulatory agency to affirm the quality of the shipment or to ensure certain restricted material (dual use) is not exported.

APPENDIX 7

Central Asia Regional Economic Cooperation Border-Crossing Points

The endorsement and implementation of the Central Asia Regional Economic Cooperation (CAREC) Transport and Trade Facilitation Strategy in 2007 included the identification of six priority CAREC corridors where transport infrastructure investments and trade facilitation initiatives would be focused. The CAREC Corridor Performance Measuring and Monitoring (CPMM) mandate to identify causes of delays and unnecessary costs along the links and nodes of each CAREC corridor, including border-crossing points (BCPs) and intermediate stops, emphasizes monitoring BCPs where shipments undergo several transactions and procedures related to transborder trade.

Table A7 lists key BCP pairs for each side of the border.

Table A7: CAREC Corridor Border-Crossing Points

	Corridor	BCP1		BCP2	
1	1a, 2c	PRC	Alashankou	KAZ	Dostyk
2	1a, 1c	KAZ	Kairak	RUS	Troitsk
3	1b	PRC	Horgos	KAZ	Khorgos
4	1b, 6b, 6c	KAZ	Zhaisan	RUS	Kos Aral/Novomarkovka (Sagarchin)
5	1c	PRC	Torugart	KGZ	Torugart
6	1c, 3b	KAZ	Merke	KGZ	Chaldovar
7	2a, 2b, 2d, 5a, 5c	PRC	Yierkeshitan	KGZ	Irkeshtam
8	2a, 2b	KGZ	Kara-Suu (Dostuk)	UZB	Kara-Suu/Savay (Dustlik)
9	2a, 2b	TAJ	Patar	UZB	Andarkhon
10	2a, 2b	TAJ	Nau	UZB	Bekabad
11	2a, 6a	KAZ	Beyneu (rail)/ Tazhen (road)	UZB	Karakalpakstan (Daut-Ata)
12	2a, 2c	AZE	Baku	KAZ	Aktau
13	2a, 2b, 2c	AZE	Red Bridge (road)–Beyuk Kesik (rail)	GEO	Red Bridge (road)–Gabdabani (rail)
14	2b, 3a	UZB	Alat	TKM	Farap
15	2b	AZE	Baku	TKM	Turkmenbashi
16	2d, 3b, 5a, 5c	KGZ	Karamyk	TAJ	Karamyk
17	2d, 5a, 5c, 6c	AFG	Shirkhan Bandar	TAJ	Panji Poyon/Nizhni Pianj
18	3a, 3b	KAZ	Aul	RUS	Veseloyarsk
19	3a, 6b, 6c	KAZ	Zhibek Zholy–Saryagash/ Yallama	UZB	Gisht Kuprik–Keles
20	3a	TKM	Sarahs	IRN	Sarakhs
21	3b	TAJ	Pakhtaabad	UZB	Saryasia
22	3a, 6a, 6b	AFG	Hairatan	UZB	Termez/Airatom
23	3b, 6b, 6d	AFG	Islam Qala	IRN	Dogharoun
24	4a	MON	Ulaanbaishint/ Tsagaanur	RUS	Tashanta
25	4a	PRC	Takeshiken	MON	Yarant
26	4b, 4c	MON	Sukhbaatar	RUS	Naushki
27	4b	PRC	Erenhot	MON	Zamiin-Uud
28	6a, 6d	KAZ	Kurmangazy (road)/Ganyushking (rail)	RUS	Krasnyi Yar (road)/Aksaraskaya (rail)
29	6c	TAJ	Istaravshan	UZB	Khavast

continued on next page

Table A7 *continued*

Corridor		BCP1		BCP2	
30	6d	KAZ	Bolashak	TKM	Serkhetyaka
31	2d	AFG	Aqina	TKM	Imam Nazar
32	2d, 6d	AFG	Torghondi	TKM	Serkhet Abad
33	5b	PRC	Khunjerab	PAK	Sost
34	5c, 6a, 6b, 6d	AFG	Chaman	PAK	Spin Buldak
35	5a, 6c	AFG	Torkham	PAK	Peshawar
36	4c	PRC	Zuun Khatavch	MON	Bichigt
37	2a, 2b, 2c	AZE	Qirmizi Korpu	GEO	Tsiteli Khidi

AFG = Afghanistan, AZE = Azerbaijan, BCP = border-crossing point, GEO = Georgia, IRN = Iran, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MON = Mongolia, PAK = Pakistan, PRC = The People's Republic of China, RUS = Russian Federation, TAJ = Tajikistan, TKM = Turkmenistan, UZB = Uzbekistan.
Source: Asian Development Bank.

APPENDIX 8

Trade Facilitation Indicators: Summary Statistics

Table A8 provides a brief comparison of Corridor Performance Measurement and Monitoring road and rail trade facilitation indicators in 2022 and 2023. Mean, median, and margin (or the 95% confidence interval band around the mean) estimates are provided to describe the distribution of the sample collected.

Table A8: Trade Facilitation Indicators—Summary Statistics

Trade Facilitation Indicators		Overall						Road						Rail					
		2022			2023			2022			2023			2022			2023		
	Corridor	Mean	Median	Margin	Mean	Median	Margin	Mean	Median	Margin	Mean	Median	Margin	Mean	Median	Margin	Mean	Median	Margin
TFI1	Time taken to clear a border-crossing point, hr																		
	Overall	**21.9**	**7.5**	**± 1.4**	**16.3**	**6.2**	**± 0.7**	**9.9**	**4.5**	**± 0.4**	**11.0**	**4.7**	**± 0.5**	**40.6**	**25.3**	**± 2.3**	**29.3**	**12.8**	**± 2.2**
	1	42.1	25.3	± 2.5	32.5	18.0	± 2.4	17.4	5.6	± 3.1	14.7	2.9	± 2.4	52.1	32.2	± 3.0	43.0	26.0	± 3.3
	2	43.1	6.2	± 10.1	16.6	6.3	± 3.0	7.5	3.4	± 1.4	10.4	4.4	± 1.5	3.6	3.7	± 0.1	3.7	3.7	± 2.1
	3	3.1	1.7	± 0.5	2.9	2.0	± 0.3	2.8	1.7	± 0.4	2.8	2.0	± 0.2	8.6	4.8	± 5.4	6.8	2.4	± 7.7
	4	11.4	3.3	± 1.4	6.8	1.9	± 0.9	3.9	2.5	± 0.4	1.9	1.6	± 0.1	28.6	18.1	± 3.9	13.2	6.3	± 2.0
	5	18.0	18.0	± 0.5	22.9	19.0	± 0.8	18.0	18.0	± 0.5	22.9	19.0	± 0.8	–	–	–	–	–	–
	6	9.6	4.4	± 0.6	9.6	4.6	± 0.5	8.7	4.3	± 0.6	8.6	4.6	± 0.5	4.6	3.9	± 0.2	4.7	4.0	± 0.2
TFI2	Cost incurred at border-crossing clearance, $																		
	Overall	**216**	**106**	**± 17**	**154**	**105**	**± 4**	**208**	**73**	**± 21**	**131**	**71**	**± 4**	**215**	**202**	**± 10**	**225**	**212**	**± 11**
	1	643	316	± 92	334	310	± 17	1,107	326	± 205	347	310	± 32	294	300	± 13	321	300	± 13
	2	117	70	± 9	119	70	± 9	62	47	± 4	81	55	± 5	220	220	–	220	220	–
	3	74	71	± 4	75	71	± 4	74	71	± 4	75	71	± 4	225	225	–	–	–	–
	4	62	9	± 17	35	9	± 5	67	9	± 22	25	9	± 6	46	28	± 11	67	29	± 9
	5	226	225	± 3	229	232	± 3	226	225	± 3	229	232	± 3	–	–	–	–	–	–
	6	108	60	± 6	104	55	± 6	95	55	± 5	89	49	± 4	146	119	± 10	147	122	± 9

continued on next page

Table A8 *continued*

Trade Facilitation Indicators		Overall						Road						Rail					
		2022			2023			2022			2023			2022			2023		
	Corridor	Mean	Median	Margin	Mean	Median	Margin	Mean	Median	Margin	Mean	Median	Margin	Mean	Median	Margin	Mean	Median	Margin
TFI3	Cost incurred to travel a corridor, $ per 500 km, per 20-ton cargo																		
	Overall	**910**	**672**	**± 39**	**836**	**715**	**± 29**	**945**	**663**	**± 47**	**814**	**673**	**± 30**	**804**	**673**	**± 65**	**916**	**755**	**± 75**
	1	1,432	781	± 114	1,153	875	± 63	2,387	1,684	± 254	1,517	1,129	± 122	856	719	± 74	837	785	± 37
	2	631	559	± 85	726	550	± 91	686	577	± 96	731	551	± 92	259	262	± 9	274	274	± 16
	3	566	610	± 61	515	547	± 58	574	620	± 63	515	547	± 59	176	83	± 85	–	–	–
	4	1,264	1,392	± 109	1,139	957	± 127	1,566	1,520	± 71	1,250	1,291	± 44	454	74	± 303	963	124	± 321
	5	463	141	± 54	482	141	± 52	463	141	± 54	482	141	± 52	–	–	–	–	–	–
	6	697	639	± 30	717	655	± 33	647	612	± 30	659	604	± 34	1,106	1,093	± 85	1,138	1,135	± 75
TFI4	Speed to travel on CAREC corridors, km/h																		
	Overall	**20.1**	**19.7**	**± 1.9**	**21.6**	**20.4**	**± 2.1**	**23.4**	**22.9**	**± 2.1**	**24.9**	**24.3**	**± 2.4**	**11.9**	**8.2**	**± 2.9**	**12.4**	**10.1**	**± 2.9**
	1	19.2	18.6	± 4.4	22.4	22.1	± 4.5	32.4	30.6	± 6.7	32.4	29.6	± 6.4	13.1	8.1	± 4.0	15.2	11.9	± 4.2
	2	19.9	17.4	± 6.4	21.9	20.6	± 3.9	24.7	23.2	± 5.6	22.3	20.8	± 3.8	5.3	4.5	± 3.4	6.1	6.1	± 1.1
	3	24.7	25.2	± 4.9	37.1	39.5	± 7.6	25.4	25.3	± 4.9	37.6	40.2	± 7.5	14.5	13.7	± 9.8	18.7	21.6	± 40.5
	4	22.4	25.5	± 4.8	21.8	19.9	± 7.4	27.6	28.2	± 3.1	36.5	36.7	± 3.1	6.9	7.1	± 1.6	7.0	7.5	± 2.6
	5	12.5	13.1	± 1.2	10.7	10.2	± 1.0	12.5	13.1	± 1.2	10.7	10.2	± 1.0	–	–	–	–	–	–
	6	21.6	21.6	± 3.1	21.2	23.2	± 3.0	22.6	22.5	± 3.3	22.3	24.3	± 3.3	13.3	13.4	± 1.1	13.1	13.1	± 0.8
SWOD	Speed without delay, km/h																		
	Overall	**45.4**	**40.7**	**± 3.6**	**44.3**	**41.0**	**± 3.5**	**42.0**	**39.2**	**± 2.8**	**43.7**	**41.7**	**± 3.0**	**53.9**	**71.1**	**± 10.8**	**45.7**	**30.1**	**± 11.5**
	1	62.9	72.0	± 8.8	66.4	72.9	± 7.0	64.4	58.8	± 7.6	62.0	58.5	± 8.5	62.2	73.3	± 12.9	69.5	79.5	± 10.4
	2	55.9	53.3	± 8.5	43.1	46.9	± 5.7	48.3	51.4	± 6.0	42.0	46.8	± 5.1	78.7	79.7	± 15.9	79.7	79.7	± 0.6
	3	38.2	33.2	± 6.5	54.0	54.7	± 7.9	39.6	35.9	± 6.2	55.0	55.5	± 7.5	17.1	16.3	± 11.6	21.4	23.6	± 44.8
	4	43.7	51.3	± 8.6	34.3	46.7	± 11.7	52.9	53.2	± 5.1	57.8	57.0	± 2.9	16.0	12.2	± 7.6	10.5	11.9	± 3.8
	5	25.6	24.1	± 2.8	24.4	21.9	± 2.1	25.6	24.1	± 2.8	24.4	21.9	± 2.1	–	–	–	–	–	–
	6	35.5	34.2	± 2.9	37.0	33.3	± 3.4	36.9	34.6	± 2.9	38.7	34.7	± 3.5	24.7	28.2	± 6.3	24.8	27.8	± 6.1

– = no data, CAREC = Central Asia Regional Economic Cooperation, hr = hour, km = kilometer, km/h = kilometer per hour, TFI = trade facilitation indicator.
Source: Asian Development Bank.

APPENDIX 9

Activities at Road Border-Crossing Points

Table A9.1 shows the time and cost spent on activities of **outbound** road shipments from the indicated country at selected border-crossing points.

Table A9.1: Time and Cost Spent at Road Border-Crossing Points, Outbound

				Duration (hours)																					
				Total		Activities																			
BCP	Country	Corridor	Count	Average	Median	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv	xvi	xvii	xviii	1	2
Tsiteli Khidi	GEO	2	85	54.9	48.2	0.0	0.0															0.1	54.7	0.0	0.1
Khorgos	PRC	1	72	51.4	31.7	0.2	1.2	0.9				0.2					0.5				4.5		66.0		
Chaman	PAK	5,6	90	48.3	53.1	0.7	38.6					0.9			0.7		0.7						7.2		
Alashankou	PRC	1,2	36	37.2	27.8	0.1	1.1	0.9				0.1									3.6		31.4		
Peshawar	PAK	5,6	500	30.0	27.2		24.8					1.7					0.7				4.3		4.7		
Sarp	OTH	2	18	17.4	18.4	0.2	0.3		0.1			0.1	0.1			0.1	0.1						16.5		
Krasnyi Most	AZE	2	18	16.5	9.2	0.2	0.5															0.2	15.8	0.6	
Sarpi	GEO	2	28	16.3	16.3	0.1	0.1		0.0	0.0		0.0				0.0	0.0						16.0		
Shirkhan Bandar	AFG	2,5,6	111	14.2	14.1	0.8	1.1		0.9	0.6		0.7			0.7						4.5		5.0		
Torghondi	AFG	2,6	84	11.3	11.2	0.7	0.8								0.7		0.7				3.9		4.6		
Oibek	UZB	2,3,6	1	10.2	10.2	0.2	2.0																8.0		
Pakhtaabad (Dusti)	TAJ	3	9	9.3	9.3	0.2	0.6		0.1	0.1				0.2	0.2	0.2	0.2						8.2	0.1	
Tazhen	KAZ	2,6	121	7.1	5.0	0.2	0.4	0.1	0.1	0.1		0.1	0.1			0.1	0.1	0.2				0.2	6.3	7.8	8.3
Takeshikent	PRC	4	12	6.0	5.9	0.2	1.2	0.8				0.2									3.7				
Dautota	UZB	2,6	160	5.7	5.5	0.2	0.3		0.1	0.1		0.1	0.1			0.1	0.1	0.1					5.0	5.3	0.2
Saryasia	UZB	3	108	5.3	5.0	0.2	1.9		0.2	0.3	0.3	0.2				0.3	0.1			1.7			5.7		
Konysbayeva	KAZ	3,6	10	5.2	3.5	0.2	0.4		0.1	0.1	0.2	0.1				0.1	0.1						4.7		
Hairatan	AFG	3,6	155	5.1	4.7	0.7	0.8								0.7						2.8	0.7			
Alat	UZB	2,3	29	5.0	4.9	0.1	0.2		0.1							0.1	0.1						4.3		
Yallama	UZB	3,6	164	3.9	4.1	0.1	0.2		0.1	0.1		0.1	0.1			0.1	0.1	0.2					3.4		
Krasnyi Yar	RUS	6	18	3.0	2.7	0.2			0.1	0.1		0.1	0.1			0.1	0.1						2.4		
Merke	KAZ	1,3	8	2.9	2.7	0.2			0.1	0.1		0.1	0.1			0.1	0.1						2.3		
Taskala	KAZ	1, 6	24	2.8	2.6	0.5			0.1	0.1	0.1	0.1				0.1	0.1						2.3		
Kurmangazy	KAZ	6	96	2.8	2.7	0.3			0.1	0.1	0.1	0.1				0.1	0.1					1.2	2.3		
Kairak	KAZ	1	7	2.5	2.7	0.2			0.1	0.1		0.1				0.2	0.1						2.2		
Zhaisan	KAZ	1,6	82	2.4	2.6	0.2			0.1	0.1	0.2	0.1				0.1	0.1						2.1		
Karamyk	KGZ	2,3,5	24	2.3	2.3	0.3	0.3		0.4	0.3	0.3	0.3				0.3		0.3							
Panji Poyon	TAJ	2,5,6	120	2.1	2.3	0.2	0.3		0.2	0.2	0.2	0.2				0.2		0.3			0.5				
Karasu	PRC	0	12	2.1	1.6	0.2	0.6					0.2					0.5				1.5				
Karasu	KAZ	1	28	1.9	0.5	0.6																	6.0		

continued on next page

Table A9.1 *continued*

				Duration (hours)																				
				Total		Activities																		
BCP	Country	Corridor	Count	Average	Median	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv	xvi	xvii	xviii	1	2
Novomarkovka	RUS	1,6	18	1.8	2.0	0.2			0.1	0.1		0.1	0.2			0.2	0.1						2.3		
Erenhot	PRC	4	120	1.8	1.7	0.2	1.3					0.1						0.2							
Khiyagt	RUS	4	120	1.5	1.5	0.2	1.0					0.1						0.2					0.2		
Dustlik	UZB	2	16	1.1	0.7	0.2	0.5			0.3													7.0		
Irkeshtan	PRC	2,5	28	1.1	0.9	0.1	0.5					0.1									2.0				
Torugart	PRC	1	38	0.9	0.5	0.2	0.4					0.3									1.9				
Kuryk	KAZ	2	24	0.7	0.6	0.1										0.1	0.2					0.2	0.3	2.6	
Dostuk	KGZ	2	12	0.6	0.5	0.1	0.4			0.2	0.6														
Ak-Tilek	KGZ	1	48	0.5	0.3	0.2																	12.0		
Baku	AZE	2	96	0.1	0.1	0.1													2.0			0.1		0.2	

				Cost (US$)																					
				Total		Activities																			
BCP	Country	Corridor	Count	Average	Median	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv	xvi	xvii	xviii	1	2
Tsiteli Khidi	GEO	2	85	160	165	0	0															133	34	59	66
Khorgos	PRC	1	72	723	722	0	87	46				0					2				588		2		
Chaman	PAK	5,6	90	81	50	10	48					8			11		10								
Alashankou	PRC	1,2	36	821	837	0	170	85				0									567		0		
Peshawar	PAK	5,6	500	270	292		237					0					10				50				
Sarp	OTH	2	18	33	30		30		10																
Krasnyi Most	AZE	2	18	40	32	0	32															25	1	73	
Sarpi	GEO	2	28	10	10		10																		
Shirkhan Bandar	AFG	2,5,6	111	295	294	2	17		2	20		100			2						151				
Torghondi	AFG	2,6	84	272	270	2	27								2		16				224				
Oibek	UZB	2,3,6	1	0	0	0	0																0		
Pakhtaabad (Dusti)	TAJ	3	9	69	80	0	54		12	5				6	5	10	10						0	20	
Tazhen	KAZ	2,6	121	37	35	1	19	5	6	6						10	8	8				60	0	4	4
Takeshikent	PRC	4	12	416	424	0	82	47				0									287				
Dautota	UZB	2,6	160	9	5	0	15		5	5													2	7	40
Saryasia	UZB	3	108	122	135	14	23		8	5	10	5				8		5		54			2		
Konysbayeva	KAZ	3,6	10	40	38	0	23		5	8	10					9	5						7		
Hairatan	AFG	3,6	155	141	142	2	10								3						128	2			
Alat	UZB	2,3	29																						
Yallama	UZB	3,6	164	8	10				5	5		5													
Krasnyi Yar	RUS	6	18																						
Merke	KAZ	1,3	8	16	15				5	5						10									
Taskala	KAZ	1, 6	24	6	3	3			5		5					10									
Kurmangazy	KAZ	6	96	14	15	3			5	5	5					10	5								
Kairak	KAZ	1	7	16	15				5	6						10									
Zhaisan	KAZ	1,6	82	17	15	27			5	5						10									

continued on next page

Table A9.1 *continued*

				Cost (US$)																					
				Total		Activities																			
BCP	Country	Corridor	Count	Average	Median	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv	xvi	xvii	xviii	1	2
Karamyk	KGZ	2,3,5	24	48	48	3	25		3	3	5	3				3		3							
Panji Poyon	TAJ	2,5,6	120	20	16	2	5		2	2	2	5				3		2							
Karasu	PRC	0	12	33	0	0	0					0					0				78				
Karasu	KAZ	1	28	15	15	15																	0		
Novomarkovka	RUS	1,6	18	4	0	4																			
Erenhot	PRC	4	120	17	17		17																		
Khiyagt	RUS	4	120	9	9		4		5													9			
Dustlik	UZB	2	16	16	14	2	11			8													0		
Irkeshtan	PRC	2,5	28	0	0	0	0					0													
Torugart	PRC	1	38	23	0	0	0					0									214				
Kuryk	KAZ	2	24	86	55	4										3	54					41	0	28	
Dostuk	KGZ	2	12	10	8	1	7			6	12														
Ak-Tilek	KGZ	1	48	5	4	5																	0		
Baku	AZE	2	96	52	40	0													24			51			

AFG = Afghanistan, AZE = Azerbaijan, BCP = border-crossing point, GEO = Georgia, IRN = Iran, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MON = Mongolia, PAK = Pakistan, PRC = The People's Republic of China, RUS = Russian Federation, TAJ = Tajikistan, TKM = Turkmenistan, UZB = Uzbekistan.
Notes:
(i) Border security and control; (ii) Customs controls; (iii) Commercial inspection; (iv) Health and quarantine; (v) Phytosanitary inspection; (vi) Veterinary inspection; (vii) Visa or immigration; (viii) Transit conformity, (ix) GAI or traffic inspection; (x) Police checkpoint or stop; (xi) Transport inspection; (xii) Weight or standard inspection; (xiii) Vehicle registration; (xiv) Emergency repair; (xv) Escort or convoy; (xvi) Loading and/or unloading; (xvii) Road or bridge toll; and (xviii) Waiting or queue.
Source: Asian Development Bank.

Table A9.2 shows the time and cost spent on activities of **inbound** road shipments to the indicated country at selected border-crossing points

Table A9.2: Time and Cost Spent at Road Border-Crossing Points, Inbound

				Duration (hours)																					
				Total		Activities																			
BCP	Country	Corridor	Count	Average	Median	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv	xvi	xvii	xviii	1	2
Dostyk	KAZ	1,2	37	22.2	12.8	0.2	3.5	0.3				0.2				0.3	0.2				0.3		18.8		
Torkham	AFG	5,6	480	19.0	12.1	0.7	10.7					0.8		0.7	0.7	0.7					3.1	0.7	5.0		
Nur Zholy	KAZ	1	72	16.5	15.9	0.2	2.7		2.0			0.1											13.4		
Spin Buldak	AFG	5,6	100	10.7	8.1	0.6	3.9					0.8				0.7					0.7		4.9		
Yarant	MON	4	12	7.1	2.6	0.1	1.2	1.2				0.3											12.8		
Panji Poyon	TAJ	2,5,6	120	7.1	6.2	0.9	0.7		1.1	0.7		0.6			0.6				4.9						
Fotehobod	TAJ	2,3,6	1	6.3	6.3	0.3	2.0																4.0	0.2	
Farap	TKM	2,3	29	5.5	5.5	0.1	0.2		0.1							0.2	0.2				1.8	0.4	2.6		
Krasnyi Most	AZE	2	86	5.2	4.7	0.2	0.5				0.1		0.2			0.1	0.1					0.2	4.1	0.2	0.1
Dautota	UZB	2,6	217	4.5	6.3	0.2	2.0		0.2	0.4	0.3	0.2	0.1			0.3	0.1	0.5		4.0			2.3	0.3	1.1
Saryasia	UZB	3	9	3.8	3.3	0.1	0.4		0.1	0.1						0.1	0.1						3.0	0.1	8.0
Karasu	KAZ	1	48	3.4	3.0	2.6										0.1	0.1						3.9	0.1	
Tsiteli Khidi	GEO	2	18	2.8	1.2	0.0	0.0									0.0						0.1	2.6	10.0	
Kulma	TAJ	0	12	2.7	2.6	0.2	1.5					0.2											0.8		
Irkeshtan	PRC	2,5	1	2.3	2.3	0.1	0.3														2.0				

continued on next page

Table A9.2 *continued*

				Duration (hours)																					
				Total		Activities																			
BCP	Country	Corridor	Count	Average	Median	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv	xvi	xvii	xviii	1	2
Termez	UZB	3,6	24	2.3	2.3		1.5		0.8			0.7													
Taskala	KAZ	1, 6	9	2.1	2.2	0.3																	1.8		
Pakhtaabad (Dusti)	TAJ	3	108	2.1	1.7	0.3	1.3		0.2	0.3	0.3	0.4				0.1	0.2						3.9	0.2	
Tazhen	KAZ	2,6	160	2.1	1.3	0.2	0.4		0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1	0.2				0.3	2.1	2.5	7.0
Pogodaevo	KAZ	0	6	2.1	2.0	0.6																1.2	1.5		
Jalgan	TAJ	2,3,5	24	1.9	1.8											0.2		0.2		1.6					
Zamiin-Uud	MON	4	120	1.8	1.7	0.2	1.1		0.2			0.1						0.2							
Torugart	KGZ	1	40	1.7	2.1	0.1	0.5					0.3				1.2									
Kurmangazy	KAZ	6	63	1.7	1.7	0.4			0.1			0.1				0.1	0.1						1.6		
Altanbulag	MON	4	120	1.7	1.5	0.2	1.0		0.2			0.1						0.2					0.3		
Konysbayeva	KAZ	3,6	164	1.4	1.2	0.1	0.3		0.1	0.1		0.1	0.1	0.1		0.1	0.1	0.1			0.1	0.1	0.8		
Irkeshtam	KGZ	2,5	33	1.4	1.5	0.1	1.1			0.2		0.1										0.3			
Sarp	OTH	2	28	1.1	1.1	0.2	0.3		0.1	0.1		0.1	0.2			0.1	0.1								
Yallama	UZB	3,6	10	1.1	0.9	0.2	0.4		0.1	0.1	0.1	0.1	0.2				0.1						2.0	0.2	
Kuryk	KAZ	2	96	1.0	0.7	0.1				0.0	0.1				0.1	0.1	0.2			1.2		0.1	0.3	0.3	0.3
Zhaisan	KAZ	1,6	19	0.9	0.8	0.5			0.1	0.2	0.2	0.1	0.2			0.2	0.1					0.1			
Dustlik	UZB	2	12	0.8	0.7	0.1	0.5			0.5	0.8														
Ozinki	RUS	1, 6	5	0.8	0.8	0.2			0.1	0.2	0.2	0.1	0.1			0.2	0.1					0.1			
Mashtakovo	RUS	0	7	0.8	0.7	0.2			0.1	0.2		0.1	0.1			0.1	0.1					0.1			
Troitsk	RUS	1	16	0.8	0.8	0.2			0.1	0.2		0.1	0.1			0.1	0.1					0.1			
Krasnyi Yar	RUS	6	76	0.8	0.8	0.2			0.1	0.2	0.2	0.1	0.1			0.1	0.1					0.1			
Novomarkovka	RUS	1,6	82	0.7	0.8	0.2			0.1	0.2		0.1	0.1			0.1	0.1					0.1			
Chaldovar	KGZ	1,3	8	0.7	0.7	0.2			0.1	0.1		0.1	0.1			0.1	0.1								
Dostuk	KGZ	2	15	0.7	0.3	0.1	0.3		0.1	0.1				0.0		0.2	0.1						4.0		
Ak-Tilek	KGZ	1	28	0.6	0.3	0.2								0.1		0.1	0.1						3.0	0.3	
Sarpi	GEO	2	19	0.4	0.3	0.1	0.1		0.0	0.1		0.0	0.0			0.0	0.0	0.0				0.0		0.1	120.0
Petuchovo	RUS	1,6	1	0.3	0.3	0.3																			
Baku	AZE	2	24	0.1	0.1	0.1											0.2					0.1		0.6	2.4

				Cost (US$)																					
				Total		Activities																			
BCP	Country	Corridor	Count	Average	Median	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv	xvi	xvii	xviii	1	2
Dostyk	KAZ	1,2	37	601	600	0	598					0									100		0		
Torkham	AFG	5,6	480	183	159	30	133					15		2	2	16					42	2	30		
Nur Zholy	KAZ	1	72	319	320	0	319		6			0											0		
Spin Buldak	AFG	5,6	100	34	9	2	29									2									
Yarant	MON	4	12	199	199	0	124	75				0											0		
Panji Poyon	TAJ	2,5,6	120	185	163	11	50		10	50		10			10				90						
Fotehobod	TAJ	2,3,6	1	185	185	0	185																0	15	
Farap	TKM	2,3	29	70	70																	70			

continued on next page

Table A9.2 *continued*

				Cost (US$)																				
				Total		Activities																		
BCP	Country	Corridor	Count	Average	Median	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv	xvi	xvii	xviii	1	2
Krasnyi Most	AZE	2	86	72	68	0	39				0		0			7	5						0	61	40
Dautota	UZB	2,6	217	67	96	15	28	0	8	5	10	5	9			8	0	5		230			0	21	19
Saryasia	UZB	3	9	3	0	0	3									0							0	12	0
Karasu	KAZ	1	48	26	15	26										0	0						0	0	
Tsiteli Khidi	GEO	2	18	97	133	0	0									0						134	0	3	
Kulma	TAJ	0	12	0	0	0	0					0											0		
Irkeshtan	PRC	2,5	1	0	0	0	0																		
Termez	UZB	3,6	24	11	11		11																		
Taskala	KAZ	1, 6	9	3	3	3																			
Pakhtaabad (Dusti)	TAJ	3	108	82	71	9	43		3	4	3	6				6	7	3			8		0	15	
Tazhen	KAZ	2,6	160	59	50	1	20		9	7	5		30			10	8	10				20	0	8	0
Pogodaevo	KAZ	0	6	3	2	3																			
Jalgan	TAJ	2,3,5	24	69	69	3	20		2	3	2	4				3		5		27					
Zamiin-Uud	MON	4	120	8	7		4		3																
Torugart	KGZ	1	40	28	37	0	2					16				21									
Kurmangazy	KAZ	6	63	7	3	3			6							10									
Altanbulag	MON	4	120	8	9		4		4																
Konysbayeva	KAZ	3,6	164	75	65		13		5	6		55	52			10	8	5			25	29			
Irkeshtam	KGZ	2,5	33	583	950	0	7			4		0										950			
Sarp	OTH	2	28	90	90		29		10	7			50												
Yallama	UZB	3,6	10	15	11	5	35		5	5			13										0	15	
Kuryk	KAZ	2	96	157	148	5				5	4				5	5	67			227		55	0	57	85
Zhaisan	KAZ	1,6	19	30	25	18			5	12	15					10						30			
Dustlik	UZB	2	12	22	21	2	15			17	15														
Ozinki	RUS	1, 6	5	39	45																	39			
Mashtakovo	RUS	0	7	64	50								58									47			
Troitsk	RUS	1	16	14	9	12			5				50									10			
Krasnyi Yar	RUS	6	76	33	30								59									30			
Novomarkovka	RUS	1,6	82	42	50	1							63									44			
Chaldovar	KGZ	1,3	8	35	35				5	5			15			14									
Dostuk	KGZ	2	15	6	6	1	6		0	1				2		0	0						0		
Ak-Tilek	KGZ	1	28	3	2	3								2		0	0						0	0	
Sarpi	GEO	2	19	100	100		10						20									70		50	0
Petuchovo	RUS	1,6	1	6	6	6																			
Baku	AZE	2	24	49	40	0											120					44		41	32

AFG = Afghanistan, AZE = Azerbaijan, BCP = border-crossing point, GAI = Gosudarstvennya Avtomobilnaya Inspektsyya, GEO = Georgia, IRN = Iran, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MON = Mongolia, PAK = Pakistan, PRC = The People's Republic of China, RUS = Russian Federation, TAJ = Tajikistan, TKM = Turkmenistan, UZB = Uzbekistan.
Notes:
(i) Border security and control; (ii) Customs controls; (iii) Commercial inspection; (iv) Health and quarantine; (v) Phytosanitary inspection; (vi) Veterinary inspection; (vii) Visa or immigration; (viii) Transit conformity, (ix) GAI or traffic inspection; (x) Police checkpoint or stop; (xi) Transport inspection; (xii) Weight or standard inspection; (xiii) Vehicle registration; (xiv) Emergency repair; (xv) Escort or convoy; (xvi) Loading and/or unloading; (xvii) Road or bridge toll; and (xviii) Waiting or queue.
Source: Asian Development Bank.

APPENDIX 10

Activities at Rail Border-Crossing Points

Table A10 shows the time and cost spent on activities of inbound and outbound rail shipments to and from the indicated country at selected border-crossing points.

Table A10: Time and Cost Spent at Rail Border-Crossing Points, Outbound and Inbound

Rail (Outbound Traffic)

Duration (hours)

BCP	Country	Corridor	Count	Total		Activities																							
				Average	Median	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv	xvi	xvii	xviii	xix	xx	xxi	xxii	1	2
Alashankou	PRC	1,2	253	17.5	19.5												2.2	0.5	0.5		1.1	2.0	2.0	15.6					
Khorgos	PRC	1	147	12.5	6.5												1.6	0.5	0.6	2.0				16.4					
Saryagash	KAZ	3,6	32	11.1	13.3												2.0	0.3	0.3					11.4	1.9				
Naushki	RUS	4	40	6.5	2.5							17.9	7.7	4.9	16.9	3.8	0.8	1.8	1.8	1.5					18.5	11.3			
Zamiin-Uud	MON	4	80	6.3	1.8							18.7	6.2	13.2	12.5	6.7	1.1		1.3	1.3					11.9	36.8	8.3		
Erenhot	PRC	4	80	5.3	2.5								12.0	5.2			1.3			1.7					36.5	27.2			
Turksib	KAZ	1,3	3	4.9	1.7																				4.9				
Torghondi	AFG	2,6	84	4.0	4.0	1.7	1.6										0.7												
Aktau	KAZ	2	4	3.7	3.7		3.7																						
Hairatan	AFG	3,6	1																										

Cost (US$)

BCP	Country	Corridor	Count	Total		Activities																							
				Average	Median	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv	xvi	xvii	xviii	xix	xx	xxi	xxii	1	2
Alashankou	PRC	1,2	253	0	0												0				0			0					
Khorgos	PRC	1	147	0	0												0			0				0					
Saryagash	KAZ	3,6	32	125	125												125							0					
Naushki	RUS	4	40	20	0							60	50	0	105	50	0	0	0	12					0	0			
Zamiin-Uud	MON	4	80	1	0							0	0	0	0	45	0		0	0					0	0	0		
Erenhot	PRC	4	80	0	0								0	0			0			0					0	0			
Turksib	KAZ	1,3	3																										
Torghondi	AFG	2,6	84	225	233	111	104										11												
Aktau	KAZ	2	4	220	220		220																						
Hairatan	AFG	3,6	1																										

continued on next page

Table A10 *continued*

Rail (Inbound Traffic)

				Duration (hours)																									
				Total		Activities																								
BCP	Country	Corridor	Count	Average	Median	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv	xvi	xvii	xviii	xix	xx	xxi	xxii	1	2
Altynkol	KAZ	1	147	76.9	66.0					2.3							1.6	0.3	0.4	0.6	1.4		94.2		7.1				
Dostyk	KAZ	1,2	253	74.3	73.1					3.5				3.0			2.4	0.4	0.6	1.3	1.2		66.0		7.7				
Zamiin-Uud	MON	4	80	30.6	19.7					17.0			10.5	13.3			0.7			1.2			37.5		21.9	23.8			
Erenhot	PRC	4	80	16.3	11.9					11.7							1.7			2.0					12.7	20.4	35.5		
Termez	UZB	3,6	34	8.0	8.1	7.4											0.6												
Sukhbaatar	MON	4	40	5.9	1.8						4.2		8.3	6.7	18.3	24.2	1.0	5.0	1.7	1.4						12.7			
Keles	UZB	3,6	32	5.3	3.6												3.7								10.0				
Serkhet Abad	TKM	2,6	84	3.9	3.9		0.7	0.7									2.5	0.7											
Turksib	KGZ	1,3	3	1.3	1.0																				1.3				

				Cost (US$)																									
				Total		Activities																							
BCP	Country	Corridor	Count	Average	Median	i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv	xvi	xvii	xviii	xix	xx	xxi	xxii	1	2
Altynkol	KAZ	1	147	285	425					207							82			0	0		0		0				
Dostyk	KAZ	1,2	253	378	425					298				0			141			0	0		0		0				
Zamiin-Uud	MON	4	80	38	29					38			0	0			0			0			0		0	0			
Erenhot	PRC	4	80	91	127					91							0			0					0	0	0		
Termez	UZB	3,6	34	121	122	110											11												
Sukhbaatar	MON	4	40	10	0						0		0	0	116	15	1	0	0	0						0			
Keles	UZB	3,6	32	150	150												150												
Serkhet Abad	TKM	2,6	84	81	81		20	20									50	11											
Turksib	KGZ	1,3	3																										

AFG = Afghanistan, AZE = Azerbaijan, BCP = border-crossing point, GAI = Gosudarstvennya Avtomobilnaya Inspektsyya, GEO = Georgia, IRN = Iran, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MON = Mongolia, PAK = Pakistan, PRC = The People's Republic of China, RUS = Russian Federation, TAJ = Tajikistan, TKM = Turkmenistan, UZB = Uzbekistan.
Notes:
(i) Load cargoes, (ii) Unload cargoes, (iii) Fix cargo shift, (iv) Remove excess cargo, (v) Transload at gauge change point, (vi) Pickup and delivery, (vii) Replace or repair inoperable wagon, (viii) Emergency repair, (ix) Train classification, (x) Document errors, (xi) Reissue transit documents, (xii) Customs inspection, (xiii) Technical inspection, (xiv) Commercial inspection, (xv) Sanitary and phytosanitary control, (xvi) Materials transfer, (xvii) Faulty handling equipment, (xviii) No wagons available, (xix) Restriction on entry, (xx) Marshaling, (xxi) Waiting for priority trains to pass, (xxii) For other reasons.
Source: Asian Development Bank.

CAREC Corridor Performance Measurement and Monitoring Annual Report 2023

The 2023 annual report uses the Corridor Performance Measurement and Monitoring (CPMM) mechanism, an empirical tool developed by the Central Asia Regional Economic Cooperation (CAREC) Program, to evaluate the efficiency of its six priority transport corridors. The report highlights both progress and ongoing challenges in regional trade and transport. Although average border-crossing times have improved slightly, significant disparities and delays remain at specific points due to procedural inefficiencies and limited digitalization. This edition introduces new chapters that provide updates on route developments, policy changes, and border performance. The report calls for renewed trade facilitation reforms, greater investment in smart logistics, and stronger regional cooperation to build a more efficient and resilient CAREC transport network.

About the CAREC Institute

The CAREC Institute is an intergovernmental organization of 11 member countries, dedicated to promoting economic cooperation in the CAREC region through research, capacity building, and knowledge sharing. As the CAREC Program's knowledge hub, it supports sustainable development and a shared future for the region and beyond

About the Central Asia Regional Economic Cooperation Program

The Central Asia Regional Economic Cooperation (CAREC) Program is a partnership of 11 member countries and development partners working together to promote development through cooperation, leading to accelerated economic growth and poverty reduction. It is guided by the overarching vision of "Good Neighbors, Good Partners, and Good Prospects." The CAREC countries are Afghanistan, Azerbaijan, the People's Republic of China, Georgia, Kazakhstan, the Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan.

CAREC Institute
www.carecinstitute.org

CAREC Secretariat
www.carecprogram.org