# CAREC CORRIDOR PERFORMANCE MEASUREMENT AND MONITORING

## ANNUAL REPORT 2021

CAREC
Central Asia Regional Economic Cooperation Program

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# Abbreviations

| | | |
|---|---|---|
| ADB | – | Asian Development Bank |
| AFG | – | Afghanistan |
| APTTA | – | Afghanistan–Pakistan Transit Trade Agreement 2010 |
| AZE | – | Azerbaijan |
| BCP | – | border-crossing point |
| CAREC | – | Central Asia Regional Economic Cooperation |
| CIS | – | Commonwealth of Independent States |
| CPMM | – | Corridor Performance Measurement and Monitoring |
| EAEU | – | Eurasian Economic Union |
| GEO | – | Georgia |
| KAZ | – | Kazakhstan |
| KGZ | – | Kyrgyz Republic |
| MON | – | Mongolia |
| PAK | – | Pakistan |
| PRC | – | The 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 Transports) |
| TKM | – | Turkmenistan |
| TTFS | – | Transport and Trade Facilitation Strategy |
| UZB | – | Uzbekistan |

# Weights and Measures

| | | |
|---|---|---|
| km | – | kilometer |
| km/h | – | kilometers per hour |
| m | – | meter |
| mm | – | millimeter |
| TEU | – | twenty-foot equivalent units |
| ton-km | – | ton-kilometer |

# Executive Summary

The Corridor Performance Measurement and Monitoring (CPMM) mechanism is an empirical tool designed by the Central Asia Regional Economic Cooperation (CAREC) Program. It is used to track the time and cost of moving goods along the six priority CAREC transport corridors and across the borders between the 11 participating CAREC countries—Afghanistan, Azerbaijan, Georgia, Kazakhstan, the Kyrgyz Republic, Mongolia, Pakistan, the People's Republic of China (PRC), Tajikistan, Turkmenistan, and Uzbekistan.

*The CAREC Corridor Performance Measurement and Monitoring Annual Report 2021* provides an assessment of the overall performance and efficiency of the CAREC corridors based on the CPMM trade facilitation indicator (TFI) data accumulated over the year. The TFIs include (i) time taken to clear a border-crossing point (BCP), (ii) cost incurred at a BCP, (iii) average cost incurred to travel a given corridor, and (iv) average speed to travel along CAREC corridors. These indicators enable the CAREC members to individually and collectively evaluate and validate the impacts of the transport and trade initiatives undertaken in the region.

CPMM data for road and rail transport in 2021 showed the following year-on-year changes from 2020:

## Road Transport

(i) Average border-crossing time dropped from 15.1 hours to 13.6 hours.

(ii) Border-crossing cost rose from $199 to $357.

(iii) Total transport cost to travel a corridor section increased to $1,256 from $918.

(iv) Speed with delay was nearly unchanged at 22.7 kilometers per hour (km/h), while speed without delay (SWOD) dropped slightly from 42.9 km/h to 41.6 km/h.

## Rail Transport

(i) Average border-crossing time rose to 51.9 hours from 23.0 hours.

(ii) Border-crossing cost increased from $193 to $357.

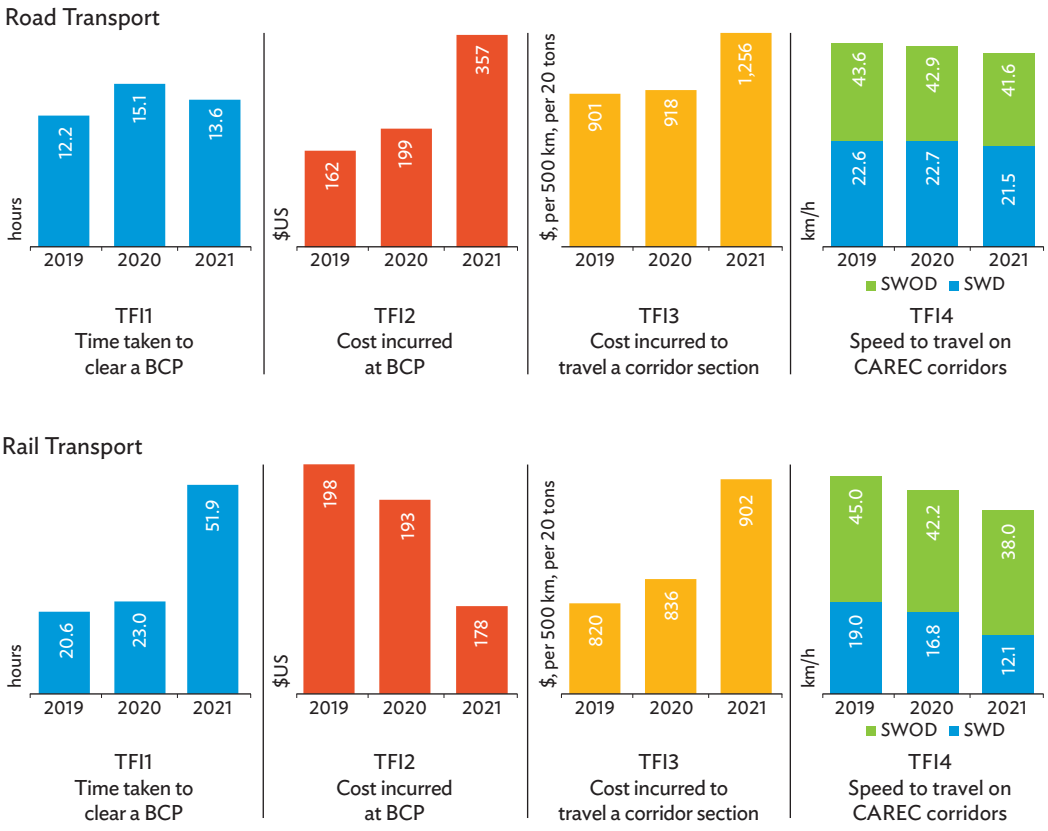
(iii) The normalized rail cost of a 20-ton load travelling 500 kilometers on CAREC corridors was up to $902 from the $836 average in 2020.

(iv) Speed with delay was 38.0 km/h in 2021, slightly slower than the 42.2 km/h in 2020; and SWOD declined from 16.8 km/h to 12.1 km/h.

## Country Updates

The 2021 report's annual analysis of the results for the four CPMM TFIs at the national level is summarized below. The analysis includes changes from and comparisons with the 2020 TFI performances of all 11 CAREC countries. The road and rail transport border-crossing times and BCP cost data are further segregated for outbound and inbound cargo and supplemented by average time and costs estimates at the BCPs along the relevant CAREC corridors. The report identifies developments and challenges in each country to help national policy makers determine strategic approaches to national and regional transport, trade, and trade facilitation problems. Transport times and costs for most, if not all, the CAREC countries were affected to varying degrees by the lingering ramifications of the worst of the COVID-19

**Figure A: Road and Rail Transport Trade Facilitation Indicators, 2019–2021**




BCP = border-crossing point, km = kilometer, km/h = kilometers per hour, SWOD = speed without delay, SWD = speed with delay, TFI = trade facilitation indicator.
Source: Asian Development Bank.

pandemic in 2020 and the knock-on effects of a sharp V-shaped global economic recovery in 2021. Surging demand for shipping and containers disrupted supply chains, choked seaports, and congested the CAREC region's land border crossings. Freight rates skyrocketed on the oceans, and then spilled over onto the CAREC corridor road and rail routes. Each country analysis is followed in the main body of this annual report by recommendations for improving TFI results and strengthening trade facilitation.

(i) ***Afghanistan.*** Crossing through Afghanistan's high-traffic road BCPs at Torkham, Spin Buldak, and Shirkhan Bandar continued to be slow. Security concerns added to the time and the total transport cost, which remained higher than those of other CAREC countries. The 33.7 km/h road corridor SWOD was the region's lowest. On a positive note, Afghanistan and neighbors Pakistan and Uzbekistan have discussed the feasibility of a railway linking Uzbekistan through Mazari Sharif in Afghanistan with Peshawar in Pakistan. CPMM does not collect rail data in Afghanistan.

(ii) ***Azerbaijan.*** Border-crossing time decreased but the costs rose, as did total transport costs. SWOD was flat, and SWD up. Baku port on the Caspian Sea remained a key CAREC corridor node, although land shipments faced waits of a few days to cross due to the irregular schedules of the vessels currently available on the Corridor 2 maritime routes.

(iii) ***People's Republic of China.*** Border-crossing times and costs rose substantially. Although the country's exceptionally burdensome COVID-19 controls often severely impacted rail shipments—it took trains from Mongolia 7.5 days to cross at the PRC's Erenhot BCP in 2021, up

from 7.4 hours in 2020—road traffic suffered more on average. Kazakhstan shippers reported long truck queues at Alashankou BCP beginning in October 2020 and throughout 2021. An expensive new road cargo border swap procedure mandated by the PRC in August drove crossing costs sky-high at one PRC–Kazakhstan border point. Because cargo shipped in conventional railcars cleared inspection more slowly than containers did, Kazakhstan may consider containerization for its exports to the PRC. However, the regular trains that serve the transport needs of Kazakhstan and the rest of the CAREC region were frequently delayed at the PRC borders or brought to a complete halt inland in 2021 to allow priority passage, mostly along CAREC corridors, of the more than 15,000 express container trains that traveled the flourishing PRC–Europe routes.

(iv) ***Georgia.*** Border-crossing times shortened, and the costs were stable. Total transport cost rose, and the CPMM speed indicator results were down. The seaport waits required for shipments over the Caspian Sea route played a role in this slowdown.

(v) ***Kazakhstan.*** The PRC's stringent epidemiological border control regime had a negative impact on Kazakhstan's border-crossing results. Road crossing time was steady , but cost was up, and total transport cost jumped by almost a third. Rail shipments took substantially longer to clear the country's BCPs, although the cost was lower. Speeds slowed slightly.

(vi) ***Kyrgyz Republic.*** Road border-crossing time rose, while that of rail edged lower. The road crossing cost dipped, but total transport costs for both road and rail continued an upward trend. Speeds were a little higher.

(vii) ***Mongolia.*** Road and rail crossing times at Mongolia's BCPs lengthened, while costs declined. Total transport costs were up on roads but more than halved by rail. SWOD crept higher. SWD dropped due to the longer border-crossing times. General transport times and costs in Mongolia were, like Kazakhstan's, greatly affected by the PRC's epidemiological border protocols. The country's economy was also especially hard hit by the delayed deliveries and surging costs of the ocean containers used to transport large volumes of its imports and exports.

(viii) ***Pakistan.*** Pakistan's TFI results (road only) broadly improved. The only exception, SWOD, barely changed. Outbound crossing times at the Torkham and Chaman BCPs remained among the longest in the region but shortened.

(ix) ***Tajikistan.*** Road border-crossing time and cost held roughly steady, although cost has continued to edge lower since 2019. Total transport cost, SWOD, and SWD were all marginally down.

(x) ***Turkmenistan.*** Turkmenistan had shorter road and rail border-crossing times, but cost data was not available. Total transport cost was significantly down for road and slightly up for rail.[a] Speeds for both were narrowly higher.

(xi) ***Uzbekistan.*** Border-crossing times shortened for both road and rail shipments in Uzbekistan, although the cost was slightly up for rail and slightly down for road transport. In the case of total transport costs, this pattern was reversed. SWOD was unchanged for road shipments, but down sharply for those moved by rail. SWD was a little faster for both modes.

## Case Study

The annual report's case study features the positive TFI results provided by modernization completed in March 2021 at Uzbekistan's high-traffic Yallama BCP, which is paired with Kazakhstan's Konysbaeva BCP. The increase of Yallama's service lanes and gates to six produced immediate results. Outbound crossing time at the BCP was reduced from 8.9 hours in the first quarter of 2021 before the upgrade became operational to 7.5 hours, 6.9 hours, and 4.4 hours in the following three quarters of the year.

[a] Turkmenistan did not permit any foreign registered vehicles nor foreign drivers to enter Turkmenistan. In addition, Turkmenistan did not participate in CPMM directly. As such, the estimates were given by Uzbekistan transport operators. The total transport cost as such could not be estimated with complete precision.

# 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 (Figure 1.1).[1] The CAREC corridors link the region's key economic hubs to one another and connect the program's landlocked members to Eurasian and global markets.[2]

The 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) a BCP had slow crossing times, 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 regional cooperation initiatives 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 pairs of BCPs at 37 border crossings that have been identified and prioritized by the CAREC member countries. Figure 1.2 illustrates the four-phase CPMM methodology, which is explained further in Appendix 1. The data along the corridors and at the BCPs is collected by an established pool of national freight forwarder and transport carrier partners.[4]

The CPMM employs the aggregated data collected for four trade facilitation indicators (TFIs) to evaluate the overall performance and efficiency of the CAREC corridors each year.[5] When measured over the years and across the corridors, the indicator results 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) ***TFI 1: 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 exit point 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 includes waiting time, unloading and loading time, time taken to transfer shipments when rail track gauges change at border crossings, and other factors. The intent is to capture both the complexities and inefficiencies in the border-crossing process.

(ii) ***TFI 2: Cost incurred at a BCP.*** This is the average total cost in United States (US) dollars of moving cargo across a border from entry to exit at a BCP. Both official and unofficial payments are included.

(iii) ***TFI 3: Cost incurred to travel a corridor section.*** This is the average total cost in US dollars incurred to transport one unit of cargo along a corridor section within a country or across

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

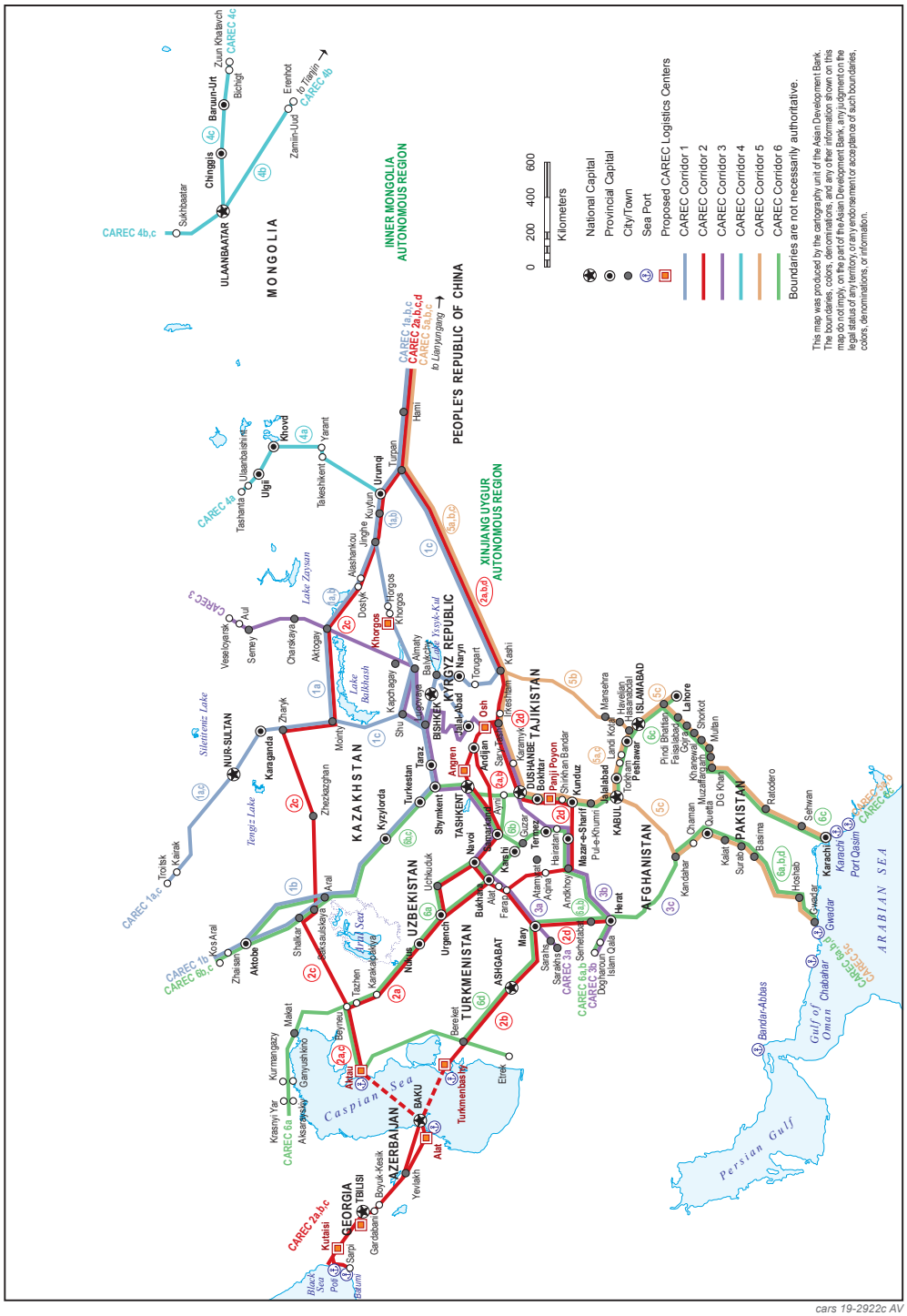
[2] The CPMM annual report is a technical document and, for the benefit of readers, includes standard explanations and definitions. Parts of the introduction contain standard and recurring descriptions of the CAREC CPMM background, methodology, names of BCPs, and appendixes and should remain consistent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

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

[4] The national forwarder and carrier partners are listed in Appendix 2.

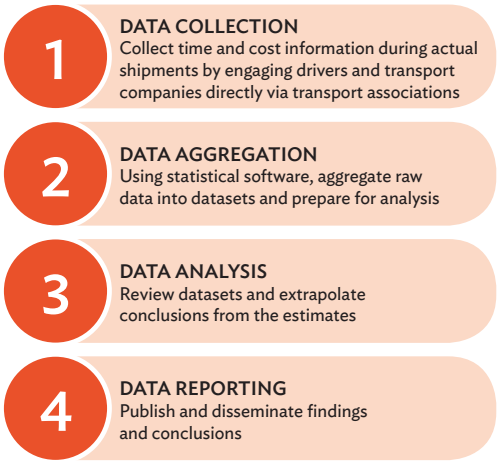
[5] The TFIs are explained in Appendix 3, including statistical derivations.

## Figure 1.1: Six Central Asia Regional Economic Cooperation Transport Corridors




CAREC = Central Asia Regional Economic Cooperation.
Source: Asian Development Bank.

**Figure 1.2: Corridor Performance Measurement and Monitoring Methodology**




Source: Asian Development Bank.

borders. One unit of cargo is taken as a truck or a rail car/wagon/container carrying 20 tons of goods. A corridor section is defined as a stretch of road or rail track 500 kilometers (km) long. Both official and unofficial payments are included. However, in practice due to data collection constraints, transport cost figures reported by CPMM refer to transport rates paid by shippers/receivers for truckor rail transportation.[6]

(iv) ***TFI 4: Speed to travel along 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. A unit of cargo refers to a cargo truck or a rail car/wagon/container carrying 20 tons of goods, and a corridor section refers to a stretch of road or rail track 500 km long. 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 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 corridors.

The data for TFIs 1 and 2, 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 typically consist of customs, immigration, and transport inspections); and (iii) the time it then takes for the shipment to gain authorization to leave the BCP.

An example is used to illustrate. Assume a truck must cross BCP A in the country of origin to enter the adjacent BCP B in the transit country. 'A' is called the exit BCP and "B" is called the entry BCP based on the sequence of travel. When CPMM reported that the TFI 1 for A was 5 hours and TFI 2 was $200, this

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

refers only to the time and cost in BCP A. This does not include any time or cost at BCP B, which will have a separate set of indicator values.

Time and cost indicator data for individual activities at each BCP are also collected and assessed. The same applies for other intermediate stops, such as toll booths and security inspections.[7] This helps to identify not only the locations of the delays along a corridor, but also the nature of these delays.

The sustainability, reliability, and successful use of CPMM depends on several factors:

(i) ***Private sector participation.*** National transport associations are formally engaged to train selected national transport operators or freight forwarders to use the CPMM tool and gather and record the necessary data. This helps ensure that each data sample reflects a bona fide cargo movement through the CAREC transport corridors.

(ii) ***Fact-based and data-driven conclusions.*** The CPMM data thus derived from actual transport movements are submitted by the national transport associations in each CAREC country every month. The findings are aggregated and analyzed quarterly and annually. This supports a fact-based, data-driven evaluation of whether time and cost performances are improving or deteriorating over an extended period.

(iii) ***Customized for landlocked countries.*** The performances on the CPMM time and cost indicators by landlocked countries—i.e., the majority of the CAREC Program members—cannot be considered comparable with those of the members that have seaports. The CPMM methodology is customized to reflect this fact. It focuses on road and rail transport, the two dominant transport modes in Central Asia. Particular emphasis is put on border-crossing times and costs, which are frequently identified as the main obstacles to more efficient cross-border cargo movement in the region.

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

# 2 2021 Key Results

This chapter analyzes CPMM data collected throughout 2021 and reports the latest TFI data for road and rail transport at selected BCPs[8] and along the priority CAREC corridors. A performance evaluation based on the four indicator results is also provided for the six corridors,[9] as is an overview of relevant regional and domestic developments in the CAREC region in 2021.[10]

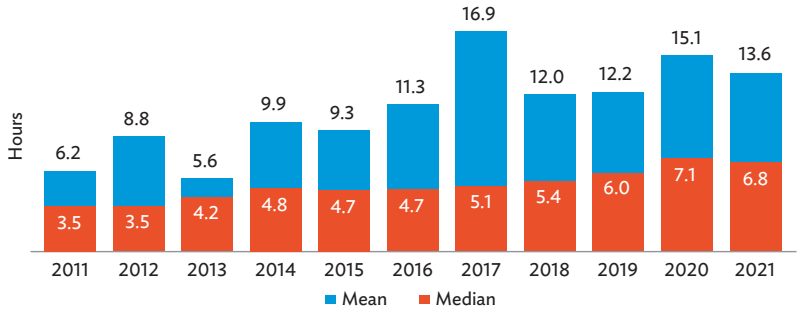
## Road Transport

Analysis of 2021 CPMM data showed that the region's performances on three of the four TFIs were below the levels recorded for 2020. Border-crossing time declined, but both border-crossing and total transport costs rose. Speeds were down. The slight drop in the time needed to cross borders along the corridors was a welcome improvement on the grave situation in 2020, but the cost picture remained grim. This reflected the continued impacts of the COVID-19 pandemic, including the disruption of supply chains and cargo transport rates across the globe.

### Trade Facilitation Indicator 1: Time Taken to Clear a Border-Crossing Point

Figure 2.1 shows that border-crossing time averaged 13.6 hours in 2021, down from 15.1 hours in 2020. This interrupted the long-term median rise on TFI 1 in recent years. Only Corridor 1 showed no TFI 1 improvement in 2021. In fact, its average border crossing time surged to 28.7 hours from 9.5 hours in 2020 due to extremely strict controls and inspections imposed on transborder movement of goods by the PRC (see Chapter 6 on the PRC's section).

**Figure 2.1: Time Taken to Complete a Border-Crossing Point, Road Transport** (hours)




Source: Asian Development Bank.

[8] Outbound and inbound crossing time and cost indicator data for key BCPs along six CAREC corridors are summarized by activities in Appendix 8 (roadtransport) and Appendix 9 (rail transport).

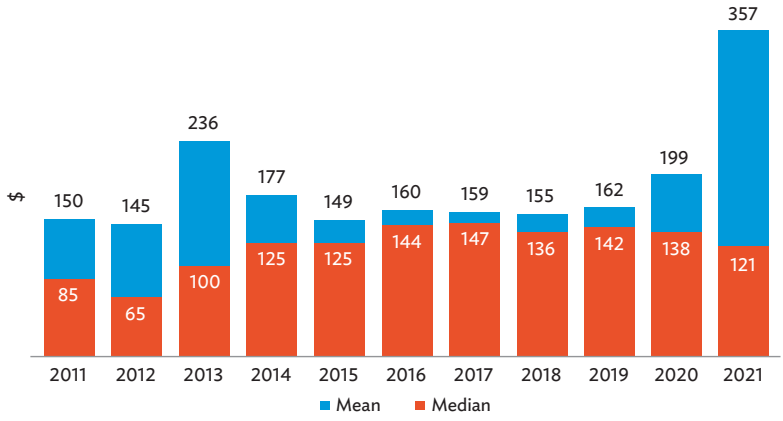
[9] Summary statistics and year-on-year comparisons of 2020 and 2021 TFI data by mode of transport and by corridor are in Appendix 6. Transport cost estimates are further disaggregated into transit fees and border payments by mode of transport and by corridor in Appendix 7.

[10] The CPMM annual report is a technical document, and, for the benefit of readers, it presents a description of routes, results, and findings in a standard format across reports. For references, please see ADB. 2019. *CAREC Corridor Performance Measurement and Monitoring Annual Report 2019*. Manila; and ADB. 2020. *CAREC Corridor Performance Measurement and Monitoring Annual Report 2020*. Manila.

## Trade Facilitation Indicator 2: Cost to Complete a Border-Crossing Point

The average border-crossing cost was $357 in 2021, up from $199 in 2020 (Figure 2.2). In a pattern similar to that of TFI 1, only Corridor 1 recorded an increase (compared with declines for Corridors 2–6), as well as a major spike in its TFI 2 average—$2,373, up from $638 in 2020. This was due to the extra costs of the additional activities and transfers of materials required by the PRC for cargo to cross its border.

**Figure 2.2: Cost to Complete a Border-Crossing Point, Road Transport ($)**

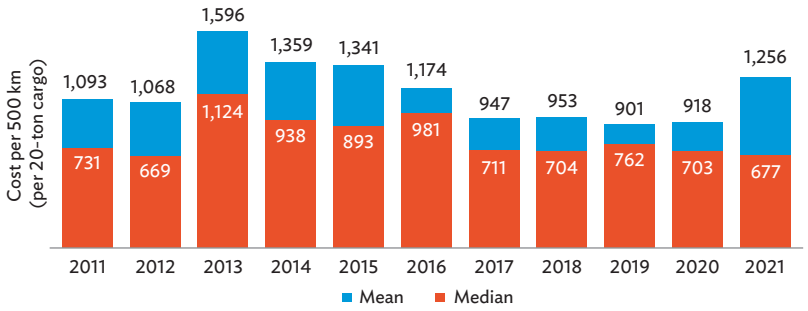



Source: Asian Development Bank.

## Trade Facilitation Indicator 3: Cost Incurred to Travel a Corridor Section

Total transport cost to travel a corridor section rose from $918 in 2020 to $1,256 in 2021 due to cost spikes on Corridor 1 (from $1,788 to $3,180) and Corridor 4 (from $1,501 to $2,926). The higher border-crossing cost and elevated road freight rates contributed to the increases.

**Figure 2.3: Cost Incurred to Travel a Corridor Section, Road Transport ($)**

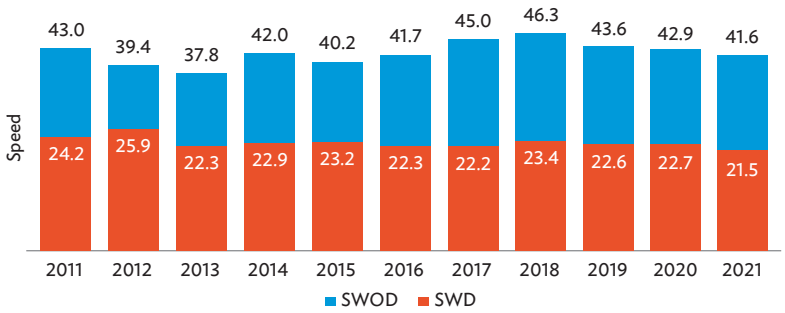



km = kilometer.
Source: Asian Development Bank.

### Trade Facilitation Indicator 4: Speed to Travel Along CAREC Corridors

Trucks registered an average SWOD of 41.6 km/h in 2021, down from 42.9 km/h in 2020. SWD also slowed slightly—22.7 km/h to 21.5 km/h. The main year-on-year difference was the sharp drop on Corridor 1 due to the longer border-crossing delays.

**Figure 2.4: Speed to Travel on CAREC Corridors, Road Transport** (km/h)




CAREC = Central Asia Regional Economic Cooperation, km/h = kilometers per hour, SWOD = speed without delay, SWD = speed with delay.
Source: Asian Development Bank.

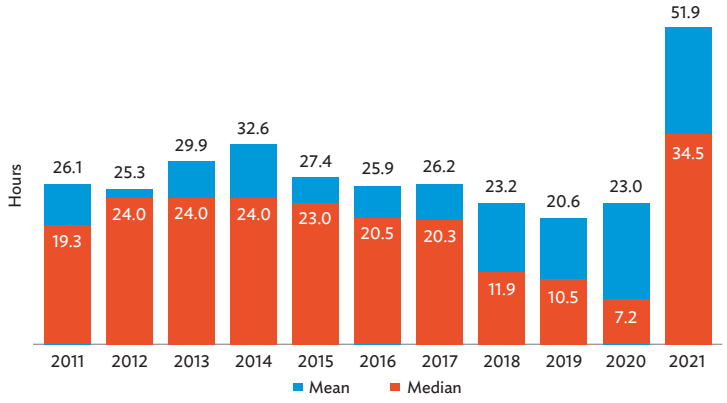
## Rail Transport

Rail performance deteriorated on all the TFIs except TFI 2. The major shift by shippers from maritime to rail transport was an important factor, since it created congestion on the rail routes and at BCPs and drove up freight rates.

### Trade Facilitation Indicator 1: Time Taken to Clear a Border-Crossing Point

Average rail border-crossing time more than doubled from 23 hours in 2020 to 52 hours in 2021. The Corridor 1 average was up from 28.7 hours to 62.3 hours, and Corridor 4's climbed from 5.4 hours to

**Figure 2.5: Time Taken to Complete a Border-Crossing Point, Rail Transport** (hours)



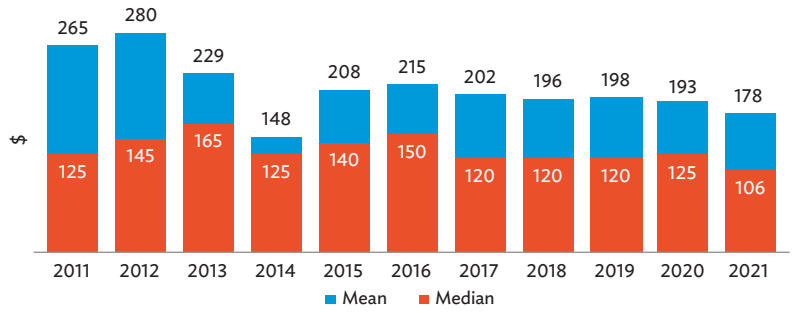

Source: Asian Development Bank.

a stratospheric 55.5. The long queues at BCPs due to more trains on the tracks combined with the PRC's strict and onerous cargo inspection and disinfection protocols were the prime reasons for the overall border slowdown.

## Trade Facilitation Indicator 2: Cost to Complete a Border-Crossing Point

The average cost to cross a border by rail dipped slightly from $193 in 2020 to $178 in 2021. The cost was down on Corridor 1, but up on Corridor 4.

**Figure 2.6: Cost to Complete a Border-Crossing Point, Rail Transport ($)**

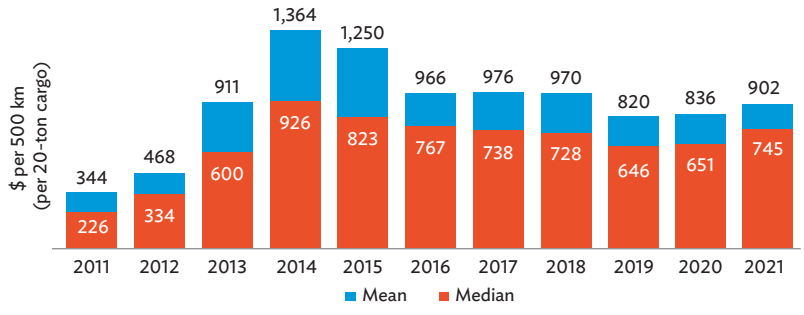



Source: Asian Development Bank.

## Trade Facilitation Indicator 3: Cost Incurred to Travel a Corridor Section

Rail TFI 3 results rose from $836 in 2020 to $902 in 2021. Corridor 1, up $981 from $654, registered the largest cost increase. Higher rates due to the diversion of cargo to rail from ocean transport and a reduction in the Chinese government subsidies for the PRC–Europe container express trains were the principal factors.

**Figure 2.7: Cost Incurred to Travel a Corridor Section, Rail Transport ($)**

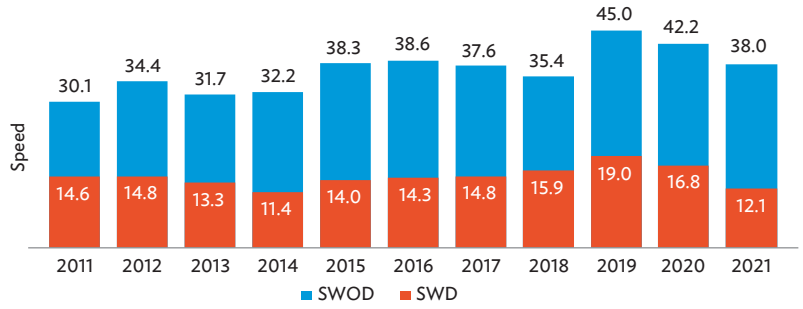



km = kilometer.
Source: Asian Development Bank.

### Trade Facilitation Indicator 4: Speed to Travel on Central Asia Regional Economic Cooperation Corridors

SWOD dropped from 42.2 km/h to 38.0 km/h, and SWD from 16.8 km/h to 12.1 km/h (Figure 2.8).

**Figure 2.8: Speed to Travel on CAREC Corridors, Rail Transport** (km/h)




CAREC = Central Asia Regional Economic Cooperation, km/h = kilometers per hour, SWOD = speed without delay, SWD = speed with delay.
Source: Asian Development Bank.

## Corridors

***Corridor 1.*** Times and costs continued their 2020 ascent on Corridor 1 in 2021. Road and rail shipments crossing the PRC–Kazakhstan border faced higher fees and unprecedented delays. The PRC's Horgos and Alashankou were the two most time-consuming BCPs for road shipments, with outbound clearance times averaging 77.5 hours and 61.7 hours, respectively. They also topped the category for rail transport (58.7 hours and 80.2vhours). The performances by these BCPs made Corridor 1 the outlier in the 2021 border-crossing time averages; Corridors 2–6 showed year-on-year declines. Road and rail border-crossing cost and total transport cost also rose along the corridor, while SWOD and SWD declined.

***Corridor 2.*** Time to cross borders along Corridor 2 was down in 2021, as was the cost, although road freight rates increased overall. SWOD and SWD improved. Shipping performance on this corridor depends not only on land border-crossing efficiency but also on how well cargo moves through its seaport BCPs and across the Caspian Sea. Long wait times for trucks entering **Kuryk** seaport in Kazakhstan were an issue and led to a lengthy average duration of 61.6 hours for Corridor 2 outbound shipments destined for Baku in Azerbaijan.

***Corridor 3.*** Border-crossing time and cost fell on Corridor 3, along with total transport cost. SWOD dropped, but SWD rose. **Pakhtaabad** in Tajikistan on its border with Uzbekistan emerged as a slow Corridor 3 BCP, with an average 10.1 hours taken per crossing. Yallama, a road BCP in Uzbekistan at its border with Kazakhstan, provided an example in 2021 of what can be achieved through physical modernization of border facilities. The upgrade completed during the year allowed vehicles to be handled at six gates. Crossing time at Yallama dropped from 9.6 hours to 6.8 hours for traffic outbound from Uzbekistan and by almost 90% from 30.0 hours to 3.4 hours for inbound vehicles.

***Corridor 4.*** Although average Corridor 4 border-crossing time and cost dropped, the year's disruptions in international maritime shipping and spiking freight rates propelled total transport cost higher. The road and rail rates rose as congestion at global ports and a worldwide shortage of containers drove ocean

transport costs to unprecedented highs, and shippers shifted large volumes of their cargos to overland routes. Conditions on Corridor 4 caused exceptional difficulties for Mongolia due to severe congestion at the PRC port of Tianjin, the landlocked country's principal gateway for imports and exports moved by sea. Containerization remains less popular than general cargo transport in many Central Asian countries despite the rapid growth of container shipments on PRC–Europe freight trains, but **Tianjin seaport** will handle only cargos (including commodities) shipped in containers. Gnarled supply chains, the traffic congestion at Tianjin and the long train holdups at the PRC's Corridor 4 Erenhot BCP, and the scarcity and elevated freight prices of containers and land transport thus significantly impacted Mongolia's foreign trade in 2021. The corridor's average total road transport cost nearly doubled, rising to $2,925 from $1,509 in 2020. SWOD and SWD slowed slightly.

Corridor 4 rail transport suffered major time issues due to the PRC's severe COVID-19 control policies. Average border-crossing time shot up to 55.5 hours from 9.1 hours in 2020 as trains from Mongolia entering through the PRC's **Erenhot** BCP were held up for an average of 7.5 days in 2021—making it the slowest rail BCP along the six corridors. The cost of crossing borders also rose, but the corridor's total transport cost declined. SWOD and SWD were both lower. The deterioration in key time and cost TFIs reflected the challenging environment Mongolia's shippers had to cope with during the year.

***Corridor 5.*** TFIs for this corridor improved across the board. BCPs on the border between Afghanistan and Pakistan continued to report long delays but performed better than in 2020. These included Afghanistan's **Torkham** and the pair of BCPs at **Chaman** in Pakistan and **Spin Buldak** in Afghanistan.

***Corridor 6.*** Border-crossing time and cost declined on Corridor 6, total transport cost was up, and SWOD and SWD were roughly unchanged. The corridor features some of the slowest BCP border crossing times tracked by CPMM. Afghanistan's **Shirkhan Bandar, Dautota** in Uzbekistan, and **Tazhen** in Kazakhstan on the Uzbekistan border averaged more than 10 hours each. Corridor 6 rail BCPs such as **Sarygash-Keles** and **Torghondi-Serhetabad** has a range of crossing times between 5–10 hours at each location.

# 3 2021 Corridor Performance Measurement and Monitoring Data

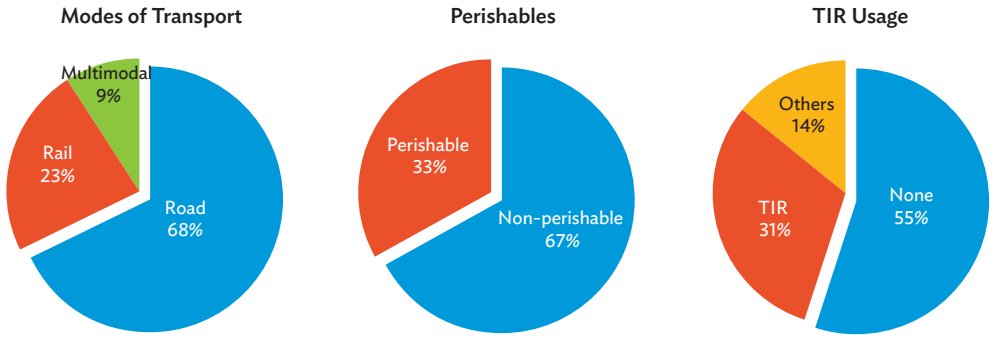
CPMM data relates to commercial shipments that move through Central Asia. Although most of these shipments originate in CAREC member countries, some start in countries beyond the program region, including Iran, the Russian Federation, and Türkiye. Most shipments are destined for CAREC countries, but some continue to more distant destinations, mainly Europe and the Russian Federation.

This chapter uses 2021 CPMM data to profile cargo movements in each CAREC member country. As previous reports have shown, the types of cargo shipped and the shipping routes do not vary significantly from one year to the next. The products shipped are mainly staple items and are sent over established channels. This consistency is reflected in the sample distribution and data profile presented below.

## Data Profile

In 2021, 13 associations (listed in Appendix 2) collected data on 2,625 samples of cross-border shipments in nine CAREC countries. The goods were carried by road (68%), rail (23%), and multimodal transport (9%). About 33% of the shipments were perishables, mostly transported on trucks (Figure 3.1); and 31% of the shipments sampled were accompanied and detailed by TIR Carnets of the Transports Internationaux Routiers (International Road Transport).

**Figure 3.1: Data Profile of Corridor Performance Measurement and Monitoring Samples, 2021** *(%)*



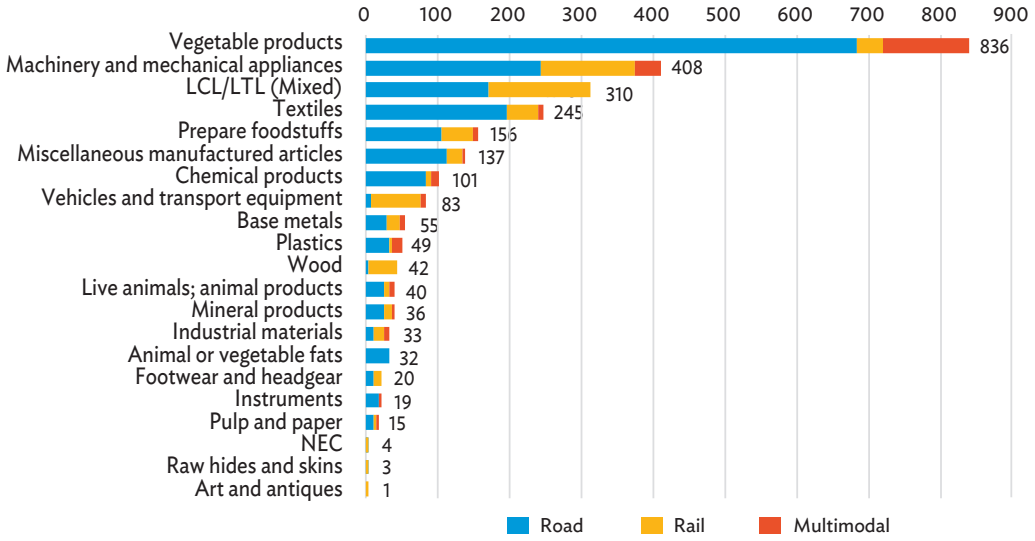

TIR = Transports Internationaux Routiers (International Road Transport).
Note: Numbers may not sum precisely because of rounding.
Source: Asian Development Bank.

Figure 3.2 shows the top five types of the shipments sampled, categorized by the goods carried: vegetable products, 31.8%; machinery and mechanical appliances, 15.5%; less than a container load or less than a truckload (mixed), 11.8%; textiles, 9.3%; and prepared foodstuff, 5.9%.

## Cargo Movement

The CPMM mechanism focuses on road, rail, and multimodal transport. It covers the six CAREC corridors and the BCPs along them. The data collected for each shipment sampled includes points of origin and

### Figure 3.2: Number of Shipments, by Type of Commodity




LCL = less than container load, LTL = less than truckload, NEC = not elsewhere classified.
Source: Asian Development Bank.

destination. Table 3.1 lists key BCPs crossed by shipments along the CAREC corridors. Because some corridor sections overlap, one BCP can be listed on more than one corridor.

### Table 3.1: CAREC Corridors and Key Border-Crossing Points by Country

| Country | CAREC Corridors | Key CPMM BCPs |
|---|---|---|
| Afghanistan | 2, 3, 5, and 6 | Hairatan, Shirkhan Bandar, Spin Buldak, Torghondi, and Torkham |
| Azerbaijan | 2 | Baku International Sea Trade Port, Boyuk Kesik, and Qirmizi Korpu |
| People's Republic of China | 1, 2, 4, and 5 | Alashankou, Erenhot, Irkeshtan, Horgos, Khunjerab, Kara Suu, Takeshikent, Torugart, and Zuun Khatavch |
| Georgia | 2 | Gardabani, Sarpi, and Tsiteli Khidi |
| Kazakhstan | 1, 2, 3, and 6 | Altynkol, Dostyk, Nur Zholy, Konysbaeva, and Tazhen |
| Kyrgyz Republic | 1, 2, 3, and 5 | Ak Tilek, Chaldovar, Gulistan, Irkeshtam, Karamyk, and Torugart |
| Mongolia | 4 | Altanbulag, Bichigt, Sukhbaatar, Yarant, and Zamyn-Uud. |
| Pakistan | 5 and 6 | Chaman and Torkham |
| Tajikistan | 2, 3, 5, and 6 | Dusti, Gulistan, Karamyk, Kulma, Pakhtaabad and Panji Poyon |
| Turkmenistan | 2, 3, and 6 | Farap, Sarahs, and Serkhet Abad |
| Uzbekistan | 2, 3, and 6 | Alat, Dautota, Hairatan, Dustlik, Oibek, Saryasia, Termez, and Yallama |

BCP = border-crossing point, CAREC = Central Asia Regional Economic Cooperation, CPMM = Corridor Performance Measurement and Monitoring.
Source: Asian Development Bank.

## Afghanistan

The CPMM captured the following types of **road** cargo movements in Afghanistan in 2021: (i) containerized shipments from the Karachi seaport in Pakistan to Jalalabad in Afghanistan; (ii) containerized shipments from port of Karachi to Afghanistan's southern city of Kandahar; (iii) transit shipments from Peshawar in Pakistan to Dushanbe in Tajikistan; (iv) transit shipments from Peshawar in Pakistan to Tashkent in Uzbekistan. **Rail** shipments included multimodal transit shipments from Quetta in Pakistan to Ashgabat in Turkmenistan and Tashkent in Uzbekistan. **Commodities** commonly transported by road and railway were fresh fruits and vegetables.

## Azerbaijan

The types of **road** cargo movement in Azerbaijan captured by CPMM were as follows: (i) containerized shipments from Georgia's Poti and Batumi seaports on the Black Sea to Azerbaijan's Baku seaport and across the Caspian to Kuryk in Kazakhstan that either terminated in that country or moved on to other CAREC countries; (ii) containerized transit shipments from the Central Asia Republics to Georgia; and (iii) transit shipments from Türkiye to Kazakhstan. No rail shipment data was recorded by the CPMM in 2021. The road cargo was commonly electrical equipment and machinery and pharmaceuticals.

## People's Republic of China

**Road** shipments in the PRC during 2021 included the following: (i) exports of consumer and industrial goods to Kazakhstan and the Kyrgyz Republic; (ii) exports of construction equipment and building materials to Afghanistan and Tajikistan; (iii) exports of refined petroleum, consumer items, construction material, and food commodities to Mongolia; (iv) exports of plastic pipes to Pakistan along Subcorridor 5b; (v) imports of coal and minerals from Mongolia along Subcorridors 4a and 4c; (vi) imports of Russian Federation lumber along Subcorridor 4b; (vii) transit shipments of Mongolia's exports to the PRC's Tianjin seaport along Subcorridor 4b, and (viii) shipments with TIR Carnets from the PRC to Europe. Sampled **rail** movements included (i) exports of consumer products to Almaty and Nur-Sultan in Kazakhstan along Corridor 1; (ii) exports of machinery and equipment to Turkmenistan, transiting Kazakhstan and Uzbekistan; (iii) exports of electronics from Chongqing to Duisburg in Germany on container express trains; and (iv) exports of glass bottles, motorcycles, and automobile spare parts from Chongqing to Ulaanbaatar in Mongolia. The **commodities** commonly transported by road were an assortment of consumer products, apparel, iron and steel articles, and electrical equipment and machinery. Commodities shipped by rail included chemicals, electronics, electrical equipment, passenger vehicles, auto parts, machinery, consumer products and plastic articles.

## Georgia

All shipments sampled in Georgia were transported by road along Subcorridor 2a and mostly noncontainerized. They included (i) exports of machinery and equipment from Türkiye to Central Asia; (ii) exports of industrial and consumer goods from Ukraine and other countries on vessels that berth at Georgia's Black Sea ports at Poti or Batumi and are then transported by truck and over the Caspian Sea to Central Asia ; (iii) exports of pharmaceuticals from Georgia to Central Asia; (vi) incoming dried fruits and nuts exported to Tbilisi from Uzbekistan; and (v) incoming cotton from Tajikistan. These movements cross the Caspian Sea between Baku in Azerbaijan and Kuryk in Kazakhstan. The most common **commodities** transported by road were fruits and nuts, processed food, cotton, vehicles, electrical equipment and machinery, and pharmaceuticals.

## Kazakhstan

**Road** shipments in 2021 included (i) imports to Almaty of consumer and industrial materials from Urumqi in the PRC via Subcorridor 1b; (ii) imports from the Kyrgyz Republic and Uzbekistan of fresh fruits and vegetables; and (iii) transit shipments of agricultural products from the Kyrgyz Republic and Uzbekistan through Kazakhstan to the Russian Federation. **Rail** shipments included (i) imports by train to Almaty of vehicles and industrial goods from major cities in the PRC, such as Chongqing and Shenzhen; (ii) imports of vehicles and consumer goods from Japan, PRC and South Korea on vessels to Lianyungang and continue on rail transport to cities in Kazakhstan; (iii) imports of chemicals, equipment, and machinery from Urumqi in the PRC to Almaty and Nur-Sultan in Kazakhstan along Subcorridors 1a or 1b rail routes; and (iv) transit shipments of machinery and equipment exported by the PRC from Urumqi to Uzbekistan and Turkmenistan. (v) transit shipments using the container express train service from PRC to Europe. **Commodities** transported by road were assorted consumer products, apparel, and electrical equipment and machinery. Those shipped by rail included consumer electronic appliances, electrical equipment and machinery, textiles, and construction materials.

## Kyrgyz Republic

The Kyrgyz Republic has a very small and disjointed rail network that consists of short branch lines oriented to the Kazakh rail network.

CPMM tracked only **road** shipments in the Kyrgyz Republic in 2021. They included (i) imports of consumer products from the PRC; (ii) imports of paper from Kazakhstan; (iii) exports of fresh and dried fruits and textiles to Kazakhstan and the Russian Federation; and (iv) transit shipments of equipment and machinery from the PRC to Tajikistan. The commonly transported **commodities** were vegetables, fruits and nuts, small appliances, apparel, and electrical equipment and machinery.

## Mongolia

The **road** traffic shipments sampled in Mongolia in 2021 included (i) imports of mixed consumer goods and foodstuff from the PRC entering at the Zamyn-Uud BCP along Subcorridor 4b and destined for Ulaanbaatar Zamyn-Uud; (ii) imports of consumer goods and beverages from the Russian Federation to Ulaanbaatar, entering at the Altanbulag BCP on Subcorridor 4b; (iii) exports of coal from Mongolia crossing into the PRC at **Takeshikent** on Subcorridor 4a; and (iv) imports of beverages, electrical equipment, and mixed cargoes from the Russian Federation entering at the Borshoo BCP. None of the samples were containerized. **Rail** shipments included (i) imports of containerized cargoes from Japan, the Republic of Korea, and parts of the PRC, including shipments from the PRC's Tianjin port to Ulaanbaatar; (ii) exports of meat and minerals in containers from Ulaanbaatar to Tianjin for for onward shipment by sea to international consignees; and (iii) transit shipments from the Russian Federation to the PRC of lumber. The most common **commodities** transported by road were consumer products, foodstuff, and diesel fuel. Most of the rail shipments carried chemicals, electrical equipment and machinery, and plastic articles.

## Pakistan

**Road** shipments in Pakistan included (i) exports of fruits and vegetables to Tajikistan and Uzbekistan via Afghanistan; (ii) exports of fruits and vegetables from Quetta to Ashgabat in Turkmenistan via Afghanistan; and (iii) transit shipments of containerized cargoes from Karachi to Jalalabad or Kandahar. No **rail** shipments were recorded by CPMM in 2021. Road shipment sampled were predominantly fresh fruits and vegetables, as well as some electrical equipment and machinery and ceramic products.

## Tajikistan

The Tajikistan **road** shipments captured by CPMM included (i) imports to Dushanbe from the PRC of construction and building equipment in containers; (ii) imports to Dushanbe of containerized consumer and industrial products from the Russian Federation via Kazakhstan and Uzbekistan; (iii) bilateral trade with the Kyrgyz Republic via their Karamyk BCPs; and (iv) imports of fruits and vegetables from Pakistan via Afghanistan. There was no rail shipment recorded by CPMM in 2021.

## Turkmenistan

**Road** shipments sampled in Turkmenistan included containerized transit shipments moving in both directions between Uzbekistan and Iran. **Rail** shipments included (i) imports of equipment and machinery from the PRC; and (ii) imports of fruits and vegetables from Pakistan. The **commodities** commonly transported by road were carpets and copper articles. Rail shipments included agricultural products, electrical equipment, and machinery.

## Uzbekistan

The CPMM Uzbekistan **road** shipments sampled included (i) exports of agricultural products to the Russian Federation via Kazakhstan and imports of manufactured goods and seaborn fruits through Russian Federation ports in the other direction; (ii) exports of fruits and vegetables to Kazakhstan; (iii) imports of fruits and vegetables from Pakistan via Afghanistan; and (iv) transit shipments from the Russian Federation to Tajikistan of manufactured goods and equipment. **Rail** shipments included transit cargoes of machinery and equipment from the PRC to Turkmenistan. The most common **commodities** transported by road were fruits and vegetables, textiles, consumer products, and auto parts. Rail cargos included electrical equipment and machinery.

# 4 Road Transport in 2021

## Trade Facilitation Indicators

CPMM data for road transport for all corridors and all CAREC countries covered in 2021 showed the following year-on-year changes overall from 2020:

(i) Average border-crossing time dropped from 15.1 hours to 13.6 hours.

(ii) Border-crossing cost rose from $199 to $357.

(iii) Total transport cost to travel a corridor section increased to $1,256 from $918.

(iv) SWD was static at 22.7 kilometers per hour (km/h), while SWOD dropped slightly from 42.9 km/h to 41.6 km/h.

The TFI data for road transport in 2021 are summarized in Tables 4.1 and 4.4. Results for TFIs by corridor are provided in Appendix 6.

### Trade Facilitation Indicator 1: Average Border-Crossing Time

Border crossing times declined on all corridors except Corridor 1. Although most countries relaxed epidemiological restrictions at their borders in 2021, the COVID-19-control regimes at PRC BCPs continued to be exceptionally demanding and severe. This led to extremely long average border-crossing times at the PRC's Horgos (77.5 hours) and Alashankou (61.7 hours) BCPs on the border with Kazakhstan, which were the most time-consuming crossing points on the CAREC corridors tracked by CPMM during the year.

They were followed in average length of crossing times by Kazakhstan's BCP at Kuryk (61.6 hours) where trucks often faced long queues while awaiting entry to the Caspian Sea port and capacity may need to be expanded. Pakistan's BCPs at Chaman (57.5 hours) and Torkham (31.6 hours) at its border with Afghanistan also reported lengthy border-crossing averages. They have consistently been among the five most time-consuming BCPs, but their average crossing times did decline somewhat in 2021. The most time-consuming BCPs for inbound shipments were Dostyk in Kazakhstan (46.8 hours), Yarant in Mongolia (23.9 hours), Torkham in Afghanistan (22.2 hours), and Nur Zholy (19.6 hours) and Kuryk (17.7 hours) in Kazakhstan. Interestingly, these inbound values were lower than the outbound. Waiting time made up more than half of the average crossing period in either direction.

### Trade Facilitation Indicator 2: Average Border-Crossing Cost

An overall increase in the average cost to clear a BCP in 2021 was largely the result of a near quadrupling of these costs from $638 to $2,373 on Corridor 1. This in turn was due to the additional costs incurred to comply with the stringent border-crossing procedures imposed by the PRC at its Horgos and Alashankou BCPs on its border with Kazakhstan.

Table 4.2 breaks down the costs incurred at BCPs along CAREC corridors in 2021 by activity. The major outlays were for the loading and unloading of cargos between trucks required at some border crossings and for customs control fees. The average loading and unloading costs continued to rise after hitting an all-time high of $1,487 in 2020. On Corridor 1, where the PRC required an elaborate and expensive procedure, it reached $5,925. It was also up for the second year in a row on Corridors 4, 5, and 6, although by far more modest amounts. Customs-related fees were highest on Corridors 1 and 5.

### Table 4.1: Average Time and Cost to Clear a Border-Crossing Point

| Indicator | Description | 2020 | 2021 | % Change |
|---|---|---|---|---|
| TFI1 | Time taken to clear a border-crossing point (hours) | 15.1 | 13.6 | (9.9%) |
| TFI2 | Cost incurred at border-crossing clearance ($)[a] | 199 | $357 | +79.3% |

TFI = trade facilitation indicator.
[a] Total cost estimates are derived by summing fees and payments for each border-crossing activity at the BCP. "Tea money" or "facilitation fees" beyond the official amount to be paid are included.
Source: Asian Development Bank.

### Table 4.2: Average Cost at Road Border-Crossing Points by Activity ($)

| | Road Costs | Overall | Corridors | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 |
| i | Border security and/or control | 12 | 8 | 5 | 9 | 15 | 17 | 12 |
| ii | Customs controls | 99 | 221 | 50 | 21 | 35 | 202 | 57 |
| iii | Commercial inspection | 56 | 63 | 5 | – | 47 | 17 | 12 |
| iv | Health and/or quarantine | 9 | 9 | 24 | 7 | 9 | 8 | 8 |
| v | Phytosanitary | 13 | 39 | 4 | 5 | 30 | 35 | 6 |
| vi | Veterinary inspection | 6 | – | 6 | 6 | – | – | 6 |
| vii | Visa and/or immigration | 22 | 16 | – | 8 | – | 44 | 13 |
| viii | Transit tonformity | 32 | – | 51 | 30 | – | – | 11 |
| ix | GAI and/or Traffic inspection | 8 | 4 | – | 3 | – | 10 | 7 |
| x | Police checkpoint or top | 11 | – | – | – | – | 10 | 11 |
| xi | Transport inspection | 11 | 19 | 8 | 8 | – | 19 | 11 |
| xii | Weight and/or standard inspection | 14 | 10 | 32 | 12 | 31 | 10 | 12 |
| xiii | Vehicle registration | 6 | – | 12 | 5 | – | – | 7 |
| xiv | Emergency repair | 90 | – | – | – | – | 90 | – |
| xv | Escort or convoy | 50 | – | 175 | 48 | – | – | – |
| xvi | Loading and nnloading | 1.027 | 5,925 | – | 8 | 265 | 102 | 116 |
| xvii | Road or Bridge Toll | 25 | – | 72 | – | 7 | 11 | 12 |
| xviii | Waiting or Queueing | 20 | – | 2 | – | – | 18 | 30 |

– = data not available, GAI = Gosudarstvennya Avtomobilnaya Inspektsyya.
Note: Highlighted cells show values equal to or above $100.
Source: Asian Development Bank.

The CPMM analyzed reports by drivers of unofficial payments related to road transport on the six corridors (Table 4.3).[11] Ranked by likelihood of occurrence, the activities with which most such payments were related in 2021 were (i) customs control (26%), (ii) vehicle registration (20%), (iii) phytosanitary activities (7%), (iv) transport inspection (6%), and (v) weight and standard inspection (6%). The largest average unofficial payments per truck were related to (i) loading and unloading ($69), (ii) customs control ($66), (iii) transit conformity ($9), (iv) border security ($6) and (v) health and quarantine ($8). As might be expected, corruption levels dropped in early 2020 when the borders were closed and rebounded when many BCPs reopened in June. However, the estimated overall corruption value tracked by CPMM was down in 2021 from the previous year.

[11] An unofficial payment is defined as a sum paid on top of that officially recognized by law, with the aim of gaining a favor in return. No official receipt is given, and the opaque nature of the transaction makes tracking unofficial payments inherently difficult. Drivers participating in the CPMM are trained to recognize unofficial payments and record them separately. Unofficial payments differ across corridors and tend to be more significant along high-traffic corridors where drivers may pay "tea money" to shorten the long wait times created by congestion at border crossings. Unofficial payments were recorded at both BCP and non-BCP inland locations, such as customs offices or where drivers have interacted with traffic police on the road.

**Table 4.3: Estimated Average Unofficial Fees Paid per Activity for Road Transport, 2021 ($)**

| | Activities at BCPs and Inland | Portion of Overall Total (%) | Corridors | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 |
| i | Border security and/or control | 0 | – | 6 | – | – | – | 6 |
| ii | Customs controls | 26 | 41 | – | 1 | 72 | 33 | 66 |
| iii | Commercial inspection | 1 | – | – | – | – | – | 3 |
| iv | Health and/or quarantine | 3 | 6 | 4 | 30 | – | 4 | 5 |
| v | Phytosanitary | 7 | 12 | 5 | – | – | 5 | 5 |
| vi | Veterinary inspection | 5 | – | 2 | – | – | – | 2 |
| vii | Visa and/or immigration | 5 | – | 2 | – | – | – | 2 |
| viii | Transit conformity | 3 | – | 10 | – | – | 8 | 9 |
| ix | GAI and/or traffic inspection | 0 | – | – | – | – | – | – |
| x | Police checkpoint or stop | 0 | – | – | – | – | – | – |
| xi | Transport inspection | 6 | 15 | 3 | – | – | 6 | 5 |
| xii | Weight and/or standard inspection | 6 | 4 | 4 | – | 1 | 6 | 5 |
| xiii | Vehicle registration | 20 | 5 | 3 | – | – | 5 | 4 |
| xiv | Emergency repair | 0 | – | – | – | – | – | – |
| xv | Escort or convoy | 0 | – | – | – | – | – | – |
| xvi | Loading and unloading | 0 | – | – | – | – | 2 | 69 |
| xvii | Road or bridge toll | 0 | – | – | – | – | – | – |
| xviii | Waiting or queueing | 0 | – | – | – | – | – | – |

– = data not available, GAI = Gosudarstvennya Avtomobilnaya Inspektsyya.
Note: Highlighted cells show values equal to or above $100.
Source: Asian Development Bank.

## Trade Facilitation Indicator 3: Total Transport Cost

Total transport cost as measured by CPMM has risen steadily in recent years. This trend was supported in 2021 by sharp increases in ocean and road freight rates associated with congestion at seaports, a worldwide shortage of containers, and a shift from sea routes to land transport. The effects were particularly felt on Corridor 1. Total transport cost rose from $1,092 in 2019 to $1,788 in 2020, then nearly doubled to $3,179 in 2021. Corridors 2 and 4 also showed increases. The diversion of cargo from ocean transport due to high sea freight rates pushed up demand and the cost for shipping by road.

## Trade Facilitation Indicator 4: Speed to Travel on CAREC Corridors

Average corridor speeds were down in 2021, with SWOD falling by 3.0%, and SWD by 5.2%. With an SWOD of 63.5 km/h, Corridor 1 remained the fastest corridor to travel. Corridor 2 (49.7 km/h) came second, and Corridor 5 (27.5 km/h) continued to be the slowest. Corridor 1 also led on SWD, at 56.2 km/h. Corridor 4, the slowest of the six monitored, had an SWD of 14.8 km/h.

**Table 4.4: Average Cost and Speed of Travel on CAREC Corridors**

| Indicator | Description | 2019 | 2020 | % Change |
|---|---|---|---|---|
| TFI3 | Cost incurred to travel a corridor section ($ per 500 km, per 20 tons) | 918.0 | 1,256.0 | +36.8 |
| TFI4 | Speed to travel on CAREC corridors (km/h) | 22.7 | 21.5 | (5.2) |
| SWOD | Speed without delay (km/h) | 42.9 | 41,6 | (3.0) |

CAREC = Central Asia Regional Economic Cooperation, km = kilometer, km/h = kilometer per hour, SWOD = speed without delay, TFI = trade facilitation indicator.
Source: Asian Development Bank.

# Corridor Performance

## Corridor 1—Road

Corridor 1 is a key route for goods moving between East Asia and Europe. The significant climb in transport demand in 2021 and the surging ocean freight costs drove some shippers to switch to rail and truck. Corridor 1 was a prime beneficiary in terms of volume but suffered major border-crossing delays as heavier road and rail traffic combined with extremely tight, costly, and time-consuming COVID-19 border restrictions and procedures at PRC BCPs.

One example was a PRC ban on the entry of its trucks into Kazakhstan and on Kazakhstan truck entry into the PRC. This required that all cargo trailers be switched between PRC and Kazakhstan tractors in a neutral zone between the PRC's Horgos BCP and the Nur Zholy BCP on the Kazakhstan side. The PRC added onerous requirements to these exchanges in August 2021. It mandated that only a few select carriers undertake them, and that a special rack always be employed. The PRC carriers levied an exorbitant charge equivalent to roughly $5,800 for their part in the short-distance procedure, and the fees imposed by the Kazakhstan carriers were an astronomical $12,000 per transfer. The special racks, which the PRC ruled could be used only once, cost about $4,200 each. Border-crossing cost soared to $22,000 per trip. Combined with the added time needed to complete the intricate crossing procedure, this cost dropped daily throughput at the PRC's Horgos BCP to a dozen trucks a day from an already pandemic-decimated 20–30 daily in 2020.[12]

## Corridor 2—Road

Corridor 2 links the economies of the East Asia, Central Asia, Caucasus, and Mediterranean regions via four subcorridors. At one end is the PRC, and at the other Georgia.

**Table 4.5: Shipments from Georgia's Black Sea Port at Poti to Central Asia, 2021**

| Indicators | Poti to Shymkent, Kazakhstan | Poti to Bishkek, Kyrgyz Republic | Poti to Dushanbe, Tajikistan | Poti to Tashkent, Uzbekistan |
|---|---|---|---|---|
| Distance (km) | 4,640 | 5,082 | 3,300 | 3,302 |
| Transit time (hrs) | 108.75 | 133.58 | 154.75 | 79.83 |
| Activities time (hrs) | 172.42 | 180.58 | 231.40 | 193.13 |
| **Total time (hrs)** | **281.17** | **314.17** | **386.15** | **272.97** |
| Transport rate ($) | 6,200.00 | 6,000 | 6,200.00 | 5,700.00 |
| Activities cost ($) | 649.50 | 644.50 | 1,267.00 | 801.00 |
| **Total Trip cost ($)** | **6,849.50** | **6,644.50** | **7,467.00** | **6,501.00** |
| SWOD (km/h) | 42.67 | 38.04 | 21.32 | 41.36 |
| SWD (km/h) | 16.50 | 16.18 | 8.55 | 12.10 |
| Transport rate ($/500km) | 668.10 | 590.32 | 939.39 | 863.11 |
| Activities cost ($/500km) | 69.99 | 63.41 | 191.97 | 121.29 |
| Total Trip cost ($/500km) | 738.09 | 653.73 | 1,131.36 | 984.40 |

hrs = hours, km = kilometer, km/h = kilometer per hour, SWOD = speed without delay, SWD = speed with delay.
Note: No information was available for Poti–Almaty, so Poti–Shymkent data is provided instead.
Source: Asian Development Bank.

Georgia's seaports at Poti and Batumi on the Black Sea are gateways for shipments moving east to Central Asia. Table 4.5 shows the time and cost indicator data for a sample of noncontainerized cargoes trucked from Poti to Baku seaport in Azerbaijan on the Caspian Sea, moved by ship across the

[12] Source: https://ru.sputnik.kz/20201126/china-granitsa-kazakhstan-15585506.html (accessed on April 20, 2022).

sea to the port of Kuryk in Kazakhstan, and transported by truck to destinations in Kazakhstan, the Kyrgyz Republic, Tajikistan, and Uzbekistan. The average shipment times for such cargoes increased only slightly from 10–14 days in 2020 to 11–16 days in 2021. A more pronounced problem on this route was a tripling of road freight costs brought on by increased use of land shipments seeking to avoid the surging ocean freight rates on the Europe–East Asia maritime trade lanes.

## Corridor 3—Road

Corridor 3 links Kazakhstan and the eastern Russian Federation with Central Asia and Iran. The northern section of the corridor splits at Merke in Kazakhstan. Subcorridor 3a traverses Kazakhstan, Uzbekistan, and Turkmenistan and links with Iran. Subcorridor 3b also links with Iran at its southern end but through the Kyrgyz Republic, Tajikistan, and Afghanistan.

It took longer to cross the borders on 3a in 2021 but cost less (Table 4.4). This behaviour was in line with previous patterns. The average crossing at BCPs on Subcorridor 3a—such as Yallama–Konysbaeva (Uzbekistan–Kazakhstan), Alat–Farap (Uzbekistan–Turkmenistan) and Sarahs–Sarakhs (Turkmenistan–Iran) had higher average values than the BCPs on Subcorridor 3b, including Karamyk (Kyrgyz Republic–Tajikistan) and Dusti/Pakhtaabad–Saryasia (Tajikistan–Uzbekistan).

**Table 4.6: Trade Facilitation Indicator Results for CAREC Subcorridors 3a and 3b, 2021**

| Trade Facilitation Indicator | Subcorridor 3a | Subcorridor 3b |
|---|---|---|
| TFI1 | 8.7 hours | 3.9 hours |
| TFI2 | $62 | $82 |
| TFI3 | $652 | $499 |
| TFI4 | 54 km/h | 35 km/h |
| SWOD | 26 km/h | 21 km/h |

TFI = trade facilitation indicator, SWOD = speed without delay.
Source: Asian Development Bank.

The completion of the modernization at Yallama in Uzbekistan expanded the BCP to six gates and cut the average crossing time in half (Chapter ##: Case Study).

## Corridor 4—Road

Corridor 4 connects the PRC in the south to the Russian Federation in the north and is a vital trade and transit route for Mongolia and its economy. Subcorridor 4b is a conduit for both road and rail traffic and the most important of its three subcorridors. The Erenhot–Zamyn-Uud (PRC–Mongolia) crossing on Subcorridor 4b is a key gateway for cross-border trade and gives Mongolia access to Tianjin seaport in the PRC.

Subcorridor 4a often carries Mongolia's coal exports from Kexuete to the PRC through the Yarant–Takeshikent (Mongolia–PRC) BCPs. The crossing, previously closed due to pandemic controls, reopened in 2021. Among the shipments resumed were PRC exports of construction materials and consumer goods destined for Khovd, a regional center in western Mongolia. Average border-crossing times during the year were 10 hours at the PRC's Takeshikent BCP and 26 hours at Mongolia's Yarant. Waiting times and the time needed for epidemiological tests and to change cargos from one truck to another due to PRC restrictions were the main causes of delays.

The importance of Subcorridor 4b to Mongolia's trade was further highlighted in 2021. Although CPMM showed that what in effect had been a shutoff of inbound shipments of such perishables as fruits and vegetables due to PRC border restrictions ended IN WHAT MONTH, PLEASE?, the rate for trucking

freight on the PRC's Erenhot BCP–Ulaan Baatar route skyrocketed from $1,000 in January of 2021 to almost $7,000 by May. It hovered around $8,000 for the remainder of the year, posing a major threat to Mongolia's economy and underlining the landlocked country's extreme vulnerability to cost shocks, delays, or interruptions affecting its vital transport links with the sea. Adding to the difficulties were the unprecedented holdups of trains entering the PRC due to border controls at the PRC's Erenhot BCP. It took the trains an average of 7.5 days to cross through the BCP during the year, up from 7.4 hours in 2020.

The surge in Corridor 4 freight transport costs were due to the complex string of challenges that confronted global maritime shipping in 2021, as well as Mongolia's almost total reliance on the port of Tianjin, which at present is its only viable gateway for imports and exports moved by sea. Zamyn-Uud Ocean transport charges exploded in early 2021 as COVID-19 restrictions were eased in many major markets and international trade rebounded. This led to severe shortages and sky-high fees for containers, as well as heavy congestion at ports worldwide that added penalty charges to freight costs for the longer use of stranded containers. Some of the clogged maritime transport flows spilled over on to rail and road routes, and freight rates on these links also rose with the greater demand. Although Mongolia is a land-locked country, it has less alternative to access seaports compared to other Central Asian Republics, and strongly relies on Tianjin as a gateway port. Congestion at Tianjin seaport caused a logjam of goods bound for Mongolia, and resulted in high demand for rail transport. Importers in Mongolia had to resort to trucks for time-sensitive cargoes. From Erenhot to Ulaan Baatar, it takes a day for a truck to cover the 700 km distance, but it takes at least three days for a train to complete the trip.

## Corridor 5—Road

Corridor 5 connects East, Central, and South Asia and offers a potential alternative route to the sea for the PRC and landlocked CAREC countries through the new Gwadar, providing potential routes to access all-weather seaport at Karachi in Pakistan. Karachi lies on one end of all three of the Corridor 5 subcorridors, with the PRC at the other. In between they traverse Central Asian Republics in the north and Afghanistan and Pakistan in the south. Corridor 5 surrendered its title as the most costly and time-consuming corridor in 2021 to Corridor 1. Afghanistan's Torkham on the Pakistan border, the pairing of Chaman–Spin Buldak (Pakistan–Afghanistan) and Shirkhan Bandar–Panji-Poyon (Afghanistan–Tajikistan) were among the most challenging BCPs along this corridor.

## Corridor 6—Road

The four Corridor 6 subcorridors traverse Kazakhstan, Uzbekistan, and Turkmenistan, in the northwest, where they link with the Caucuses and the Russian Federation; and Tajikistan, Afghanistan, and Pakistan and its Arabian Sea ports to the south, where they connect with Iran and the Persian Gulf. Pakistan's agricultural producers employ Corridor 6 to ship products to Uzbekistan and Turkmenistan. In 2021, Pakistan sent a shipment of mangoes under a TIR Carnet through the corridor to the Russian Federation. Uzbekistan's trucking fleet, one of the region's largest, makes heavy use of the route through the Subcorridor 6a Dautota–Tazhen (Uzbekistan–Kazakhstan) BCP and through Kazakhstan's Kurmangazy BCP (6a, 6d) to move exports into the Russian Federation through that country's BCP at Krasny Yar. These transport operators tend to avoid using the more direct Corridor 2 route across the Caspian Sea due to long wait times at Kazakhstan's two ports and higher freight rates. They move cargo instead through the Alat–Farap BCP (Uzbekistan–Turkmenistan) on to links leading to seaports in Iran and Pakistan. The effectiveness of this transit corridor, however, depends greatly on political stability and supply chain security across Afghanistan. TFI performance on the six CAREC transit corridors is also clearly subject factors not tracked by the CPMM. These include the current state of supply chains, political stability, bilateral and multilateral relationships, geopolitics, and safety and security. Disruptions in any of these areas can the flow of goods along the corridors and the CPMM data in ways that cannot be addressed purely through CAREC trade facilitation efforts.

# 5 Rail Transport in 2021

## Trade Facilitation Indicators

CPMM data for rail transport in 2021 showed the following overall year-on-year changes from 2020:

(i) Average border-crossing time rose to 51.9 hours from 23.0 hours.

(ii) Border-crossing cost increased from $193 to $357.

(iii) The normalized rail cost of a 20-ton load travelling 500 km on CAREC corridors was up to $902 from the $836 average in 2020.

(iv) Speed with delay (SWD) was 38.0 km/h, down from 42.2 km/h; and SWOD declined from 16.8 km/h to 12.1 km/h.

The TFI data for rail transport in 2021 are summarized in Tables 5.1 and 5.2. The results by corridor are in Appendix 6.

### Trade Facilitation Indicator 1: Average Border-Crossing Time

Average border-crossing time jumped sharply from 23.0 hours in 2020 to 51.9 hours in 2021 after trending steadily downward from 2014 on. Major contributors to longer delays were gateway congestion brought on by stringent COVID controls, particularly by the PRC; an increase in and the priority accorded to express container trains; a shortage of flat wagons; and constraints imposed by the current state of rail infrastructure.

A huge increase in the number of express container trains from the PRC to Europe strained handling capacity and substantially slowed throughput at the PRC–Kazakhstan Alashankou–Dostyk and Khorgas–Altnykol rail BCPs. Throughput fell further in October 2021 when the PRC imposed tighter COVID-19 epidemiological steps and controls. For instance, the number of trains received daily by China Railways from Kazakhstan's national railways, Kazakhstan Temir Zholy (KTZ), dropped from 18 to only 5–8 trains per day after these stricter COVID-19 protocols went into effect. The escalation in controls created a major chokepoint and an immense logjam at the border. The slowdown followed completion the previous June of a new Dostyk rail terminal able to transfer containers between PRC and Russian gauge railcars more efficiently and handle six trains a day. KTZ is also working with China Railways to build a new 73 km line that will bypass the Alashankou–Dostyk gateway to connect the PRC across the border with Almaty.

### Trade Facilitation Indicator 2: Average Border-Crossing Cost

Average border-crossing costs for rail dropped to $178 in 2021 from $193 the previous year. This continued a steady downtrend due to streamlining of border management and greater process efficiencies that began in 2012.

**Table 5.1: Average Time and Cost to Clear a Border-Crossing Point by Rail, 2021**

| Indicator | Description | 2020 | 2021 | % Change |
|---|---|---|---|---|
| TFI1 | Time taken to clear a border-crossing point (hours) | 23.0 | 51.9 | 125.6 |
| TFI2 | Cost incurred at border-crossing clearance ($) | 193 | 178 | (84.5) |

TFI = trade facilitation indicator.
Source: Asian Development Bank.

### Trade Facilitation Indicator 3: Total Transport Cost

The normalized cost of a 20-ton load travelling 500 km by rail on CAREC corridors increased from $836 in 2020 to $902 in 2021. The surge in rail traffic as the COVID-19 pandemic eased gave the railroads pricing power and contributed to this increase. So did the passed-on costs of a decline in subsidies for some of the PRC–Europe express container trains, especially those on such established routes as that between Chongqing in the PRC and Duisburg in Germany. The skyrocketing rates on the PRC–Europe ocean route also pushed up the demand and prices for shipping on these trains.

### Trade Facilitation Indicator 4: Speed to Travel on CAREC Corridors

The average rail SWOD in 2021 was 38.0 km/h, a drop from 42.2 km/h in the previous year. SWD slowed to 12.1 km/h from 16.8 km/h. A shift of cargo from trucks to rail due to COVID-19 restrictions led to congestion, cross-border delays, and slower speeds on the six rail corridors.

**Table 5.2: Average Cost and Speed to Travel on CAREC Corridors, 2021**

| Indicator | Description | 2020 | 2021 | % Change |
|---|---|---|---|---|
| TFI3 | Cost incurred to travel a corridor section ($ per 500 km, per 20 tons) | 836 | 902 | +7.8 |
| TFI4 | Speed to travel on CAREC corridors (km/h) | 16.8 | 12.1 | (27.9) |
| SWOD | Speed without delay (km/h) | 42.2 | 38.0 | (9.9) |

CAREC = Central Asia Regional Economic Cooperation, km = kilometer, km/h = kilometers per hour, SWOD = speed without delay, TFI = trade facilitation indicator.
( ) = negative.
Source: Asian Development Bank.

## Corridor Performance

### Corridor 1—Rail

Intensified COVID control measures by the PRC, including the mandated disinfection of trains, combined with the congestion induced by surging rail traffic during the year raised border-crossing time on Subcorridor 1a in 2021 to 60.2 hours from **40.6** hours in 2020, and to 66.0 hours from 31.9 hours on Subcorridor 1b.

As a rule, the PRC required that wagons and containers be disinfected at the sending rail station, and a disinfection certificate issued for presentation to sanitation and/or phytosanitary authorities at the destination for approval and subsequent release. Serious delays occurred **at rail interchange gateways at PRC/Kazakhstan border** throughout the year. This led to a fourth-quarter suspension by China Railways of regular trains to the Alashankou–Dostyk crossing to clear the backlog at the Kazakhstan border. The higher priority accorded by **China Railways** to PRC–Europe express container trains reduced the capacity available to the regular trains that transport most of the goods to and from other CAREC member countries and left them sidetracked and delayed for long periods.

### Corridor 4—Rail

Corridor 4b is a 1,100 km single-track rail line connecting the PRC and the Russian Federation through Mongolia. Since railways in Mongolia and the Russian Federation use 1,520 millimeter (mm) Russian gauge track and the PRC uses 1,435 mm gauge, cargo must be transloaded at the Mongolia–PRC border. The receiving station undertakes this task.

Corridor 4b traffic and tonnage has grown steadily and significantly in recent years as it has become a more important transit route for shipments between the PRC, the Russian Federation, Central Asia, and

Europe. Corridor 4b handles both regular trains and container express rail traffic. Border-crossing time on this corridor ballooned to 55.5 hours in 2021 from 9.1 hours in 2020 due to the PRC's increasingly stringent controls and a jump in Mongolia's COVID-19 infections. The CPMM mechanism's reporting partner in Mongolia noted that some containers were delayed for more than 100 days at the PRC's Erenhot BCP.

ADB is assisting Mongolia in upgrading its rail network and in the enhancement of its throughput capacity. This includes completion of a multimodal logistics center at Mongolia's Zamyn Uud BCP and an evaluation of the feasibility of building the Bogdkhan Railway to bypass Ulaanbaatar.

# 6 Country Updates

This chapter updates the main national developments and CPMM data country by country to help explain the trends and outcomes as of 2021 at the CAREC regional and CAREC corridor levels. Policies, regulations, infrastructure, and institutional factors that can affect corridor performance are analyzed; and pertinent barriers and issues highlighted. Key developments and progress are noted, and recommendations for the policy makers made.

The 2021 CPMM report introduces the four TFIs at the country level, segregated by road and rail transport. Border-crossing time and cost data are further decomposed for outbound and inbound shipments (Tables 6.1–6.22). These data are supplemented by average border-crossing time and cost for BCPs along the CAREC corridors. Key CPMM findings are also provided in this chapter.

## Afghanistan

### Key Findings[13]

CPMM data for road transport in Afghanistan[14] in 2021 showed the following year-on-year changes from 2020:

(i) Border-crossing time dropped to 17.5 hours from 19.5 hours.

(ii) Border-crossing cost declined from $240 to $228, and total transport cost was down to $957 from $1,002 in the previous year.

(iii) SWOD (33.8 km/h) and SWD (11.9 km/h) both remained the slowest in the region.

(iv) The longest crossing times among Afghanistan BCPs were at Torkham, Shirkhan Bandar, Torghondi, and Hairatan.

**Table 6.1: Trade Facilitation Indicators for Afghanistan, 2019–2021**

| Trade Facilitation Indicators | | Road Transport | | | Rail Transport | | |
|---|---|---|---|---|---|---|---|
| | | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 |
| TFI1 | Time taken to clear a border-crossing point (hour) | 19.9 | 19.5 | 17.5 | 3.8 | 3.8 | 3.9 |
| | *Outbound* | *13.4* | *12.9* | *11.5* | *3.8* | *3.8* | *3.9* |
| | *Inbound* | *23.8* | *23.7* | *21.0* | – | – | – |
| TFI2 | Cost incurred at border-crossing clearance ($) | 240 | 240 | 228 | 225 | 225 | 224 |
| | *Outbound* | *246* | *256* | *253* | 225 | 225 | 224 |
| | *Inbound* | *237* | *230* | *213* | – | – | – |
| TFI3 | Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo) | 1,106 | 1,002 | 957 | – | – | – |
| TFI4 | Speed to travel on CAREC corridors (km/h) | 12.3 | 12.4 | 11.9 | – | – | – |
| SWOD | Speed without delay (km/h) | 32.5 | 33.7 | 33.8 | – | – | – |

km = kilometer, km/h = kilometers per hour, SWOD = speed without delay, TFI = trade facilitation indicator.
Source: Asian Development Bank.

[13] ADB placed on hold its assistance in Afghanistan effective 15 August 2021.
[14] ADB placed on hold its assistance in Afghanistan effective 15 August 2021.

**Table 6.2: Border-Crossing Performance in Afghanistan**

| BCP, Corridor, and Direction of Trade | | | Duration (hours) | | | Cost ($) | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2018 | 2019 | 2020 | 2018 | 2019 | 2020 |
| **Road Transport** | | | | | | | | |
| Hairatan | (3, 6) | *Outbound* | 4.9 | 5.0 | 5.5 | 145 | 159 | 160 |
| | | *Inbound* | – | – | – | – | – | – |
| Torkham | (5, 6) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 23.5 | 24.2 | 22.2 | 258 | 259 | 242 |
| Shirkhan Bandar | (2, 5, 6) | *Outbound* | 14.2 | 17.3 | 17.2 | 331 | 340 | 335 |
| | | *Inbound* | 20.0 | – | – | 392 | – | – |
| Spin Buldak | (5, 6) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 25.3 | 20.5 | 13.8 | 143 | 98 | 37 |
| Torghondi | (2, 6) | *Outbound* | 28.2 | 20.2 | 14.6 | 311 | 317 | 309 |
| | | *Inbound* | – | – | – | – | – | – |
| **Rail Transport** | | | | | | | | |
| Torghondi | (2. 6) | *Outbound* | 3.8 | 3.8 | 3.9 | 225 | 225 | 224 |

– = no data, BCP = border-crossing point.
Source: Asian Development Bank.

## Trends and Developments

Torkham BCP on the Pakistan border continued to operate 24/7 in 2021, which contributed to lower overall border-crossing time. Some crossing fees were waived in August 2021 but reinstated in December 2021. These included[15] charges (in US dollar equivalents) involving:

(i) mandatory road transport insurance at a cost of $20 a week, or $80 for 3 months;

(ii) 3-month visas for drivers issued at the BCP for $161;

(iii) a 3-month entry permit costing $450; and

(iv) road charges (*tuprok puli*) of $420–$430.

Although the basic border-crossing transport data improved in 2021, Afghanistan's business community faced severe setbacks on other fronts. The country was cut off from the international payment system, including SWIFT, after the fall of the former government in August. Because businesses could no longer move money through this system, they were forced to pay hard currency on delivery for their shipments. As elsewhere, these are the behind-the-borders problems that are not necessarily covered adequately by CPMM.

On a positive note, Afghanistan and Pakistan held intensive talks on reactivating the Afghanistan–Pakistan Transit Trade Agreement (APTTA), which liberalized transit across their borders.[16] Negotiations stalled in 2016, but reactivation could eliminate the need to transfer cargo between trucks at the Torkham–Peshawar (Afghanistan–Pakistan) BCPs. In addition, Uzbekistan has held discussions with the Afghanistan and Pakistan governments on the feasibility of a 573 km railway corridor link between its southern city of Termez and Peshawar through Afghanistan.

[15] These fee changes were reported by the Afghanistan Association of Freight Forwarders Companies (AAFFCO), a CPMM partner in Afghanistan.
[16] APTTA was concluded in March 2022. This would be reported in the next Annual Report.

## Recommendations

***Conclude APTTA negotiations with Pakistan authorities.*** Ending truck cargo transfers at their border under a reactivated APTTA would strengthen the trade, economies, and transport efficiency of both countries.

***Begin development of an authorized economic operators system.*** Afghanistan lacks such a system, which could be built on the APTTA. The natural candidates for economic operator authorization are the country's registered and approved TIR Carnet holders. These holders have met the strict requirements of the TIR Convention and its Annexes 2–7, which stipulate the standards for a secure shipment using a truck.

***Implement the TIR Convention and accede to the Convention on the Contract for the International Carriage of Goods by Road (CMR).*** There are only seven TIR Carnet holders in Afghanistan, and the country has not yet signed the CMR. Doing so would be a step toward ensuring smoother transit across Central Asia and the CAREC region.

***Roll out 24/7 operations at other high-traffic BCPs.*** The benefits of the September 2019 agreement between Afghanistan and Pakistan for 24/7 operations at Torkham were immediate. Queues shortened, and border-crossing time dropped. Afghanistan rolled out 24/7 operations at all its international BCPs **WHEN, PLS?.**

***Strengthen the Afghanistan Railways Authority.*** Preparing and developing an Uzbekistan–Pakistan rail corridor through Afghanistan will require that the staff of the Afghanistan Railways Authority have the necessary technical competencies and management skills. Strengthening the institutional and human resources at the authority is an area where international development organizations can provide technical assistance.

# Azerbaijan

## Key Findings

CPMM road transport data for 2021 showed the following year-on-year changes from 2020 in Azerbaijan:

(i) Border-crossing time fell slightly from 6.3 hours to 5.8 hours. This followed a big jump in 2020 from 2019.

(ii) Border-crossing cost increased from $85 to $106, but total transport cost was down to $27 from $45.

(iii) SWOD slowed slightly to 52.3 km/h from 52.7 km/h, while SWD rose to 39.1 km/h from 34.2 km/h.

(iv) The average time taken to clear the country's Krasny Most (Red Bridge) BCP declined for both inbound and outbound directions. The cost was significantly higher than in 2020.

## Trends and Developments

Azerbaijan serves transit traffic moving in both directions on four Corridor 2 subcorridors between the East and Central Asian CAREC countries and Black Sea ports in Georgia or Sarpi on Georgia's border with Turkey. The country's seaport and BCP at Alyat[17] 70 km south of Baku is a key juncture on these

[17] The name commonly used in public media is either Alat or Alyat. This report uses Alyat to differentiate this location from Alat, a Uzbekistan BCP on its border with Turkmenistan.

### Table 6.3: Trade Facilitation Indicators for Azerbaijan

| Trade Facilitation Indicators | | Road Transport 2019 | 2020 | 2021 |
|---|---|---|---|---|
| TFI1 | Time taken to clear a border-crossing point (hour) | 2.7 | 6.3 | 5.8 |
| | *Outbound* | *1.9* | *2.8* | *7.5* |
| | *Inbound* | *3.6* | *10.2* | *3.6* |
| TFI2 | Cost incurred at border-crossing clearance ($) | 50 | 85 | 106 |
| | *Outbound* | *34* | *71* | *100* |
| | *Inbound* | *57* | *97* | *112* |
| TFI3 | Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo) | 23 | 45 | 27 |
| TFI4 | Speed to travel on CAREC corridors (km/h) | 34.0 | 34.2 | 39.1 |
| SWOD | Speed without delay (km/h) | 55.7 | 52.7 | 52.3 |

km = kilometer, km/h = kilometers per hour, SWOD = speed without delay, TFI = trade facilitation indicator.
Source: Asian Development Bank.

### Table 6.4: Border-Crossing Performance in Azerbaijan

| BCP, Corridor, and Direction of Trade | | | Duration (hours) 2019 | 2020 | 2021 | Cost ($) 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|
| **Road Transport** | | | | | | | | |
| Baku | (2) | *Outbound* | 0.9 | 1.7 | 7.2 | 23 | 64 | 110 |
| | | *Inbound* | 0.4 | 1.6 | 0.5 | 34 | 51 | 43 |
| Krasnyi Most | (2) | *Outbound* | 7.4 | 4.5 | 2.9 | 23 | 20 | 26 |
| | | *Inbound* | 4.6 | 11.9 | 3.7 | 63 | 105 | 120 |

BCP = border-crossing point.
Note: The estimates for the Baku seaport BCP are for land-side operations only. The water-side delays are more significant.
Source: Asian Development Bank.

routes. Shipments moving to or from the Black Sea are loaded onto or discharged from vessels traversing the two Corridor 2 maritime routes across the Caspian Sea. The port can handle 15 million tons of cargo a year and boasts annual container throughput capacity of 100,000 twenty-foot equivalent units (TEUs). It has a ferry terminal with two berths and a yearly capacity of 6.2 million tons; a Roll on/roll off (RO-RO) terminal with two berths and a 1.8 million ton annual capacity; and a seven-berth general cargo terminal that can move 7 million tons a year. A key constraint, however, is the fact that Azerbaijan Caspian Shipping (ASCO), the national fleet operator, runs only two cargo vessels between the Baku facility and the ports at Aktau and Kuryk on the Kazakhstan side of the Caspian and deploys them ad hoc with no fixed schedule or route according to the volume and types of cargoes waiting to cross.

In 2021, inbound and outbound shipments waited in the port for 1–7 days. Caspian Sea shipments arriving from Kuryk across the Caspian in Kazakhstan had shorter dwell times than those outbound on the same route. Ferry tickets are $1,200 one-way and $1,800 round trip. Transit across the Caspian was more expensive as of 2021 than a comparable Kazakhstan–Russia Federation–Georgia–Türkiye overland route around the sea due to the seaport terminal and ferry fees. However, transport operators and drivers from Georgia had no choice between the two options, since the Russian Federation was denying them permits to transit.

## Recommendations

***Enhance the efficiency and appeal of the trans-Caspian Middle Corridor.*** The alignment of the Middle Corridor, or Trans-Caspian International Transport Route, as it is also known, is essentially that of CAREC Subcorridor 2c through the Baku seaport and the Transport Corridor Europe Caucasus Asia (TRACECA) route first proposed in 1993. Developing and expanding traffic on the Middle Corridor, which Azerbaijan

**Figure 6.1: Baku International Sea Trade Port**


Source: https://www.carecprogram.org/?feature=the-baku-international-sea-trade-port-of-azerbaijan.
Photo by Ragas, Sammons, and Khodjaev.

National Railway (ADY), Georgian Railways, and Kazakhstan's KTZ have partnered to promote, will help Azerbaijan realize its goal to become an important transit country for transport and a key link between the Central Asian countries and Europe.

Azerbaijan has invested heavily in physical infrastructure on the Middle Corridor by constructing the new cargo port in Alyat,[18] upgrading the national railway, and building Azertbaijan Demir Zholy ()logistics centers in Ganja and Krasny Most along the route. As of 2021, however, the Middle Corridor accounted for only 3%–5% of the 1.46 million TEUs moved during the year on PRC–Europe container express trains, or of the 1.5 million tons passing through the Russian Federation.[19] In addition, shippers find it cheaper and more efficient to move many of their containers from Uzbekistan to Azerbaijan not by the more direct bimodal trans-Caspian Corridor 2 route, but overland through Kazakhstan and into the Russian Federation and back south through the Azerbaijani border 200 km north of Baku. For the Middle Corridor to become more competitive and attract more transit traffic, the capacity and reliability of the Caspian crossing must be improved.

***Upgrade the services and capacity of Azerbaijan Caspian Shipping Company (ASCO).*** More effective trans-Caspian shipping is critical to expanding volumes on the Middle Corridor. The services now available are undependable and unable to meet even current modest transport capacity demands. Azerbaijan

[18] Alyat is the name of the seaport in Baku.
[19] Source: Railfreight.com https://www.railfreight.com/specials/2022/03/18/middle-corridor-unable-to-absorb-northern-volumes-opportunities-still-there/

Caspian Shipping Company, the **State-Owned shipping company** should add more container ships to the two it now operates and run them reliably on a fixed schedule.

***Promote the formation of a national freight forwarding association.*** Azerbaijan has a national association for road carriers but none for its freight forwarders. One is needed to represent the interests of the country's forwarders as Azerbaijan's role as a transport transit country grows and the services and capacity of the Middle Corridor are enhanced and expanded.

***Accelerate the development of Alyat Free Economic Zone.*** Swifter development of this free trade zone (FTZ) will also speed up the development of value-added industries in the country. Proper legislation and regulatory reforms are required to move the 2020 plan forward, as well as land and logistics nodes to link the FTZ to current transport routes.

## People's Republic of China

### Key Findings

The PRC is the source of goods and the transit country for incoming and outgoing sea transport for landlocked Kazakhstan and Mongolia. Coupled with a China Railway flatcar shortage and priority given to express trains not serving Central Asia, the PRC's extremely onerous COVID control policies in 2021 disrupted the supply chains and border crossings of both of these neighboring members. For example, containers that normally took 45 days to reach Ulaan Baatar from Australia required more than 6 months. Mongolia and Kazakhstan found their supply of fresh fruits and vegetables, previously sourced mostly from the PRC, essentially cut off, although Mongolia was able to obtain perishable produce from Central Asian countries such as Uzbekistan.

CPMM road and rail transport data for 2021 showed the following year-on-year changes from 2020 in the PRC:

(i) Both border-crossing duration and costs rose substantially due to the additional inspection and sanitation control measures.

(ii) Road border-crossing time averaged 23.3 hours, up 230% from 7.1 hours in 2020; and the cost surged 187.6% to $1,219 from $424. Total road transport cost rose from $678 to $896.

SWOD by road rose from 62.5 km/h to 64.5 km/h, but SWD dropped to 14.6 km/h from 16.8 km/h.

(iii) The time taken to cross borders by rail jumped to 83.8 hours from 18.3 hours. The cost was up by a far more modest 19% from $115 to $137.

(iv) The outgoing rail border-crossing times at PRC BCPs more than doubled to 80.2 hours at Alashankou and quadrupled at Horgos (58.7 hours). In practice, the actual traffic were bi-directional but CPMM only managed to collect samples from PRC to Kazakhstan. Neither had incoming rail shipments. The outgoing average was double at Erenhot too (36.2 hours), but was insignificant compared with the incoming rail average, which rose by 25 times from 7.4 hours in 2020 to 184.5 hours in 2021 due to much heavier restrictions after COVID-19 cases surged in Mongolia.

(v) Total rail transport cost more than doubled from $3,979 from $1,710.

Although rail SWOD dropped only marginally from 82.0 km/h to 78.8 km/h, SWD more than halved to 22.3 km/h from 47.2 km/h.

## Table 6.5: Trade Facilitation Indicators for the People's Republic of China

| Trade Facilitation Indicators | | Road Transport 2019 | Road Transport 2020 | Road Transport 2021 | Rail Transport 2019 | Rail Transport 2020 | Rail Transport 2021 |
|---|---|---|---|---|---|---|---|
| TFI1 | Time taken to clear a border-crossing point (hour) | 4.3 | 7.1 | 23.3 | 13.4 | 18.3 | 83.8 |
| | *Outbound* | *5.5* | *9.5* | *27.8* | *11.9* | *18.7* | *64.7* |
| | *Inbound* | *1.2* | *1.5* | *2.3* | *17.7* | *17.5* | *149.6* |
| TFI2 | Cost incurred at border-crossing clearance ($) | 166 | 424 | 1,219 | 104 | 115 | 137 |
| | *Outbound* | *181* | *544* | *1,413* | *33* | *24* | *28* |
| | *Inbound* | *133* | *157* | *170* | *128* | *150* | *266* |
| TFI3 | Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo) | 1,257 | 1,710 | 3,979 | 789 | 678 | 896 |
| TFI4 | Speed to travel on CAREC corridors (km/h) | 25.9 | 47.2 | 22.3 | 20.9 | 16.8 | 14.6 |
| SWOD | Speed without delay (km/h) | 69.8 | 82.0 | 78.8 | 65.1 | 62.5 | 64.5 |

km = kilometer, km/h = kilometers per hour, SWOD = speed without delay, TFI = trade facilitation indicator.
Source: Asian Development Bank.

## Table 6.6: Border-Crossing Performance in the People's Republic of China

| BCP, Corridor and Direction of Trade | | | Duration (hours) 2019 | Duration (hours) 2020 | Duration (hours) 2021 | Cost ($) 2019 | Cost ($) 2020 | Cost ($) 2021 |
|---|---|---|---|---|---|---|---|---|
| **Road Transport** | | | | | | | | |
| Alashankou | (1, 2) | *Outbound* | – | 18.6 | 61.7 | – | 590 | 610 |
| | | *Inbound* | – | – | – | – | – | – |
| Erenhot | (4) | *Outbound* | 6.7 | 6.4 | 6.0 | 144 | 117 | 54 |
| | | *Inbound* | – | – | – | – | – | – |
| Horgos | (1) | *Outbound* | 11.0 | 16.4 | 77.5 | 450 | 1,658 | 5,809 |
| | | *Inbound* | 15.7 | 4.3 | – | 80 | 174 | – |
| Torugart | (1) | *Outbound* | 1.6 | 2.1 | 4.2 | – | – | 6 |
| | | *Inbound* | – | – | – | – | – | – |
| Irkeshtan | (2, 5) | *Outbound* | 0.2 | 1.4 | – | – | – | – |
| | | *Inbound* | 1.6 | 0.8 | – | 4 | – | – |
| Karasu | (0) | *Outbound* | 4.1 | 2.8 | 10.5 | 207 | 51 | 156 |
| | | *Inbound* | – | – | – | – | – | – |
| Zuun Khatavch | (4) | *Outbound* | 1.3 | 1.4 | – | 16 | 16 | – |
| | | *Inbound* | – | – | – | – | – | – |
| Khunjerab | (5) | *Outbound* | 1.7 | 2.8 | – | – | – | – |
| | | *Inbound* | – | – | – | – | – | – |
| **Rail Transport** | | | | | | | | |
| Alashankou | (1, 2) | *Outbound* | 17.3 | 26.9 | 80.2 | 2 | 6 | 8 |
| | | *Inbound* | – | – | – | – | – | - |
| Erenhot | (4) | *Outbound* | 11.2 | 15.0 | 36.2 | 16 | – | 18 |
| | | *Inbound* | 9.2 | 7.4 | 184.5 | 69 | 125 | 288 |
| Horgos | (1) | *Outbound* | 7.6 | 12.7 | 58.7 | 14 | 13 | 15 |

BCP = border-crossing point.
Source: Asian Development Bank.

## Trends and Developments

### *Strict COVID-19 Controls in 2021*

The PRC's exceptionally burdensome border control responses in 2021 to spiking numbers of COVID-19 cases among its own population and those of neighboring CAREC countries due to the more infectious but less deadly omicron variants severely impacted CAREC transport corridor performance and landlocked CAREC economies.

Kazakhstan and Mongolia, which depend on the PRC for access to international ocean transport, were severely affected by extraordinary delays and even complete shutdowns of crucial imports. For example, containers shipped from Australia took more than 6 months to reach Ulaan Baatar due to PRC BCP controls compared with the normal 45 days. Both countries found their supply of fresh fruits and vegetables from the PRC essentially cut off by the PRC controls, although Mongolia was able to obtain perishable produce from Central Asian countries such as Uzbekistan.

The closing of small PRC BCPs such as Takeshikent on the Kazakhistan border at Yarant and the enforcement of extreme epidemiological measures at the PRC's Horgos BCP on the Kazakhstan border and its Yierkeshitan BCP in PRC with the adjacent Irkeshtan BCP in the Kyrgyz Republic drove crossing costs up to extraordinary levels and slowed throughput to a trickle.

The PRC had banned its trucks from entering neighboring countries, and their trucks from entering its own, requiring shipments to be unloaded or trailers detached at the PRC BCP and shuttled to a neutral zone where they would then be shuttled to trucks or bonded warehouses on the other side. Further expense was added by an August 2021 PRC directive mandating only a few specific carriers to execute these shuttles. These carriers promptly began charging exorbitant rates for transfers on both sides of the border.

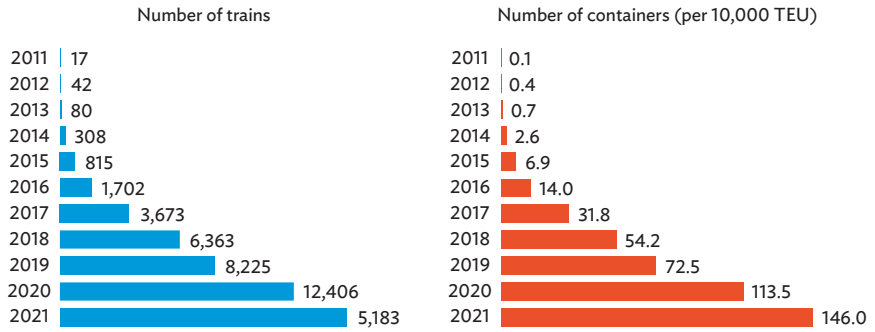
Costs soared even higher at the PRC's Horgos BCP due to a PRC order requiring shippers to purchase a single-use loading rack for the designated carrier to employ when transporting their goods a few kilometers to the Kazakstan BCP at Nur Zholy. The rack cost about $5,780 and pushed the total shuttle fee to $14,000 and overall border crossing costs to an astounding $22,000 per trip. Daily throughput at Horgos–Nur Zholy, which had already plunged from 200 to 20–30 vehicles in 2020, dropped further to a dozen.

The CAREC corridor transport mode that gained most from the confluence of negative factors affecting maritime shipping in 2021 were the PRC–Europe container express trains, if often at the expense of the transport capacity and needs of some of the PRC's CAREC neighbors. Exploding ocean freight rates propelled express rail traffic to new heights (Figure 6.2). The PRC ordered that these express trains move automatically to the front of the line of all rail traffic seeking passage at its clogged BCPs. With 15,183 trains running the PRC–Europe express routes in 2021, the majority through CAREC corridors in Kazakhstan and Mongolia and on into the Russian Federation, regular trains on which the other CAREC members depend for their imports and exports were regularly sidetracked and made to wait. In addition, while China Railway repeatedly ordered a full halt to regular train traffic, express trains had a green light all year and continued to roll.

An additional stiffening of the PRC's COVID-19 control measures in the fourth quarter[20] further tightened the rail bottlenecks at its borders for all but the Europe-bound express traffic. The most severe delays were for regular trains at the Alashankou–Dostyk (PRC–Kazakhstan) crossing. In addition, thousands of trucks loaded with grain, minerals, raw materials, and other exports and imports (mostly between Kazakhstan and the PRC) were left waiting to cross the border.

[20] Severe delays also occur at PRC's border with GMS countries like Vietnam

**Figure 6.2: PRC–Europe Container Express Train Traffic and Freight Volumes, 2021**




China Railways Container Transport Corporation, China Railways, South China Morning Post (https://www.scmp.com/economy/global-economy/article/3169239/what-china-europe-railway-express-and-how-much-pressure-it).

## Recommendations

***Authorize more shuttle carriers to transfer goods between the PRC's Horgos and Kazakhstan's Nur Zholy BCP.*** The small number of carriers allowed to conduct these shuttles has proven a license for them to charge extortionary rates. The PRC government should work with the Kazakhstan government to expand the authorized shuttle fleet and guide the rates down to a reasonable level.

***Streamline COVID-19 border inspection at rail BCPs.*** The long lines of trains and rail wagons backed up at the Alashankou–Dostyk and Horgos–Altynkol crossings signaled a lack of capacity at BCPs to administer the PRC's rigid and time-consuming COVID-19 control measures. The priority accorded to the crossing of PRC–Europe express container trains—more than 8,000 at these two crossings in the first half of 2021 alone by one estimate—further delayed regular trains serving CAREC members themselves. Additional package-by-package inspection mandated by the border agencies of the PRC's Xinjiang Uygur Autonomous Region also affected throughput. This problem will be aggravated if unresolved and lead to spoilage of perishables such as grains and oilseeds. Border authorities from the PRC and the adjacent countries should hold bilateral talks to explore ways to streamline border inspections and ease the situation.

***Expand the transloading capacity at the Alashankou–Dostyk crossing.*** The PRC and Kazakhstan governments should examine ways to develop faster transloading throughput at this pair of BCPs. Improvements should include greater yard space, more transloading tracks, and the replacement of outdated container-handling cranes with modern high-speed models guided by global positioning systems (GPS). Operating procedures should also be streamlined. Serious effort is needed to develop autonomous cargo handling systems that minimize human interaction and reduce the transmission of the COVID-19 through close human contact.

***Shift some railcar transloading from the Dostyk BCP to Alashankou.*** Kazakhstan's Dostyk BCP station has little room to expand due to its mountain-bound location. The yard at the PRC's Alashankou BCP is much better situated, and China Railway has the resources needed to provide more transloading space. China Railway and Kazakhstan Temir Zholy could consider modifying their Organization for Cooperation of Railways (OSJD) protocol so that Alashankou can handle the transloading of cargo between the PRC gauge wagons and Russian gauge railcars when Dostyk is swamped with work.

***Develop more effective means of transporting fresh fruits and vegetables to Kazakhstan.*** As part of its severe COVID-19 controls, the PRC halted the export of fresh fruits and vegetables to Kazakhstan in 2021. The two countries should promptly develop practical means to reinstate cross-border transportation of fresh produce.

# Georgia

## Key Findings

CPMM road transport data for Georgia in 2021 showed the following year-on-year changes from 2020:

(i) There was a sharp drop in land border-crossing time from 13.0 hours to 3.6 hours.

(ii) The border-crossing cost for road shipments were stable at $49, up only $1 from the previous year; but total transport cost surged from $87 to $562 on the back of demand by shippers for a road transport alternative to the skyrocketing rates for ocean freight.

(iii) SWOD was down to 32.6 km/h from 46.3 km/h. SWD was 25.0 km/h, slightly lower than the 27.1 km/h in 2021.

### Table 6.7: Trade Facilitation Indicators for Georgia

| Trade Facilitation Indicators | | Road Transport 2019 | 2020 | 2021 |
|---|---|---|---|---|
| TFI1 | Time taken to clear a border-crossing point (hour) | 10.6 | 13.0 | 3.6 |
| | *Outbound* | *12.9* | *14.2* | *4.2* |
| | *Inbound* | *2.6* | *4.8* | *1.3* |
| TFI2 | Cost incurred at border-crossing clearance ($) | 68 | 48 | 49 |
| | *Outbound* | *69* | *45* | *37* |
| | *Inbound* | *49* | *78* | *94* |
| TFI3 | Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo) | 185 | 87 | 562 |
| TFI4 | Speed to travel on CAREC corridors (km/h) | 21.5 | 27.1 | 25.0 |
| SWOD | Speed without delay (km/h) | 56.8 | 46.3 | 32.6 |

km = kilometer, km/h = kilometers per hour, SWOD = speed without delay, TFI = trade facilitation indicator.
Source: Asian Development Bank.

### Table 6.8: Border-Crossing Performance in Georgia

| BCP, Corridor, and Direction of Trade | | | Duration (hours) 2019 | 2020 | 2021 | Cost ($) 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|
| **Road Transport** | | | | | | | | |
| Tsiteli Khidi | (2) | *Outbound* | 13.4 | 5.1 | 24 | 52 | 43 | 52 |
| | | *Inbound* | 2.1 | 3.1 | 1.4 | – | – | 33 |
| Sarpi | (2) | *Outbound* | – | 36.2 | 6.2 | – | 10 | 10 |
| | | *Inbound* | 6.2 | 1.4 | 1.3 | 9 | 84 | 100 |

– = no data, BCP = border-crossing point.
Source: Asian Development Bank.

## Trends and Developments

Georgia is the only CAREC country with seaports on the Black Sea, making it a gateway for transit cargo moving between Europe and the Mediterranean region and Central Asia. Eastbound goods were trucked from the Black Sea ports of Poti or Batumi to be transported across the Caspian Sea and onto the Central Asian CAREC road corridors. The Russian Federation denies Georgia's transport operators permission to transit its land routes to the Central Asian countries, leaving the Corridor 2 Trans-Caspian subcorridors their only option.

Clearance through Georgia's BCPs the fastest in the CAREC region. Outbound clearance time at Georgia's Tsiteli Khidi (Red Bridge) BCP with Azerbaijan averaged 2.4 hours, and the inbound average was only 1.4 hours. A driver can complete the he immigration and customs controls clear the country's BCPs in only 5–10 minutes. The comparatively swift processing is due to a risk-based customs controls management approach, the use of pre-arrival declarations that allow customs to review cargo data before the shipment physically arrives, and legal reforms aimed at streamlining BCP and trade procedures through a one-stop-shop approach. Customs staff are empowered to pass truck drivers through immigration, and drivers need not alight from the vehicle for controls and inspections. Nonetheless, the total crossing time depends on the throughput capacities and clearance efficiencies of both BCPs at any point along the borders between the 11 CAREC countries.

A major impediment on Georgia's Corridor 2 routes in 2021 were lengthy waits averaging 3–4 days at the seaports at Baku in Azerbaijan and Aktau and Kuryk in Kazakhstan for trucks to be ferried across the Caspian. Land crossings at Corridor 2 BCPs in Central Asia also took longer in 2021, and the average total corridor transport cost hit a new high of $562. Transport operators blamed this increase on a shift by shippers toward use of the Middle Corridor and away from the soaring container costs on the traditional maritime routes between Europe and East Asia. Non-CAREC member Türkiye has long used Corridor 2 to send goods through its border with Georgia at Sarpi and onwards to the CAREC region.

Unless capacity constraints are addressed, however, Corridor 2's traffic growth potential may largely depend on exogenous factors. Türkiye's shippers likely use the corridor as much as they do in part because their transport operators (like Georgia's) are denied land transit by the Russian Federation. If that changed, the northern overland route around the Caspian could draw Türkiye's traffic away from Corridor 2. Other events could, of course, have the opposite effect and compel shippers to direct more trans-Eurasia cargoes along Corridor 2, as well as via the southern portions of Corridors 1 and 3–6 linking to seaports on the Arabian Sea and Persian Gulf. Nonetheless, given the current challenges posed by the Caspian crossing and presented at various BCPs, a sudden surge in Corridor 2 demand would lead to longer shipping times.[21]

## Recommendations

***Pilot CAREC Advanced Transit System (CATS).*** Both Azerbaijan and Georgia customs authorities are keen to begin using this electronic platform with support from the Asian Development Bank (ADB). **Azerbaijan and Georgia** should revisit the proposal for Kazakhstan to adopt the use of CATS, and more CAREC members can be convinced to consider its merits.

***Parking for heavy transport vehicles.*** The slow crossing time at the Sarpi BCP on Georgia's border with Turkiye leaves long lines of trucks waiting on the Georgia side. The queue can stretch for miles and is sometimes disorganized. Georgia's BCP lies in a narrow space between a hill and the sea, leaving little room to expand the parking area. Proper parking for heavy transport vehicles covered by TIR Carnets could be set up nearer to the outskirts of Batumi City to shorten the line-ups.

***Use of rail transport.*** Georgia Railways is a founding member of the Trans-Caspian International Route Association, whose members include the Kazakhstan and Azerbaijan railways and aim to develop a through-fare for rail shipments. Although this remains a work in progress, a properly developed and transparent through-fare would simplify cost estimation by shippers who would like to use the route but currently find it difficult to obtain good information on all the fees and tariffs along the way.

[21] This occurred after the Russian Federation invaded Ukraine in February 2022. As of **MONTH YEAR**, seaports on the Caspian and Black Seas faced unprecedented levels of congestion, presumably due to diversion of some cargoes to the Corridor 2 and Middle Corridor routes from the overland Russian Federation–Belarus route that virtually all Eurasian and PRC–Europe rail transport shipments took in 2021.

# Kazakhstan

## Key Findings

CPMM in 2021 showed the following year-on-year changes in Kazakhstan's road and rail transport data from 2020:

(i) Border-crossing time for road transport improved slightly from 8.7 hours to 8.2 hours.

(ii) The cost of crossing borders by road surged to $567 from $123. Total road transport cost was up to $2,422 from $1,850.

(iii) SWOD decreased from 52.9 km/h in 2020 to 49.9 km/h in 2021, and SWD decreased from 29.2 km/h to 28.6 km/h in 2021.

(iv) The most time-consuming road transport BCPs included Konysbaeva and Tazhen on the Uzbekistan border, but the land-side operation at the country's Kuryk seaport on the Caspian was even slower.

(v) Border-crossing time for rail continued a rise begun in 2019 and was up to 58.6 hours from 48.6 hours in 2020.

(vi) The rail border-crossing fees dipped from $341 to $308, but the total rail transport cost rose from $724 to $924.

(vii) Train SWOD and SWD both slowed substantially, with SWOD declining to 49 km/h from 65.2 km/h, and SWD dropping to 8.9 km/h from 15.3 km/h.

(viii) The 2021 CPMM data showed longer border-crossings, higher rail freight rates, and the slower speeds that indicated and reflected congestion at both terminals and across the country's rail network.

(ix) The Dostyk and Altynkol BCPs on the PRC border, both high-traffic rail crossings heavily used for transit to the Russian Federation for the PRC–Europe route, were where the main delays occurred.

**Table 6.9: Trade Facilitation Indicators for Kazakhstan**

| Trade Facilitation Indicators | | Road Transport | | | Rail Transport | | |
|---|---|---|---|---|---|---|---|
| | | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 |
| TFI1 | Time taken to clear a border-crossing point (hour) | 9.2 | 8.7 | 8.2 | 39.9 | 48.6 | 58.6 |
| | *Outbound* | *7.9* | *8.0* | *5.9* | *9.0* | *8.4* | *10.9* |
| | *Inbound* | *10.0* | *9.2* | *9.5* | *46.7* | *56.2* | *64.0* |
| TFI2 | Cost incurred at border-crossing clearance ($) | 115 | 123 | 567 | 327 | 341 | 308 |
| | *Outbound* | *67* | *58* | *30* | *122* | *124* | *141* |
| | *Inbound* | *139* | *157* | *875* | *351* | *356* | *320* |
| TFI3 | Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo) | 715 | 1,850 | 2,422 | 687 | 724 | 924 |
| TFI4 | Speed to travel on CAREC corridors (km/h) | 30.7 | 29.2 | 28.6 | 18.1 | 15.3 | 8.9 |
| SWOD | Speed without delay (km/h) | 53.2 | 52.9 | 49.9 | 67.8 | 65.2 | 49.0 |

km = kilometer, km/h = kilometers per hour, SWOD = speed without delay, TFI = trade facilitation indicator.
Source: Asian Development Bank.

## Table 6.10: Border-Crossing Performance in Kazakhstan

| BCP, Corridor, and Direction of Trade | | | Duration (hours) | | | Cost ($) | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 |
| **Road Transport** | | | | | | | | |
| Aul | (3) | *Outbound* | 0.4 | 2.4 | – | 14 | 26 | – |
| | | *Inbound* | – | – | – | – | – | – |
| Kairak | (1) | *Outbound* | 5.7 | – | 3.1 | 8 | – | 18 |
| | | *Inbound* | 2.0 | 4.0 | – | 25 | 30 | – |
| Zhaisan | (1, 6) | *Outbound* | 1.4 | 3.3 | 3.2 | 14 | 11 | 6 |
| | | *Inbound* | 0.6 | 2.0 | 1.5 | 10 | 23 | 19 |
| Beyneu | (2. 6) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | – | – | – | – | – | – |
| Tazhen | (2, 6) | *Outbound* | 11.8 | 10.7 | 10.0 | 100 | 94 | 62 |
| | | *Inbound* | 8.7 | 7.3 | 4.7 | 107 | 85 | 60 |
| Kurmangazy | (6) | *Outbound* | 2.5 | 3.3 | 3.1 | 10 | 7 | 7 |
| | | *Inbound* | 2.1 | 2.2 | 2.3 | 9 | 9 | 7 |
| Konysbayeva | (3, 6) | *Outbound* | 4.4 | 12.0 | 5.9 | 45 | 79 | 41 |
| | | *Inbound* | 11.6 | 12.8 | 5.1 | 128 | 123 | 52 |
| Aisha Bibi | (1, 3) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 9.5 | – | – | 15 | – | – |
| Taskala | (1, 6) | *Outbound* | 1.9 | 2.8 | 2.9 | 10 | 9 | 7 |
| | | *Inbound* | 1.5 | 2.4 | 2.0 | 12 | 18 | 5 |
| Pogodaevo | (0) | *Outbound* | – | 3.1 | – | – | 10 | – |
| | | *Inbound* | 1.9 | 2.0 | 2.5 | 10 | 10 | 6 |
| Aktau | (2) | *Outbound* | 0.6 | – | – | 57 | – | – |
| | | *Inbound* | 1.0 | – | – | 130 | – | – |
| Dostyk | (1, 2) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | – | 17.0 | 46.8 | – | 602 | 4,840 |
| Khorgos | (1) | *Outbound* | 1.1 | – | – | – | – | – |
| | | *Inbound* | 5.7 | – | – | 339 | – | – |
| Merke | (1, 3) | *Outbound* | 2.7 | 2.5 | 0.6 | 12 | 8 | 20 |
| | | *Inbound* | 0.1 | – | – | 6 | – | – |
| Kordai | (1) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 0.2 | – | – | – | – | – |
| Karasu | (1) | *Outbound* | 1.7 | 4.0 | 1.3 | 15 | 32 | 14 |
| | | *Inbound* | 34.4 | 15.5 | 1.5 | 101 | 29 | 18 |
| Kuryk | (2) | *Outbound* | 44.7 | 69.7 | 61.6 | 204 | 177 | 263 |
| | | *Inbound* | 14.8 | 23.5 | 17.7 | 321 | 308 | 312 |
| Nur Zholy | (1) | *Outbound* | 5.2 | 6.7 | – | 150 | 290 | – |
| | | *Inbound* | 3.5 | 5.1 | 19.6 | 277 | 315 | 3,918 |
| **Rail Transport** | | | | | | | | |
| Saryagash | (3, 6) | *Outbound* | 9.6 | 8.9 | 11.3 | 122 | 124 | 132 |
| | | *Inbound* | – | 1.7 | 4.0 | – | 14 | 7 |
| Dostyk | (1, 2) | *Outbound* | – | – | 6.7 | – | – | – |
| | | *Inbound* | 48.2 | 72.7 | 70.0 | 534 | 524 | 398 |
| Khorgos | (1) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | – | – | – | – | – | – |
| Merke | (1, 3) | *Outbound* | 2.5 | 6.0 | 6.6 | – | – | 175 |
| | | *Inbound* | – | – | – | – | – | – |

*continued on next page*

**Table 6.10** *continued*

| BCP, Corridor, and Direction of Trade | | | Duration (hours) | | | Cost ($) | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 |
| Altynkol | (1) | *Outbound* | – | 9.4 | 13.3 | – | – | – |
| | | *Inbound* | 44.7 | 51.4 | 65.9 | 252 | 271 | 276 |
| Saryagash | (3, 6) | *Outbound* | 9.6 | 8.9 | 11.3 | 122 | 124 | 132 |
| | | *Inbound* | – | 1.7 | 4.0 | – | 14 | 7 |
| Bolashak | (5) | *Outbound* | – | – | 30.2 | – | – | – |
| | | *Inbound* | – | – | – | – | – | – |

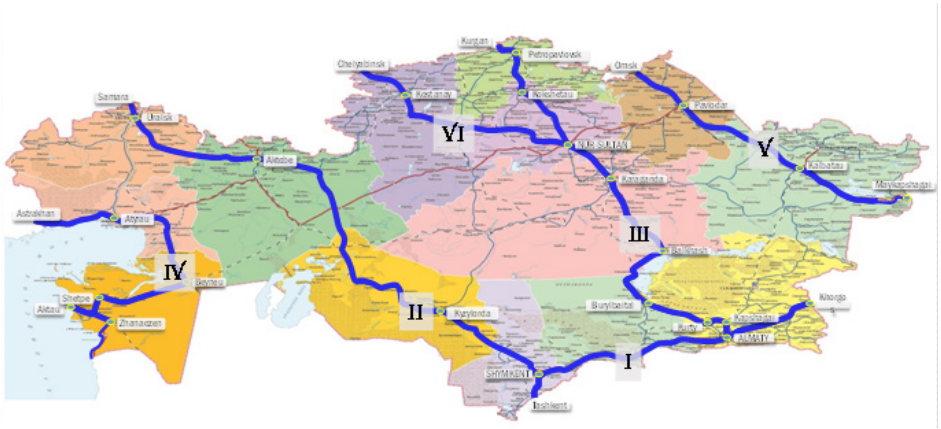
– = no data, BCP = border-crossing point.
Source: Asian Development Bank.

## Trends and Developments

Kazakhstan has six key road corridors stretching 8,357 km across the country. They are:

- I–II. Western Europe–Western China – **3,226 km**, *including section Aktobe–Uralsk–Samara.*
- III. Almaty–Karaganda–Nur–Sultan–Petropavlovsk – **1,724 km**
- IV. Astrakhan–Atyrau–Aktau–border of Turkmenistan – **1,415 km**
- V. Omsk–Pavlodar–Semipalatinsk–Mykapshagay – **1,101 km**
- Nur-Sultan–Kostanay–Chelyabinsk–Yekaterinburg – **891 km**

**Figure 6.3: Kazakhstan Road Networks**

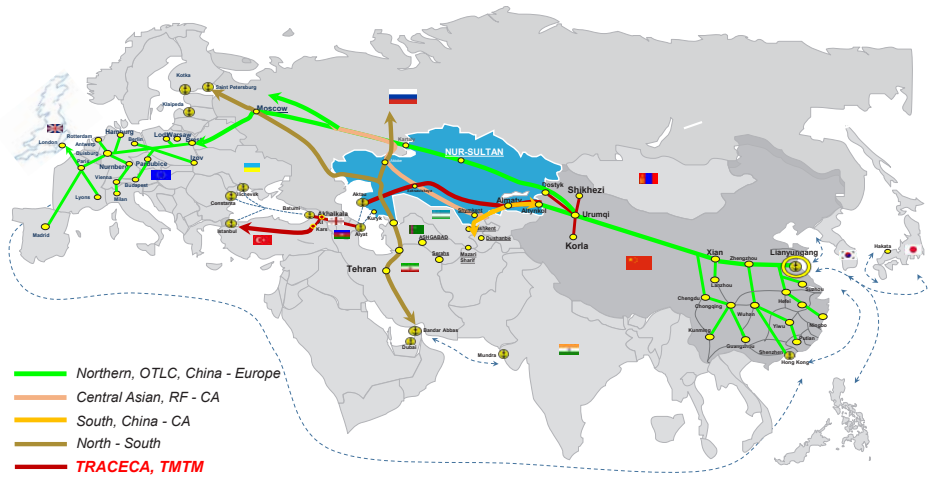



Source: https://www.carecprogram.org/?feature=the-baku-international-sea-trade-port-of-azerbaijan.
Photo by Ragas, Sammons, and Khodjaev.

The CAREC corridors covered by CPMM in Kazakhstan are 1, 3, 4, and 6, which are especially important for TIR Carnet shipments transiting the country from the PRC to Europe via the Russian Federation. Also covered is Corridor 2, which serves multimodal trans-Eurasia routes via the Caspian Sea and Georgia. Performance of the important road border-crossing at Khorgos–Horgos (Kazakhstan–PRC) had steadily improved until the pandemic broke out in in 2020. The prolonged and severe border control strictures imposed by the PRC in 2021 also contributed to much longer road crossing times at Kazakhstan's Nur Zholy and Dostyk BCPs.

The Kazakhstan CAREC corridor sections play a significant transit role for road shipments originating in or destined for other members of the program and beyond. Some 2.79 million tons of transit freight crossed the country by road in 2021, up 32.8% from 2020. The main transit goods included vegetables (25%), equipment (20%), textiles (16%), and metals (7%). The main sources of these road shipments **were XXXXX**, and the main destinations were Uzbekistan (64%), the PRC (15%), the European Union (10%), Turkmenistan (5%), Tajikistan (4%), and Türkiye (2%). Kazakhstan facilitated the movement of cargo from **XXXXX** across the borders of the Russian Federation and Uzbekistan on CAREC Corridors 3 and 6. Border performance at Kazakhstan–Uzbekistan BCPs would improve, notably at Konysbaeva–Yallama and Tazhen–Dautota, if Uzbekistan follows up on its consideration to join Kazakhstan as a member of the Eurasian Economic Union (EAEU).[22]

**Figure 6.4: Rail Transit Corridors Through Kazakhstan**




Source: https://www.carecprogram.org/?feature=the-baku-international-sea-trade-port-of-azerbaijan.
Photo by Ragas, Sammons, and Khodjaev.

Geography has made Kazakhstan a key link in the shortest rail routes for cargo moving between the PRC and Europe. The number of PRC–Europe container express trains, the bulk of which transit the country, increased again in 2021 to **15,183**. This has made the domestic development of containerization a priority.

Kazakhstan's CPMM rail crossing timesremained at an elevated 70 hours for the second straight year at the country's Dostyk BCP on the PRC border. Higher border-crossing times were reported at the PRC border BCPs at Altynkol, Sarygash, and Merke. The situation at Altynkol was especially serious, with average border-crossing time rising from 51.4 hours in 2020 to 61.9 hours in 2021. (The details are elaborated in the PRC section).

## Recommendations

***Improve and standardize road transport checkpoint operations.*** The main road transport delays occur at checkpoints. Two steps should be taken to reduce them:

(i) Develop a standardized operation procedure for internal and cross-border EAEU checkpoints. The locations of veterinary, phytosanitary, transport, and export controls should be separated and optimized at internal checkpoints.

[22] Kazakhstan and Uzbekistan have 8 BCPs, six international and two bilateral. CPMM gathers data only on two.

(ii) Complete the reconstruction of checkpoints, providing the full capacity needed to accommodate existing and projected cargo flows. The design and construction should take into account the functions and types of control performed for internal and external checkpoints of the EAEU, while providing special lines for vehicles using the TIR Carnet or carrying perishable goods. Equip checkpoints with the necessary modern equipment, technical means, and software and information tools, including high-speed internet connections.

***Continue integrating customs information systems with other services and organizations and through the single window.*** The most pressing need is integration of information systems. Linking the customs, railway, border services, veterinary, phytosanitary, sanitary-epidemiological, and transport control systems will reduce unnecessary paperwork and the time required for processing documents and crossing BCPs and checkpoints.

***Further expand the use of paperless technologies.*** The necessary steps include legal recognition and implementation of electronic certificates of origin and phytosanitary certificates, as well as Kazakhstan's accession to the Additional Protocol to the CMR 2008 Convention (e-CMR).

***Improve the operation of the Dostyk and Altynkol BCPs.*** The most frequent crossing delays occur at the border with the PRC. In addition to significant slowdowns on the PRC side due to other factors, the Kazakhstan BCPs have had problems handling the growth in cargo traffic. Their staff needs to be expanded, and their equipment updated. Additional lanes and sidings are needed to handle more shipments simultaneously are also useful.

## Kyrgyz Republic

### Key Findings

CPMM road and rail transport data for the Kyrgyz Republic in 2021 showed the following year-on-year changes from 2020:

(i) Border-crossing time increased by 76% from 2.1 hours in 2020 to 3.7 hours. This included a 161% surge from 1.8 hours to 4.7 hours for outbound traffic.

(ii) Border-crossing cost dropped to $23 from $27. An increase to $2,194 from $1,346 in total transport cost reflected the significant rise in road freight rates.

(iii) SWOD was 52.5 km/h, and SWD 27 km/h.

(iv) The most notable border delays were at the country's **Torugart BCP**, where outbound clearance averaged 25.8 hours, and **Irkeshtam**, where it stood at 11.5 hours.

### Trends and Developments

Although the Kyrgyz Republic has a rail system, it is essentially a small branch network of the larger railways operating in Kazakhstan and Uzbekistan and in great need of infrastructure improvements. As a result, most trade on the country's CAREC corridors is transported by road. CPMM data indicates that the typical commodities shipped include consumer goods imported from the PRC (much of which are subsequently re-exported) and exports of fruits and vegetables to Kazakhstan and the Russian Federation.

Much of the added time needed for outbound and inbound clearance at the country's BCPs in 2021 was due to the exceptionally strict, time-consuming pandemic control processes imposed by the PRC at its international borders. While truck drivers with negative COVID-19 test results could cross freely between Kazakhstan and Uzbekistan, the PRC enforced a regime similar to those at its Kazakhstan and Mongolia's border crossings that required lengthy trailer swap with no driver contact in a neutral zone.

### Table 6.11: Trade Facilitation Indicators in the Kyrgyz Republic

| Trade Facilitation Indicators | | Road Transport 2019 | Road Transport 2020 | Road Transport 2021 | Rail Transport 2019 | Rail Transport 2020 | Rail Transport 2021 |
|---|---|---|---|---|---|---|---|
| TFI1 | Time taken to clear a border-crossing point (hour) | 1.6 | 2.1 | 3.7 | 1.2 | 1.7 | 1.6 |
| | *Outbound* | *0.9* | *1.8* | *4.7* | – | – | – |
| | *Inbound* | *2.0* | *2.4* | *2.8* | *1.2* | *1.7* | *1.6* |
| TFI2 | Cost incurred at border-crossing clearance ($) | 23 | 27 | 23 | – | – | 175 |
| | *Outbound* | *21* | *24* | *22* | – | – | – |
| | *Inbound* | *25* | *30* | *25* | – | – | *175* |
| TFI3 | Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo) | 1,122 | 1,346 | 2,194 | 338 | – | 413 |
| TFI4 | Speed to travel on CAREC corridors (km/h) | 30.8 | 26.9 | 27.0 | 23.5 | 16.2 | 19.4 |
| SWOD | Speed without delay (km/h) | 50.6 | 49.4 | 52.5 | 33.2 | 20.0 | 21.2 |

km = kilometer, km/h = kilometers per hour, SWOD = speed without delay, TFI = trade facilitation indicator.
Source: Asian Development Bank.

### Table 6.12: Border-Crossing Performance in the Kyrgyz Republic

| BCP, Corridor, and Direction of Trade | | | Duration (hours) 2019 | Duration (hours) 2020 | Duration (hours) 2021 | Cost ($) 2019 | Cost ($) 2020 | Cost ($) 2021 |
|---|---|---|---|---|---|---|---|---|
| **Road Transport** | | | | | | | | |
| Dostuk | (2) | *Outbound* | 0.6 | 2.2 | 16 | 16 | 25 | 10 |
| | | *Inbound* | 1.0 | 1.9 | 2.5 | 22 | 18 | 11 |
| Chaldovar | (1, 3) | *Outbound* | 0.2 | – | – | 9 | – | – |
| | | *Inbound* | 1.7 | 6.8 | 0.7 | 8 | 8 | 33 |
| Karamyk | (2, 3, 5) | *Outbound* | 2.1 | 2.2 | 2.2 | 45 | 42 | 45 |
| | | *Inbound* | 0.6 | 2.1 | 2.4 | 19 | 25 | 12 |
| Ak Zhol | (1) | *Outbound* | 0.2 | – | 0.4 | 4 | – | 7 |
| | | *Inbound* | – | – | – | – | – | – |
| Kensay | (0) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 1.4 | 1.6 | – | 18 | 22 | – |
| Kyzyl-Bel | (0) | *Outbound* | 0.5 | 1.7 | 0.7 | 13 | 22 | 12 |
| | | *Inbound* | 0.9 | 1.7 | – | 23 | 24 | – |
| Torugart | (1) | *Outbound* | – | 2.4 | 25.8 | – | – | 2 |
| | | *Inbound* | 2.2 | 2.3 | 4.1 | 28 | 30 | 40 |
| Irkeshtam | (2, 5) | *Outbound* | 1.2 | 3.7 | 11.5 | 43 | 6 | 1 |
| | | *Inbound* | 0.8 | 1.8 | 1.2 | 15 | 106 | 12 |
| Chon Kapka | (1, 3) | *Outbound* | 0.3 | – | – | 6 | – | – |
| | | *Inbound* | – | – | – | – | – | – |
| Ak-Tilek | (1) | *Outbound* | 0.1 | 11 | 0.8 | 4 | 6 | 7 |
| | | *Inbound* | 0.1 | 1.6 | 1.0 | 2 | 7 | 7 |
| **Rail Transport** | | | | | | | | |
| Chaldovar | (1, 3) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 1.2 | 1.7 | 1.6 | – | – | 175 |

BCP = border-crossing point.
Source: Asian Development Bank.

## Recommendations

***Work to develop a new railway across the Kyrgyz Republic linking the PRC and Uzbekistan.*** The Kyrgyz Republic has continued to discuss this proposal with its two CAREC partners. The railway would link the PRC's rail system with Uzbekistan's and expand the route options for trans-Eurasian trade and

transport. This would rejuvenate the KTJ and provide substantial gains for the country as soon as the new railway is completed. However, rather than agree to the shortest, most direct, and less expensive transit alignment between the PRC and Uzbekistan favored by its two neighbors, the Kyrgyz Republic has pushed in the past for a route that it believes would benefit more of its people and domestic economy. Most stakeholders believe(s) such a route is unlikely to attract investors hoping to earn a return. ADB could assist the Kyrgyz Republic in seeking an arrangement that can serve the needs of all three countries, as well as play a role in the financing should the project go ahead.

***Develop a stable long-term transit policy.*** The Kyrgyz Republic is well-placed to play an important transit roll and can secure substantial economic gains by connecting the PRC with other CAREC countries, especially Uzbekistan and Tajikistan. So far, however, the country's government, unlike those of Kazakhstan and Mongolia, has not made transit transport a top priority.

***Develop cold chain infrastructure.*** Agricultural products, such as those listed in HS07 (vegetables) and HS08 (edible fruits and nuts), are the principal exports of many CAREC countries, including the Kyrgyz Republic. Kazakhstan and Uzbekistan are building transport and logistics centers that include temperature-controlled facilities and can improve the storage, processing, and transport of agricultural products. Developing cold chain infrastructure that prolongs the storage and transport life of agricultural products can provide major benefits to the net exporters of vegetables, fruits, and/or nuts—including the Kyrgyz Republic, Tajikistan, and Uzbekistan, which tend to harvest similar products at the same time each year and force prices down by flooding the markets with them. Yet when these prices rebound in the off-season, the Kyrgyz Republic and their competitors cannot meet either their export or domestic demands. For example, Kazakhstan must pay higher than in-season prices to import apples from Belarus and Poland in the off-season.

Operating a network of cold chain facilities to store and transport these products would enable the Kyrgyz Republic to stabilize supplies and meet export demand year-round. The country should swiftly implement the recommendations of the ATP Agreement on perishable products. It calls for the creation of temperature-controlled distribution centers, a refrigerated vehicle fleet , certified laboratories, and servicing centers for refrigerated trucks and containers. Production or procurement support from the domestic packaging industry would be needed to meet the requirements for moisture-resistant boxes for transporting perishables in a temperature-controlled environment. The development of human resource capacity would also be needed to effectively apply international and industry cold chain standards.

# Mongolia

## Key Findings

CPMM in 2021 showed the following year-on-year changes in Mongolia's road and rail transport data from 2020:

(i) Border-crossing time by road rose to 6.3 hours from 4.8 hours

(ii) Road transport border-crossing cost was down to $37 from $87, although total transport cost was up from $1,463 to $1,632.

(iii) SWOD rose slightly to 35.4 km/h. SWD was 20.8 km/h.

(iv) Border-crossing time by rail went from 8.9 hours to 11.8 hours.

(v) The rail border-crossing cost dropped to $32 from $39, and total transport cost declined from $852 to $360.

(vi) SWOD edged up to 21.9 km/h, and SWD was 13.0 km/h.

### Table 6.13: Trade Facilitation Indicators for Mongolia

| Trade Facilitation Indicators | | Road Transport 2019 | Road Transport 2020 | Road Transport 2021 | Rail Transport 2019 | Rail Transport 2020 | Rail Transport 2021 |
|---|---|---|---|---|---|---|---|
| TFI1 | Time taken to clear a border-crossing point (hour) | 3.7 | 4.8 | 6.3 | 19.0 | 8.9 | 11.8 |
| | *Outbound* | *2.9* | *1.5* | *2.7* | *8.7* | *2.1* | *9.8* |
| | *Inbound* | *3.7* | *5.0* | *6.6* | *21.4* | *10.6* | *12.9* |
| TFI2 | Cost incurred at border-crossing clearance ($) | 97 | 87 | 37 | 52 | 39 | 32 |
| | *Outbound* | *12* | *27* | *12* | *11* | *6* | *5* |
| | *Inbound* | *109* | *90* | *37* | *54* | *51* | *42* |
| TFI3 | Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo) | 1,373 | 1,463 | 1,632 | 720 | 852 | 360 |
| TFI4 | Speed to travel on CAREC corridors (km/h) | 26.2 | 24.4 | 20.8 | 19.1 | 17.1 | 13.0 |
| SWOD | Speed without delay (km/h) | 40.8 | 33.5 | 35.4 | 24.1 | 21.5 | 21.9 |

km = kilometer, km/h = kilometers per hour, SWOD = speed without delay, TFI = trade facilitation indicator.
Source: Asian Development Bank.

### Table 6.14: Border-Crossing Performance in Mongolia

| BCP, Corridor, and Direction of Trade | | | Duration (hours) 2019 | Duration (hours) 2020 | Duration (hours) 2021 | Cost ($) 2019 | Cost ($) 2020 | Cost ($) 2021 |
|---|---|---|---|---|---|---|---|---|
| **Road Transport** | | | | | | | | |
| Yarant | (4) | *Outbound* | 2.9 | 1.8 | 2.7 | 55 | 24 | 2 |
| | | *Inbound* | 3.3 | 2.7 | 25.9 | 198 | 202 | 205 |
| Zamiin-Uud | (4) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 4.5 | 5.2 | 5.0 | 133 | 110 | 38 |
| Altanbulag | (4) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 1.9 | 4.7 | 5.4 | 12 | 7 | 8 |
| Bichigt | (4) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 1.4 | 1.6 | – | 7 | 7 | – |
| **Rail Transport** | | | | | | | | |
| Sukhbaatar | (4) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 6.2 | 4.8 | 12.2 | 5 | 5 | 5 |
| Zamiin-Uud | (4) | *Outbound* | 8.7 | 2.1 | 9.8 | 4 | 4 | 4 |
| | | *Inbound* | 24.2 | 11.5 | 13.1 | 36 | 32 | 55 |

BCP = border-crossing point.
Source: Asian Development Bank.

## Trends and Developments

Freight statistics[23] showed growth in imports and exports in 2021 as international trade rebounded from the pandemic lows in 2020. Trucks transported $1.72 billion worth of imports, up from $1.56 billion, and rail import freight rose in value from $1.69 billion to $2.36 billion. The overall value of the exports transported also increased—to $3.03 billion from $1.98 if moved by road, and from $1.32 billion to $2.2 billion if shipped by train. The country's export freight was mainly mined commodities and included little semifinished or finished products.

Mongolia's shipping times and costs and the economy as a whole suffered significantly in 2021 due to disruptions on its vital Corridor 4 container connection with the port of Tianjin in the PRC, by far its most important link for imports and exports moved by sea. The average shipment time for the 1,692 km Tianjin–

[23] The freight statistics is prepared by the Mongolian National Chamber of Commerce and Industry (MNCCI), a CPMM partner in Mongolia.

Ulaan Baatar route, with containers typically moved by train, was 12 days, including 3 days by rail from Mongolia's Zamyn-Uud BCP after clearing the Erenhot BCP at the PRC border. Freight costs soared for both rail and road transport, with rates for the latter driven up as shippers shifted large volumes from trains to trucks.

Major throughput backups at Tianjin's seaport, the worldwide shortage of containers and the explosive upward effect this scarcity put on both ocean and land transport rates, and the delays and complications of the severe prolonged PRC COVID-19 restrictions were a heavy combined drag on the flows of the 80% of Mongolia's international trade that moves in containers. Slower border crossings were another important factor. The time for outbound rail shipments to clear and exit Mongolia's Zamyn-Uud BCP quadrupled to 9.8 hours, but trains then needing to cross into the PRC through its Erenhot BCP were held by an average of more than 7.5 days, up from only 7.4 hours in 2020. This made Erenhot the slowest rail BCP along the six CAREC corridors. Inbound times rose from 11.5 hours to 13.1 hours at Zamyn-Uud, and outbound times from 15.0 hours to 36.2 hours at Erenhot.

Over the longer term, however, Mongolia's most important Corridor 4 transport issue is its heavy dependence on container shipments and a single international seaport. The Mongolian National Chamber of Commerce and Industry (MNCCI), a CPMM partner, estimated that 6,000 Mongolia-bound containers were stuck at Tianjin seaport during June–September 2021. Daily detention charges of $2–$4 per container began on the 8th day it remained in the seaport in 2021, and the average container was stranded in the port during this 4-month period for 114 days. On the low end, this added $1,284,000 to the freight costs of Mongolia's importers, which also included 2021's stratospheric container rental charges, and penalties for late returns. These mounted in 2021 when the PRC's state-owned shipping giant COSCO cut the free-use period for Mongolia's container rentals from 45 days to only 7.

## Recommendations

***Develop an alternative seaport route.*** Mongolia has expressed interest in using an alternative international seaport to avoid congestion and delays at Tianjin. This would involve connecting **Ulaan Baatar rail station** to the Chifeng railways terminal in Inner Mongolia, which in turn links with the seaport at Jinzhou on the PRC coast north of Tianjin. There are important obstacles, and more study is needed to determine whether this or some other PRC port may be a viable option for relieving Mongolia's international transport challenges. Jinzhou is not a major seaport like Tianjin and a port of call for fewer vessels and on fewer important international sea routes. More containers worldwide might ease the high costs and long delays Mongolia faced in 2021 on its key Corridor 4 import–export route, but congestion on global sea routes and at seaports (which often leaves empty containers unavailable elsewhere) is due to multiple and extremely complex knock-on factors going back to the outbreak of COVID-19 in late 2019 and may not be completely unwound any time soon.

Zamyn-Uud ***Negotiate a longer return period for containers.*** Mongolia's government may need to negotiate directly with the PRC government to seek a longer return period for COSCO containers. These charges now begin to accumulate after an 8-day free-use period, drastically shortened by the company from the previous 45 days. They are based on progressive tiers and differ for a 20-foot, 40-foot or 40-foot- high cube containers and escalate quickly. The shortened return period is especially difficult for Mongolia's shippers to meet due to the long shipment lead-time.

***Develop more container parks.*** Mongolia lacks container yards, container freight stations, and other container transport-related infrastructure and facilities. Private investment is needed to address this issue, and private operators should be found to provide the necessary containerization support service at international border points and other strategic inland locations.

***Develop an integrated logistics park.*** Zamyn-Uud requires further development to offer a full set of integrated logistics services. Customs clearance, repair centers, and a marshalling yard and storage are

already established, but the BCP lacks consolidation, inventory control, container stuffing and unstuffing services, as well as more sophisticated elements such as temperature-controlled logistics facilities and dangerous goods warehouses.

***Negotiate better transit arrangements with the PRC and the Russia Federation.*** Mongolia's current transit arrangements with the PRC and the Russian Federation **DO WHAT, SET WHAT LIMITS, ETC?** Mongolia should obtain better terms for the trade and PRC–Europe transit traffic that passes through its territory between these two countries on Corridor 4. An increase in the number of trains exchanged daily through its BCPs at its southern and northern borders and PRC permission for container wagons to enter through PRC BCPs other than the one at Erenhot would provide benefits.

***Develop railway operations.*** There is an urgent need to increase the capacity of Mongolia's railways and provide it with more advanced technology. This should be done in a step-by-step manner in line with long-term development plans.

# Pakistan

## Key Findings

CPMM in 2021 showed the following year-on-year changes in Pakistan's road transport data from 2020:

(i) Border-crossing time dropped from 55.7 hours to 35.3 hours, a return to the average in 2019.

(ii) Border-crossing cost was little changed, slipping only $6 to $274. Total transport cost declined from $704 to $620.

(iii) SWOD stood at 27.3 km/h, and SWD at 11.8 km/h.

(iv) Crossing times at the **Torkham** and **Chaman** BCPs remained among the longest in the region but shortened.

## Trends and Developments

Pakistan has significant unexploited potential as a transit country for Afghanistan, Central Asia, and the western regions of the PRC. CAREC Corridors 5 and 6 offer these countries access to its warm water year-round ports on the Arabian Sea. Pakistan has been working to build the foundation for expanding this transit role through negotiations with Afghanistan on a stalled transit trade agreement and with Afghanistan and Uzbekistan on constructing a 573 km railway linking the three countries.

**Table 6.15 Trade Facilitation Indicators for Pakistan**

| Trade Facilitation Indicators | | Road Transport | | |
|---|---|---|---|---|
| | | 2019 | 2020 | 2021 |
| TFI1 | Time taken to clear a border-crossing point (hour) | 38.2 | 55.7 | 35.3 |
| | *Outbound* | *39.6* | *53.3* | *35.2* |
| | *Inbound* | *1.8* | *85.8* | *120.0* |
| TFI2 | Cost incurred at border-crossing clearance ($) | 283 | 280 | 274 |
| | *Outbound* | *287* | *275* | *274* |
| | *Inbound* | *16* | *340* | *525* |
| TFI3 | Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo) | 704 | 704 | 620 |
| TFI4 | Speed to travel on CAREC corridors (km/h) | 10.6 | 8.0 | 11.8 |
| SWOD | Speed without delay (km/h) | 28.2 | 28.1 | 27.3 |

km = kilometer, km/h = kilometers per hour, SWOD = speed without delay, TFI = trade facilitation indicator.
Source: Asian Development Bank.

**Table 6.16: Border-Crossing Performance in Pakistan**

| BCP, Corridor, and Direction of Trade | | | Duration (hours) | | | Cost ($) | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 |
| **Road Transport** | | | | | | | | |
| Chaman | (5, 6) | *Outbound* | 60.1 | 70.7 | 57.5 | 156 | 109 | 54 |
| | | *Inbound* | – | – | – | – | – | – |
| Peshawar | (5, 6) | *Outbound* | 35.7 | 50.0 | 31.6 | 319 | 311 | 309 |
| | | *Inbound* | – | – | 120.0 | – | – | 525 |
| Khunjerab | (5) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 1.8 | 2.3 | – | 5 | – | – |

BCP = border-crossing point.
Source: Asian Development Bank.

Obstacles to this greater transit traffic include the preference shown by many of Afghanistan's businesses for using the route through Iran to its seaports at Bandar Abbas and Chabahar over transporting via Pakistan and using its port at Karachi. The Karachi route dominated up to 2010, but Afghanistan shippers contend that costs and waiting times at Iran's port have become lower. Pakistan's pandemic-related border closures in March–August 2020 and previous ad hoc shutdowns may have moved Afghanistan businesses to try and then switch to the Iran route. Although CPMM does not cover non-CAREC member Iran, its Pakistan data showed the average overall customs control, wait, and cargo transfer dwell time at the Karachi seaport for Afghanistan-bound container in 2021 was 3–5 days and possibly longer if documents or cargo were subjected to inspection. Pakistan allows Afghanistan's cargo to transit its Corridor 6 seaport at Gwadar, but this is not a popular option. Karachi can handle much more cargo than Gwadar—150.0 million tons vs. 5.5 million tons, and 4.85 million TEUs, compared with 500,000 TEUs[24]—and few shipping lines call at the smaller port.

Transit challenges on land are significant too. Pakistan's Chaman BCP (at 57.5 hours) and Peshawar (Landi Kotal) BCP (at 31.5 hours) registered the 4th and 5th slowest outbound clearance times among CAREC corridor BCPs in 2021. The Afghanistan–Pakistani BCPs are also dotted with multiple checkpoints that both slow throughput and offer opportunities for the solicitation of bribes. Bonded Pakistan carriers transporting containerized goods into Afghanistan must transload them onto Afghanistan-registered vehicles at Jalalabad for the onward trip to Kabul and other destinations, which adds time and expense to shipment deliveries. This transloading requirement has limited the growth of TIR Carnet operations in Afghanistan.

## Recommendations

***Reactivate the Afghanistan–Pakistan Transit Trade Agreement (APTTAR).*** Pakistan should renew talks with Afghanistan on reactivating APTTAR, which ended with the change of government in Afghanistan in mid-2021. Reviving the agreement would boost Pakistan's role as an important CAREC transit country.

***Approve the National Freight Logistics Policy.*** The National Freight Logistics Policy was formulated with the support of ADB and completed in March 2020. The policy contains important transit and transport facilitation initiatives but is still awaiting the required Cabinet approval.

***Promote the Pakistan–Afghanistan border crossing at Ghulam Khan.*** Although ADB supported modernization efforts at the Torkham BCP under the Regional Improvement in Border Services (RIBS) program,[25] it took inbound traffic an average of 120 hours to cross in 2021. Physical factors make any

[24] ADB. 2021. *Ports and Logistics Scoping Study in CAREC Countries*. Manila. https://www.adb.org/sites/default/files/publication/690856/ports-logistics-scoping-study-carec-countries.pdf.

[25] The information on RIBS can be found here https://www.carecprogram.org/?project=carec-regional-improving-border-services-project-pak and https://www.adb.org/projects/46378-002/main.

significantly narrowing of the BCP crossing time gap with others along the border unlikely. The BCP is in a mountainous area with no room for expansion, and its layout does not suit effective traffic management. Developing another international BCP would relieve Tokkham of some of the load and make it less of a chokepoint. Ghulam Khan is a viable alternative.

***Incentivize freight trains on the Corridor 6 Karachi–Peshawar route.*** CPMM does not monitor rail transport in Pakistan, which moves negligible volumes of freight. All the transit shipments via Afghanistan are carried by trucks. The railways need to increase their freight transport capacity to take away a share of the cargo now moved by road on the 1,376 km Peshawar–Karachi seaport route. The estimated 2021 one-way trucking rate was $2,500–$3,000 for a 40-foot container. An efficient railway service could offer a competitive rate.

# Tajikistan

## Key Findings

CPMM in 2021 showed the following year-on-year changes in Tajikistan's road transport data from 2020:

(i) At 4.7 hours, border-crossing time was little changed from 4.4 hours in the previous year.

(ii) Border-crossing costs was also similar, down slightly to $86 from $90, and total cost dropped from $660 to $609.

(iii) SWOD edged lower (to 35.8 km/h from 37.8 km/h), as did SWD (to 20.0 km/h from 21.0 km/h).

(iv) High-traffic BCPs such as Pakhtaabadand Fotehobod remove thshowed shortened border-crossing times and lower border-crossing costs in 2021. Clearance time at Panji Poyon BCP with Afghanistan remained elevated, and it surged at Kulma BCP for traffic inbound from the PRC.

## Trends and Developments

Tajikistan's Customs Service officially implemented the TIR Electronic Pre-Declaration (TIR-EPD) pre-notification systems in early 2021 and signed on to the main principles of Annex 11 of the TIR Convention on Digitalization (eTIR). In May, three trucks carrying soft drinks left Tajikistan for Kazakhstan in transit through Uzbekistan under a trial electronic TIR system. TIR system guarantees have been issued electronically, and transport operators have taken advantage of the TIR-EPD system for sending advance electronic cargo information to further simplify customs procedures.

**Table 6.17: Trade Facilitation Indicators for Tajikistan**

| Trade Facilitation Indicators | | Road Transport | | |
|---|---|---|---|---|
| | | 2019 | 2020 | 2021 |
| TFI1 | Time taken to clear a border-crossing point (hour) | 4.3 | 4.4 | 4.7 |
| | *Outbound* | *4.4* | *4.1* | *3.3* |
| | *Inbound* | *4.2* | *4.6* | *5.3* |
| TFI2 | Cost incurred at border-crossing clearance ($) | 105 | 90 | 86 |
| | *Outbound* | *65* | *36* | *27* |
| | *Inbound* | *122* | *124* | *114* |
| TFI3 | Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo) | 629 | 660 | 609 |
| TFI4 | Speed to travel on CAREC corridors (km/h) | 22.5 | 21.0 | 20.0 |
| SWOD | Speed without delay (km/h) | 39.6 | 37.8 | 35.8 |

km = kilometer, km/h = kilometers per hour, SWOD = speed without delay, TFI = trade facilitation indicator.
Source: Asian Development Bank.

**Table 6.18: Border-Crossing Performance in Tajikistan**

| BCP, Corridor, and Direction of Trade | | | Duration (hours) | | | Cost ($) | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 |
| **Road Transport** | | | | | | | | |
| Dusti | (3) | *Outbound* | 11.0 | 13.8 | 10.1 | 108 | 102 | 66 |
| | | *Inbound* | 3.2 | 4.0 | 2.8 | 96 | 91 | 82 |
| Fotehobod | (2, 3, 6) | *Outbound* | – | 4.8 | 2.4 | – | 60 | 57 |
| | | *Inbound* | 1.9 | 2.5 | 4.7 | 476 | 200 | 160 |
| Panji Poyon | (2, 5, 6) | *Outbound* | 3.8 | 2.1 | 2.1 | 61 | 20 | 20 |
| | | *Inbound* | 7.2 | 7.4 | 7.8 | 183 | 188 | 188 |
| Karamyk | (2, 3, 5) | *Outbound* | 1.2 | 2.4 | 2.7 | 37 | 32 | 21 |
| | | *Inbound* | 0.6 | 2.7 | 2.2 | 26 | 31 | 22 |
| Guliston | (0) | *Outbound* | 0.9 | 3.0 | – | 29 | 43 | – |
| | | *Inbound* | 0.6 | 2.5 | 1.2 | 21 | 33 | 24 |
| Kulma | (0) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 3.0 | 2.3 | 7.6 | 91 | 32 | 10 |
| Jalgan | (2, 3, 5) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 0.6 | 0.8 | 0.6 | 99 | 153 | 69 |

BCP = border-crossing point.
Source: Asian Development Bank.

## Recommendations

***Build greater capacity for use of eTIR and CMR.*** Training should be undertaken to build the capacity and strengthen the skills of Tajikistan's customs officials for TIR-related digital processes at high-traffic BCPs. The training should cover digital TIR solutions for transport operators, consignors, consignees, and other entrepreneurs involved in cross-border trade.

***Promote regional digitalization efforts.*** Promoting joint TIR-EPD and eCMR efforts with Kazakhstan, the Kyrgyz Republic, Turkmenistan, Uzbekistan and other CAREC members will be strategically beneficial for Tajikistan and the region overall. By enabling customs services to implement risk-based solutions by receiving shipment data electronically in advance, TIR-EPD and eCMR systems can reduce border-crossing times. This will require capital expenditure for computers and communication hardware upgrades at key BCPs. Tajikistan should also discuss a deeper partnership on TIR-EPD with PRC customs authorities in Kashgar Prefecture since the PRC is also implementing the TIR systems.

***Establish Green Lanes at selected BCPs.*** A feasibility study on operating green lanes at Tajikistan–Uzbekistan BCPs is recommended—specifically at the Fotekhobod–Oybek and Dusti–Sarosiyo BCP pairings. Implementing TIR-Green Lanes at these high-traffic BCPs could improve on 2021 crossing times—10.1 hours outbound at Pakhtaabad BCP, and 4.7 hours inbound at Fotehobod. If there is not enough space for another lane, one of the existing lanes could be designated as a green lane for TIR shipments, and BCP modernization plan to boost the throughput.

***Become a new South–Central Asia transit corridor.*** Trade between these two adjacent subregions remains unnecessarily low, and Tajikistan can serve as a transit corridor for expanding it. It could, for example, become a hub for Pakistan to distribute goods for onward transport to other parts of Central Asia. Tajikistan could also offer capacity-building programs on TIR and CMR to Pakistan. Although Pakistan acceded to the TIR Convention in 2016, the implementation has been met with challenges and the TIR usage is still low.

# Turkmenistan

## Key Findings

CPMM road and rail transport data for Turkmenistan in 2021 showed the following year-on-year changes from 2020:

(i) The time for border crossing by road dipped to 6.9 hours from 7.3 hours. This improvement was in part due to the closure of its borders to foreign trucks **soon after COVID spread to Central Asia**, which required trailers to be swapped in a neutral zone between the country's Farap BCP and the Alat BCP on the Uzbekistan side.

(ii) No average border-crossing cost data were available. The Turkmenistan carrier responsible for transporting cargo within the country does not participate in the CPMM reporting.

(iii) SWOD reached 53.9 km/h, and SWD rose to 21.9 km/h.

(iv) The country's rail system adjusted to a surge in traffic in 2021, and border-crossing time dropped to a more normal 3.7 hours from 5.7 hours the previous year.

(v) Rail border-crossing cost dropped from $87 to $81, and total transport cost rose to $1,349 from $1,319.

(vi) SWOD (28.2 km/h) and SWD (13.0 km/h) changed little.

(vii) Outbound trucks crossing through the Farap BCP took 7.4 hours, down from 9.4 hours.

## Trends and Developments

Turkmenistan closed its borders to foreign trucks soon after COVID-19 pandemic started in 2020. Major border crossings were reopened to **Turkmen nationals in 2021** but foreign trucks were still denied entry and were required to engage government-designated Turkmenistan carriers to complete shipment deliveries within the country. This is done through swaps of loaded and empty trailers by the two trucks in a neutral zone between BCP pairs. Despite this restriction, Turkmenistan's trade with Uzbekistan was up 65%[26] in 2021 from the previous year. Although the PRC absorbs three-quarters of Tajikistan's exports in terms of value, most of this is natural gas moved by pipeline and petroleum-based products.

**Table 6.19: Trade Facilitation Indicators for Turkmenistan**

| Trade Facilitation Indicators | | Road Transport | | | Rail Transport | | |
|---|---|---|---|---|---|---|---|
| | | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 |
| TFI1 | Time taken to clear a border-crossing point (hour) | 9.0 | 7.3 | 6.9 | 3.5 | 5.7 | 3.7 |
| | *Outbound* | *7.5* | *8.9* | *3.6* | *3.6* | *3.6* | – |
| | *Inbound* | *10.0* | *6.9* | *7.1* | *3.5* | *5.9* | *3.7* |
| TFI2 | Cost incurred at border-crossing clearance ($) | 211 | 229 | – | 97 | 87 | 81 |
| | *Outbound* | *63* | *65* | – | *108* | *108* | – |
| | *Inbound* | *302* | *311* | – | *93* | *86* | *81* |
| TFI3 | Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo) | 1,094 | 1,029 | 564 | 1,462 | 1,319 | 1,349 |
| TFI4 | Speed to travel on CAREC corridors (km/h) | 19.5 | 19.0 | 21.9 | 14.0 | 13.7 | 14.0 |
| SWOD | Speed without delay (km/h) | 54.3 | 53.8 | 53.9 | 28.5 | 28.2 | 29.0 |

km = kilometer, km/h = kilometers per hour, SWOD = speed without delay, TFI = trade facilitation indicator.
Source: Asian Development Bank.

[26] ???

**Table 6.20: Border-Crossing Performance in Turkmenistan**

| BCP, Corridor, and Direction of Trade | | | Duration (hours) | | | Cost ($) | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 |
| **Road Transport** | | | | | | | | |
| Sarahs | (3) | *Outbound* | 7.6 | 7.3 | 6.2 | 62 | 60 | – |
| | | *Inbound* | 9.4 | – | – | 317 | – | – |
| Farap | (2, 3) | *Outbound* | 7.5 | 9.4 | 7.4 | 63 | 67 | – |
| | | *Inbound* | 10.2 | 109 | 9.4 | 298 | 311 | – |
| Turkmenbashi | (2) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 60 | – | – | – | – | – |
| Serkhet Abad | (2, 6) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | – | 0.9 | 0.7 | – | – | – |
| **Rail Transport** | | | | | | | | |
| Farap | (2, 3) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 2.7 | 214 | - | 120 | 120 | – |
| Serkhet Abad | (2, 6) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 3.7 | 3.7 | 3.7 | 82 | 82 | 81 |
| Serkhetyaka | (5) | *Outbound* | – | – | – | – | – | – |
| | | *Inbound* | 120 | – | 4.0 | – | – | – |

BCP = border-crossing point.
Source: Asian Development Bank.

Uzbekistan is its second largest trading partner,[27] representing 5.3% of exports; and the two countries are exploring closer cooperation in trade and investment.

Turkmenistan is also evolving as an important CAREC 2 Eurasian transport transit link for trans-Caspian shipments through its Turkmenbashy Port and on the route to and from Iran's Persian Gulf port of Bandar Abbas. The country's rail system is in fairly good condition and connects with the rail systems of Kazakhstan, Uzbekistan, and Iran.

## Recommendations

***Relax the transit regime for foreign trucks.*** CPMM partner associations in other CAREC member countries regularly cite Turkmenistan as the most difficult country for their trucks to travel through. Visas are valid for only short periods, and the processing time for applications is long. Turkmenistan should consider working with CAREC neighbors to establish reciprocal arrangements for long-term visas to be issued for pre-screened drivers working for responsible, trustworthy road carriers.

***Use the country's strategic location to spur transit trade.*** Turkmenistan shares borders with Afghanistan, Kazakhstan, Uzbekistan, and Iran. Tajikistan and the Kyrgyz Republic are nearby, and Azerbaijan is just across the Caspian Sea. Central Asian CAREC members rely on routes through Turkmenistan for shipments passing Iran's Bandar Abbas seaport. A friendly, reliable transit policy can promote the country's transport and logistics industries and propel the development of other sectors. This approach has been used by landlocked but strategically located countries such as Kazakhstan and Mongolia, both crucial links for PRC–Europe trade via the Russian Federation, to achieve good results and should be considered by Turkmenistan's government.

***Enhance logistics capacity development.*** ADB has provided logistics training to Turkmenistan government officials and the staff of the Turkmen Association of International Road Carriers (THADA). This training

[27] Uzbekistan slightly outranked the Russian Federation (4.5%) and Turkey (4.4%).

indicated both a strong desire to learn more and a wide knowledge gap. The government should consider partnering with multilateral organizations to develop recurring logistics capacity development, as well as invite universities with strong logistics management programs to set up branches in the country.

***Participate in CPMM.*** Turkmenistan can benefit substantially as a participant of the CPMM program. Movement data captured and aggregated can be shared with the government and its carrier associations to improve the country's transport and logistics efficiency. We hope the government will encourage THADA to participate.

# Uzbekistan

## Key Findings

CPMM road and rail transport data for Uzbekistan in 2021 showed the following year-on-year changes from 2020:

(i) Road transport border-crossing time dropped to 7.6 hours from 10.1 hours as the government implemented measures to speed up clearance and processing at Yallama BCP.

(ii) Border-crossing cost for road shipments fell from $102 to $92, although total transport cost rose slightly to $674 from $648.

(iii) Road SWOD (46.9 km/h) and SWD 26.6 km/h dipped.

(iv) Crossing borders by rail took an average of 6.2 hours, little changed from 6.4 hours in 2020.

(v) Rail border-crossing cost rose from $125 to $133, but total transport cost plummeted from to $665 from $5,671, indicating that the bottom fell out of rail freight rates in Uzbekistan in 2021.

(vi) Rail SWOD was steady, but SWD increased to 27.9 km/h from 26.6 km/h.

(vii) The outbound rail crossing time at the Yallama BCP dropped almost a third to 6.8 hours from 9.6 hours, while the inbound time plummeted from 30.0 hours to 3.4 hours due to the process and infrastructure improvements at the BCP.

**Table 6.21: Trade Facilitation Indicators for Uzbekistan**

| Trade Facilitation Indicators | | Road Transport | | | Rail Transport | | |
|---|---|---|---|---|---|---|---|
| | | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 |
| TFI1 | Time taken to clear a border-crossing point (hour) | 7.7 | 10.1 | 7.6 | 6.2 | 6.4 | 6.2 |
| | *Outbound* | *7.8* | *7.6* | *6.6* | *14.0* | *14.0* | *6.0* |
| | *Inbound* | *7.7* | *14.0* | *9.1* | *4.0* | *5.2* | *6.2* |
| TFI2 | Cost incurred at border-crossing clearance ($) | 87 | 102 | 92 | 113 | 125 | 133 |
| | *Outbound* | *92* | *124* | *114* | *99* | *100* | – |
| | *Inbound* | *83* | *83* | *74* | *119* | *129* | *133* |
| TFI3 | Cost incurred to travel a corridor section ($, per 500 km, per 20-ton cargo) | 600 | 648 | 674 | 778 | 671 | 665 |
| TFI4 | Speed to travel on CAREC corridors (km/h) | 28.6 | 26.6 | 27.9 | 10.5 | 9.7 | 11.2 |
| SWOD | Speed without delay (km/h) | 49.6 | 46.9 | 46.9 | 38.2 | 21.9 | 13.3 |

km = kilometer, km/h = kilometers per hour, SWOD = speed without delay, TFI = trade facilitation indicator.
Source: Asian Development Bank.

**Table 6.22: Border-Crossing Performance in Uzbekistan**

| BCP, Corridor, and Direction of Trade | | | Duration (hours) | | | Cost ($) | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2019 | 2020 | 2021 | 2019 | 2020 | 2021 |
| **Road Transport** | | | | | | | | |
| Alat | (2, 3) | *Outbound* | 9.5 | 9.6 | 9.7 | - | - | - |
| | | *Inbound* | - | - | - | - | - | - |
| Termez | (3, 6) | *Outbound* | 2.3 | - | - | - | - | - |
| | | *Inbound* | - | - | - | - | - | - |
| Dustlik | (2) | *Outbound* | 0.9 | 2.1 | 2.7 | 23 | 25 | 15 |
| | | *Inbound* | 0.6 | 2.4 | 1.9 | 20 | 33 | 12 |
| Dautota | (2, 6) | *Outbound* | 9.6 | 8.1 | 7.3 | 10 | 5 | - |
| | | *Inbound* | 7.5 | 14.3 | 9.3 | 84 | 73 | 86 |
| Saryasia | (3) | *Outbound* | 4.6 | 5.3 | 4.8 | 101 | 127 | 131 |
| | | *Inbound* | 10.1 | 25.7 | 11.0 | - | 10 | - |
| Yallama | 3, 6 | *Outbound* | 10.0 | 9.6 | 0.8 | 54 | - | 21 |
| | | *Inbound* | 1.3 | 30.0 | 3.4 | 10 | - | 15 |
| Uchkurgan | (0) | *Outbound* | 3.0 | 4.3 | - | - | - | - |
| | | *Inbound* | - | - | - | - | - | - |
| Oibek | (2, 3, 6) | *Outbound* | 1.3 | 2.8 | 5.3 | - | - | - |
| | | *Inbound* | - | 1.4 | 3.0 | - | 50 | 15 |
| **Rail Transport** | | | | | | | | |
| Termez | (3, 6) | *Outbound* | - | - | - | - | - | - |
| | | *Inbound* | 8.9 | 9.1 | 8.7 | 119 | 120 | 117 |
| Keles | (3, 6) | *Outbound* | - | 72.0 | 6.0 | - | - | - |
| | | *Inbound* | 2.4 | 3.5 | 4.5 | 119 | 139 | 155 |
| Bekabad | (2) | *Outbound* | - | 3.5 | 6.0 | - | - | - |
| | | *Inbound* | - | - | - | - | - | - |
| Khodzhadavlet | (2, 3) | *Outbound* | 15.0 | 12.7 | - | 100 | 100 | - |
| | | *Inbound* | | | | | | |

BCP = border-crossing point.
Source: Asian Development Bank.

## Trends and Developments

Uzbekistan has been making good use of CAREC corridors to transport its goods by road and rail through Turkmenistan's ports on the Caspian Sea, and via Turkmenistan's overland links with Iran's maritime gateways on the Persian Gulf. Other CAREC corridors connect it with the PRC through Kazakhstan's rail and road transit routes, and it aims to make more use of the Kyrgyz Republic's road corridors to strengthen its transport connections with the southern parts of the PRC's Xinjiang Uygur Autonomous Region.

The government has taken significant steps to support export growth by strengthening the transport sector. It has lowered tariffs on, and helped finance domestic carrier purchase of, imported used trucks. The national road carrier association—AIRCUZ—charges the lowest TIR Carnet fee of any International Road Transport Union member. The trucking industry has expanded rapidly as a result, better serving producers wishing to export their goods, particularly fresh fruit and vegetables. Notable progress has also been made in rail connectivity. A multimodal truck and rail service links Tashkent with Lanzhou, a major China Railway hub in the PRC's Gansu Province, via the Kyrgyz Republic. This has led to further cooperation between the two cities, including the creation of a multimodal e-commerce logistics center in each.

Uzbekistan has continued its customs reform by streamlining inspection and adopting international customs standards. These improvements were piloted at the Yallama BCP and have already yielded concrete results (Chapter 7: Case Study).

## Recommendations

***Install modern inspection equipment at BCPs to expedite cargo throughput.*** Many border delays are due to a shortage of inspection equipment. Automated weight machines, high-speed scanners, and video surveillance systems can speed up border inspection throughput and lower vehicle waiting time.

***Build additional access roads at BCPs.*** There are too few at present, which slows the flow of vehicles into and out of the BCPs and makes it difficult to accelerate throughput by separating car and truck traffic for processing. The access road to the six inspection lanes at the Yallama BCP has only two lanes. At least three are needed in each direction to make full use of its capacity and reduce crossing time further.

***Apply lessons learned from the Yallama improvements to other BCPs.*** CPMM data show that infrastructure improvements and streamlined border management procedures have had a positive impact. Lessons learned from this pilot endeavor should be applied at the country's other BCPs.

***Give freight and passenger rail traffic equal priority.*** Passenger traffic now has priority when train paths are assigned on Uzbekistan's rail lines. This is meant to support tourism, but moving cargo is far more profitable for Uzbekistan Temir Yollari (Uzbekistan Railway) than transporting passengers. The government should gradually establish equal treatment in train path assignments for freight and passenger traffic to provide the railway with the greater income it needs to expand its network.

# 7 Case Study: BCP Modernization at Yallama

International trade has expanded rapidly in Uzbekistan due to a modernization of its transit and trade regimes that began in 2016. Trade with its immediate neighbors has particularly benefitted. In 2020, the government developed a comprehensive program that lays out strategic directions and an action plan for strengthening trade facilitation and makes better management of the country's border a priority.[28]

## Changes at Yallama Border Crossing Point

Uzbekistan's Yallama BCP, which is paired with Kazakhstan's Konysbaeva BCP at their border, is a high-traffic crossing for both bilateral trade and the transit traffic on CAREC Corridors 3 and 6 across the region. CPMM data have regularly shown clearances at the Yallama–Konysbaeva crossing to be comparatively slow. Reconstruction and modernization of the Yallama BCP began in November 2019. The aim was to increase its throughput capacity and shorten its crossing time. The modernization, completed in March 2021, expanded the number of vehicles lanes at the BCP from **three** to six, including one designated as a green lane for cargoes needing expeditious processing. These include time-sensitive goods such as perishables and humanitarian aid supplies, as well as eTIR shipments.

The project improved both the soft and the hard physical infrastructure. Single window processing began in December 2021 as part of a larger plan to digitalize all Uzbekistan's public services, especially those related to trade and transport. This digitalization is aimed at strengthening overall productivity, efficiency, and transparency. By minimizing human touch points between transporters and shippers on one hand and Customs and border control officials on the other, it can also address the problem of corruption at the border.

**Figure 7.1: Six Lanes for Vehicles Crossing at Yallama BCP**

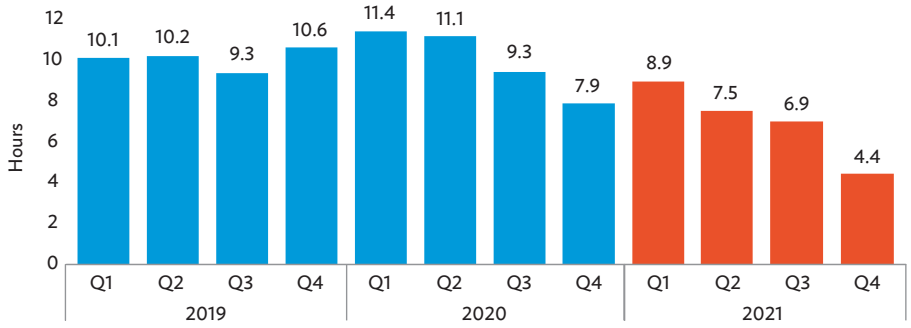

Source: Association of International Road Carriers of Uzbekistan (AIRCUZ)

[28] Government of Uzbekistan. 2020. D*ecree by the President of the Republic Of Uzbekistan On Reforming Customs Administration and Improving the Activities of the Bodies of the State Customs Service of the Republic of Uzbekistan*. Tashkent. https://lex.uz/ru/docs/4844619#4850649.

## Outcomes

The physical and procedural upgrades at the Yallama BCP produced immediate measurable results. Thetime needed to clear outbound shipments dropped. The outbound average had been 10.0 hours in 2019 before rising to 11.0 hours at the onset of the COVID-19 pandemic and subsequently dropping through the rest of 2020. The average outbound crossing time was 8.9 hours in the first quarter of 2021 but declined in each of the next three quarters after the modernization was completed to 7.5 hours, 6.9 hours, and 4.4 hours—thereby ending 2021 at half of where it started. CPMM tracked only outbound agricultural shipments from Uzebkistan through Yallama BCP to Kazakhstan in 2021, and no inbound shipments moving in the opposite direction.

**Figure 7.2: Quarterly Border-Crossing Times at Yallama BCP for Outbound Traffic, 2019–2021**




BCP = border-crossing point, Q = quarter.
Source: ADB.

## Potential Future Improvements

Despite these encouraging initial results, the BCP has other issues to address. Yallama has only two access roads to serve its six vehicle processing lanes. Widening these roads or adding new ones would make the BCP more accessible. Passenger and cargo vehicles are not handled separately but should be. Improvements in data interchange and communications are needed to speed up digitalization of border controls and inspections at the BCP.

Yallama and all the other Uzbekistan BCPs are short of the modern equipment required to fully automate processing and provide proper integration. The BCP's transport inspectors currently determine compliance with national standards by estimating and calculating the weights and dimensions of each tractor, trailer, and shipment of goods passing through the BCP themselves. This is not only slow but also provides opportunities for corruption during inspector–driver interactions. Modern integrated inspection equipment could read the vehicle plate number, calculate the weights automatically, and scan inner compartments in a shorter time.

An important lesson from Yallama's modernization for future improvements at other Uzbekistan BCPs is that hard infrastructure strengthening should be matched with and supported by soft infrastructure upgrades if the most impactful and sustainable outcomes are to be achieved.

# 8 Conclusion

The ramifications of the COVID-19 pandemic for transport along the six CAREC corridors continued into and through 2021. Bilateral trade in many countries around the world, including those in Central Asia and the CAREC region overall, rebounded from the lows of 2020 imposed by global domestic shutdowns, border closures, and heavy restrictions on international transport. Nonetheless, while the pandemic effects eased and epidemiological controls relaxed elsewhere during the year, the PRC government maintained and in some cases stepped-up severe "zero-COVID" strictures and processes at its borders with its CAREC neighbors.

These included prohibitions on entry by foreign registered trucks—a constraint also enforced by Turkmenistan—which forced costly and time-consuming trailer swaps, cargo transfers, and throughput back-ups on key CAREC corridors. Surging demand for shipping and containers created by a V-shaped economic recovery disrupted supply chains, choked seaports, and congested the CAREC region's land border crossings. Freight rates skyrocketed on the oceans, and then on CAREC roads and rail lines. Some countries and some transport modes were affected more, or differently, than others. The exports and imports of landlocked Mongolia and Kazakhstan both suffered from unprecedented rail and road logjams at their borders with the PRC, and Mongolia was seriously impacted by the soaring rates and long delays of ocean freight. The regular trains transporting goods between the PRC and the rest of the CAREC region were often held back inland or at the PRC border to allow priority passage to the express PRC–Europe container traffic that continued to grow in both train numbers (15,183) and freight volume (1.46 million TEUs) in 2021.[29]

The average border-crossing time on the six CAREC corridors fell in 2021, but border-crossing and total transport costs both rose sharply. Higher oil prices and the spillover of elevated maritime freight demand and rates on to road transport were primarily to blame for the cost increase, although some extraordinary additional PRC border control expenses played a part. The average border-crossing time for rail more than doubled to a new high of 51.9 hours. The increased rail shipment traffic due to the ocean freight congestion and higher rates, which were predicted in the 2020 CPMM annual report,[30] was a contributing factor, as were the PRC BCPs stiff COVID-19 controls and priority accorded to the growing PRC–Europe express traffic. Rail border-crossing and total transport costs both rose, and SWD and SWOD both dropped.

**Table 8.1: Road and Rail Transport Trade Facilitation Indicators, 2021**

| TFI | Indicators | Road | Rail |
|---|---|---|---|
| TFI 1 | Time to clear a BCP (hours) | 13.6 | 51.9 |
| TFI 2 | Cost incurred at a BCP ($) | 357 | 177 |
| TFI 3 | Cost incurred to travel a corridor section ($) | 1,256 | 902 |
| TFI 4 | Speed with delay (km/h) | 21.5 | 12.1 |
| | Speed without delay (km/h) | 41.6 | 38.0 |

BCP = border-crossing point, km/h = kilometers per hour, TFI = trade facilitation indicators.
Source: Asian Development Bank.

[29] Reference to Figure 6.4 in this report. The number of trains increased from 8,225 (2019), 12,406 (2020) to 15,183 (2021). The number of TEUs increased from 725,000 TEUs (2019), 1.13 million (2020) to 1.46 million (2021).

[30] This can be referenced in the CPMM Annual Report 2020, Chapter 8 Conclusions on page 61, paragraph 3.

Despite the hopefully transitory obstacles faced in 2021, the modernization of infrastructure on the CAREC corridors continued. The case study in this report (Chapter #) highlights the expansion of gates and lanes and processing upgrades at Uzbekistan's Yallama BCP, which halved its chronically slow crossing time for outbound shipments during the year. This example also underlines the frequent need for improvements to be made not only at one BCP at a border crossing, but at both. Corridor 2 between the PRC and Georgia and important both to the trade and transport of the Central Asian and Caucuses CAREC members and to developing a Middle Corridor across Eurasia, is constrained by infrastructure and service limitations on its maritime segment. A lack of the trans-Caspian vessels reliably available to the route make it cheaper, faster, and more reliable for trucks to make a longer overland trip through the Russian Federation around the sea than to wait to cross it.

The rise in global price inflation in 2022 made it all the more urgent to raise cost and time efficiency for transport along the CAREC corridors and through their BCPs. Exogenous factors aside, this shows that a greater effort is needed by the CAREC members collectively to facilitate the expanded trade along the corridors that will build their economies and better the lives of their people.

APPENDIX 1

# 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.

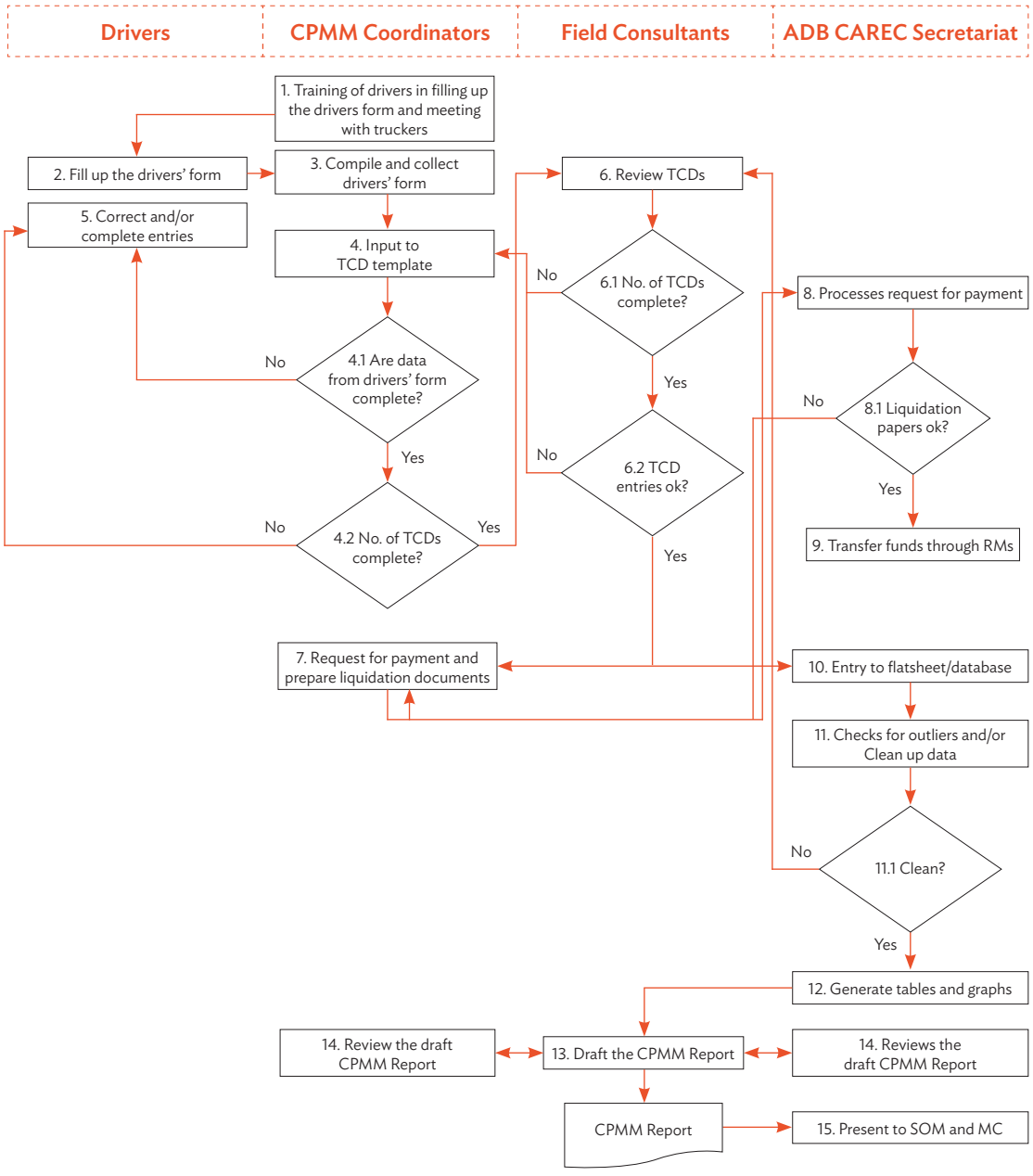
(iii) The time and cost figures for the BCP portion are normalized based on the ratio of a predetermined number of BCPs for each 500-km segment over the actual number of BCPs crossed.

(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 flowchart is in Figure A1.

## Figure A1: 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 2

# 2020 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 A2: 2020 Corridor Performance Measurement and Monitoring Partner Associations**

| | Country | Association | Abbreviation | Data Collected in 2020 |
|---|---|---|---|---|
| 1 | Afghanistan | Association of Afghanistan Freight Forwarding Companies | AAFFCO | 360 |
| 2 | People's Republic of China | Chongqing International Freight Forwarders Association | CQIFA | 275 |
| 3 | | Inner Mongolia Autonomous Region Logistics Association | IMARLA | 200 |
| 4 | | Xinjiang Uygur Autonomous Region Logistics Association | XULA | 419 |
| 5 | Georgia | Georgia International Road Carriers Association | GIRCA | 79 |
| 6 | Kazakhstan | Association of National Freight Forwarders of the Republic of Kazakhstan | KFFA | 120 |
| 7 | Kyrgyz Republic | Freight Operators Association | FOA | 119 |
| 8 | Mongolia | Mongolia Chamber of Commerce and Industry | MNCCI | 239 |
| 9 | | National Road Transport Association of Mongolia | NARTAM | 240 |
| 10 | | | | |
| 11 | Pakistan | Pakistan International Freight Forwarders Association | PIFFA | 119 |
| 12 | Tajikistan | Association of Road Transport Operators of Republic of Tajikistan | ABBAT | 119 |
| 13 | | | | |
| 14 | Uzbekistan | Association for Development of Business Logistics | ADBL | 360 |
| 15 | | Association of International Road Carriers of Uzbekistan | AIRCUZ | **240** |
| | | | **TOTAL:** | **2,999** |

Source: Asian Development Bank.

APPENDIX 3

# 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, derived measures 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 A3 illustrates the scope and extent measured in each indicator.

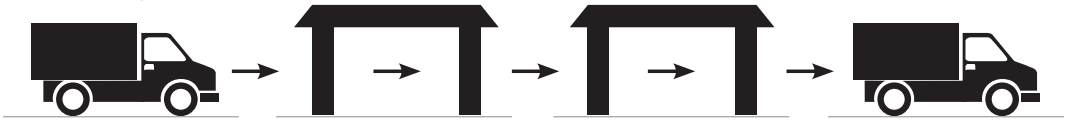
(i) ***TFI1: Time taken to clear a BCP.*** This TFI refers to the average length of time (hours) it takes to move cargo across a border from entry to exit of a BCP. The entry and exit points are typically primary control centers where customs, immigration, and quarantine are handled. Along with the standard 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 a favored, preferential treatment in

## Figure A3: Measuring the Trade Facilitation Indicators

### For Road Transport

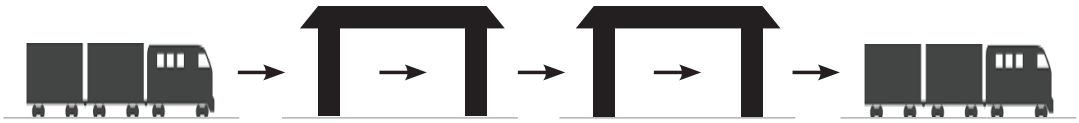


| 1<br>At Origin | 2<br>Outbound<br>Border-Crossing Point | 3<br>Inbound<br>Border-Crossing Point | 4<br>At Destination |
|---|---|---|---|
| CPMM starts measurement when goods are loaded at the origin.<br><br>Oftentimes, a truck stops at intermediate nodes (for activities such as traffic police checkpoints) before reaching the outbound BCP of the country of departure. | The truck driver then waits in line for his turn to enter the BCP.<br><br>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.<br><br>Upon completion of border-crossing procedures, the truck exits the BCP, proceeds through "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.<br><br>Inside the inbound BCP, the driver completes another series of border activities. Upon completion, the truck exits the BCP and proceeds with its journey.<br><br>**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.<br><br>At the final destination, 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<br>At Origin | 2<br>Outbound<br>Border-Crossing Point | 3<br>Inbound<br>Border-Crossing Point | 4<br>At Destination |
|---|---|---|---|
| CPMM tracks the movement of a specific wagon or container, and not the entire train, as reported by its partner international freight forwarder.<br><br>CPMM starts measurement when goods are loaded at the origin.<br><br>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.<br><br>**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 destinaton.<br><br>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 customes 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.

return. No official receipt is given. Tracking an unofficial payment is inherently difficult due to the opaque nature of the transaction.

(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.

The 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 A3.1).

**Table A3.1: Statistical Derivation of the Trade Facilitation Indicator 1**

| | Formula | Remarks |
|---|---|---|
| **Formula**, per TCD calculation | $TFI1_i = \sum_{j=1}^{a} t_j$<br>$t_j$ = time spent on each activity j<br>$j$ = 1, 2, .., a = number of activities in each border crossing<br>$i$ = 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 | $\sum_{i=1}^{n} TFI1_i$<br>$n$ = number of TCDs qualifying a given filter (per mode/per corridor)<br>$i$ = 1, 2, .., n = number of TCDs | The computation of the average is straightforward; no weights are necessary. |

## 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 A3.2).

**Table A3.2: Statistical Derivation of the Trade Facilitation Indicator 2**

| | Formula | Remarks |
|---|---|---|
| **Formula**, per TCD calculation | $TFI2_i = \sum_{j=1}^{a} c_j$<br>$c_j$ = cost incurred on each activity j<br>$j$ = 1, 2, .., a = number of activities in each border crossing<br>$i$ = 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 | $\sum_{i=1}^{n} TFI2_i$<br>$n$ = number of TCDs qualifying a given filter (per mode/per corridor)<br>$i$ = 1, 2, .., n = number of TCDs | The computation of the average is straightforward; no weights are necessary. |

TCD = time/cost–distance.

## 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 A3.3).

### Table A3.3: Statistical Derivation of the Trade Facilitation Indicator 3

| | Formula | Remarks |
|---|---|---|
| **Formula**, per TCD calculation | $TFI3_i = v_i + b_i + s_i$<br>$v_i$ = cost incurred during transit, per 500 km<br>$b_i$ = cost incurred during border crossing, per 500 km<br>$s_i$ = cost incurred during intermediate stops, per 500 km<br>$i$ = 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 | $\sum_{i=1}^{n} TFI3_i$<br>$n$ = number of TCDs qualifying a given filter (per mode/per corridor)<br>$i$ = 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 A3.4).

### Table A3.4: Statistical Derivation of the Speed Without Delay

| | Formula | Remarks |
|---|---|---|
| **Formula**, per TCD calculation | $SWOD_i = \frac{D_i}{T_i}$<br>$D$ = distance traveled from previous stop<br>$T$ = duration of travel<br>$i$ = 1, 2, .., n = number of TCDs | |
| **Aggregation**, average value per corridor and per mode of transport | $\sum_{i=1}^{n} (w_i) SWOD_i$<br>$n$ = number of TCDs qualifying a given filter (per mode/per corridor)<br>$w_i = \frac{c_i}{\sum_{i=1}^{n} c_i}$<br>$i$ = 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 A3.5).

**Table A3.5: Statistical Derivation of the Trade Facilitation Indicator 4**

| | Formula | Remarks |
|---|---|---|
| **Formula**, per TCD leg | $SWD_i = \frac{D_i}{T_i + A_i}$<br>$D$ = distance traveled from previous stop<br>$T$ = duration of travel<br>$A$ = duration of activities (BCP and non-BCP)<br>$i$ = 1, 2, .., n = number of TCDs | |
| **Aggregation**, average value per corridor and per mode of transport | $\sum_{i=1}^{n}(w_i)SWD_i$<br>$n$ = number of TCDs qualifying a given filter (per mode/per corridor)<br>$w_i = \frac{c_i}{\sum_{i=1}^{n} c_i}$<br>$i$ = 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 4

# 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 5

# 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 A5 lists key BCP pairs for each side of the border.

**Table A5: 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 |
| 30 | 6d | KAZ | Bolashak | TKM | Serkhetyaka |

*continued on next page*

**Table A5** *continued*

| | Corridor | BCP1 | | BCP2 | |
|---|---|---|---|---|---|
| 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 6

# Trade Facilitation Indicators: Summary Statistics

Table A6 provides a brief comparison of Corridor Performance Measurement and Monitoring road and rail trade facilitation indicators in 2020 and 2021. 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 A6: Trade Facilitation Indicators—Summary Statistics

| | | Overall | | | | | | Road | | | | | | Rail | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2020 | | | 2021 | | | 2020 | | | 2021 | | | 2020 | | | 2021 | | |
| | 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** | **18.8** | **8.5** | **± 1.0** | **24.0** | **9.0** | **± 1.7** | **15.0** | **7.1** | **± 0.7** | **13.6** | **6.8** | **± 0.5** | **23.0** | **7.2** | **± 2.9** | **51.5** | **34.1** | **± 6.4** |
| | 1 | 27.9 | 18.3 | ± 3.7 | 51.2 | 43.2 | ± 3.4 | 9.5 | 5.5 | ± 1.1 | 28.7 | 5.9 | ± 3.7 | 37.3 | 35.2 | ± 5.5 | 61.6 | 49.3 | ± 4.5 |
| | 2 | 22.4 | 7.5 | ± 3.8 | 11.7 | 7.3 | ± 2.1 | 10.6 | 5.4 | ± 2.1 | 7.6 | 7.1 | ± 0.9 | 61.2 | 61.2 | ± 747.0 | – | – | ± 0.0 |
| | 3 | 6.8 | 3.9 | ± 0.6 | 5.0 | 3.8 | ± 0.4 | 7.1 | 3.9 | ± 0.6 | 5.0 | 3.8 | ± 0.4 | 5.3 | 2.8 | ± 2.2 | 4.8 | 3.4 | ± 2.0 |
| | 4 | 8.1 | 4.4 | ± 1.2 | 25.7 | 5.3 | ± 8.5 | 6.3 | 2.8 | ± 1.6 | 5.4 | 3.5 | ± 0.4 | 9.1 | 5.5 | ± 1.0 | 55.5 | 7.6 | ± 20.8 |
| | 5 | 38.8 | 26.2 | ± 2.8 | 25.2 | 25.0 | ± 0.8 | 38.8 | 26.2 | ± 2.8 | 25.2 | 25.0 | ± 0.8 | – | – | – | – | – | – |
| | 6 | 13.9 | 9.8 | ± 0.6 | 11.8 | 6.5 | ± 0.6 | 13.3 | 9.3 | ± 0.6 | 11.0 | 6.5 | ± 0.6 | 4.6 | 3.9 | ± 0.3 | 4.7 | 3.9 | ± 0.3 |
| **TFI2** | Cost incurred at border-crossing clearance, $ | | | | | | | | | | | | | | | | | | |
| | **Overall** | **201** | **135** | **± 10** | **323** | **106** | **± 34** | **199** | **138** | **± 12** | **357** | **121** | **± 43** | **193** | **125** | **± 10** | **178** | **106** | **± 13** |
| | 1 | 422 | 295 | ± 48 | 1,083 | 255 | ± 169 | 639 | 290 | ± 117 | 2,373 | 272 | ± 395 | 279 | 300 | ± 15 | 236 | 190 | ± 15 |
| | 2 | 116 | 70 | ± 12 | 103 | 66 | ± 15 | 115 | 70 | ± 12 | 102 | 65 | ± 15 | – | – | – | – | – | – |
| | 3 | 91 | 92 | ± 4 | 79 | 71 | ± 4 | 92 | 96 | ± 4 | 79 | 71 | ± 4 | 14 | 14 | – | 129 | 10 | – |
| | 4 | 97 | 89 | ± 5 | 85 | 16 | ± 14 | 109 | 130 | ± 6 | 74 | 16 | ± 12 | 64 | 31 | ± 7 | 102 | 40 | ± 30 |
| | 5 | 295 | 315 | ± 4 | 279 | 300 | ± 4 | 295 | 315 | ± 4 | 279 | 300 | ± 4 | – | – | – | – | – | – |
| | 6 | 135 | 96 | ± 6 | 123 | 65 | ± 6 | 122 | 98 | ± 5 | 110 | 56 | ± 5 | 147 | 121 | ± 9 | 147 | 119 | ± 9 |

*continued on next page*

**Table A6** *continued*

| | | Overall | | | | | | Road | | | | | | Rail | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2020 | | | 2021 | | | 2020 | | | 2021 | | | 2020 | | | 2021 | | |
| | 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** | **895** | **696** | **± 30** | **1,172** | **701** | **± 57** | **918** | **703** | **± 38** | **1,256** | **678** | **± 72** | **836** | **651** | **± 41** | **902** | **746** | **± 68** |
| | 1 | 1,105 | 715 | ± 89 | 1,923 | 846 | ± 185 | 1,788 | 1,075 | ± 195 | 3,180 | 1,157 | ± 390 | 655 | 532 | ± 43 | 982 | 775 | ± 94 |
| | 2 | 563 | 573 | ± 48 | 661 | 575 | ± 61 | 563 | 573 | ± 48 | 662 | 576 | ± 62 | – | – | ± 0 | 147 | 147 | ± 0 |
| | 3 | 719 | 737 | ± 73 | 533 | 582 | ± 56 | 728 | 741 | ± 78 | 539 | 591 | ± 58 | 36 | 36 | ± 4 | 215 | 196 | – |
| | 4 | 1,224 | 1,012 | ± 66 | 1,951 | 1,627 | ± 165 | 1,510 | 1,227 | ± 88 | 2,925 | 1,984 | ± 212 | 1,018 | 788 | ± 89 | 650 | 271 | ± 144 |
| | 5 | 650 | 249 | ± 79 | 550 | 217 | ± 55 | 650 | 249 | ± 79 | 550 | 217 | ± 55 | – | – | – | – | – | – |
| | 6 | 758 | 673 | ± 34 | 766 | 656 | ± 35 | 717 | 644 | ± 36 | 721 | 626 | ± 37 | 1,100 | 1,053 | ± 80 | 1,135 | 1,081 | ± 80 |
| **TFI4** | Speed to travel on CAREC corridors, km/h | | | | | | | | | | | | | | | | | | |
| | **Overall** | **20.7** | **16.9** | **± 1.9** | **18.9** | **16.3** | **± 1.7** | **22.7** | **21.8** | **± 2.2** | **21.5** | **21.3** | **± 1.9** | **16.8** | **13.3** | **± 3.4** | **12.1** | **8.2** | **± 3.0** |
| | 1 | 27.6 | 24.0 | ± 5.6 | 20.7 | 16.3 | ± 4.6 | 41.1 | 41.8 | ± 7.0 | 30.2 | 33.1 | ± 7.4 | 20.2 | 9.1 | ± 6.3 | 14.6 | 7.0 | ± 4.7 |
| | 2 | 24.4 | 23.8 | ± 4.6 | 26.3 | 24.4 | ± 4.8 | 24.7 | 23.9 | ± 4.5 | 26.4 | 24.4 | ± 4.8 | 5.4 | 6.2 | ± 91.0 | 15.2 | 15.2 | ± 0.0 |
| | 3 | 20.8 | 20.6 | ± 4.6 | 21.7 | 22.9 | ± 4.1 | 21.4 | 21.4 | ± 4.8 | 22.4 | 23.0 | ± 4.1 | 17.5 | 15.2 | ± 13.5 | 13.4 | 13.4 | ± 15.1 |
| | 4 | 16.4 | 15.1 | ± 2.9 | 13.7 | 10.2 | ± 3.7 | 22.2 | 24.6 | ± 5.8 | 19.9 | 16.9 | ± 4.6 | 13.5 | 15.0 | ± 1.7 | 7.5 | 7.7 | ± 2.2 |
| | 5 | 8.6 | 7.8 | ± 1.3 | 10.6 | 10.9 | ± 1.0 | 8.6 | 7.8 | ± 1.3 | 10.6 | 10.9 | ± 1.0 | – | – | – | – | – | – |
| | 6 | 20.3 | 21.5 | ± 2.5 | 20.7 | 21.2 | ± 2.6 | 21.1 | 22.3 | ± 2.8 | 21.6 | 22.3 | ± 2.8 | 13.4 | 13.6 | ± 1.1 | 13.3 | 13.4 | ± 1.1 |
| **SWOD** | Speed without delay, km/h | | | | | | | | | | | | | | | | | | |
| | **Overall** | **42.7** | **37.1** | **± 3.1** | **40.6** | **35.2** | **± 3.1** | **42.9** | **39.4** | **± 2.7** | **41.6** | **36.5** | **± 2.9** | **42.2** | **27.2** | **± 8.1** | **38.0** | **26.5** | **± 8.5** |
| | 1 | 68.1 | 75.3 | ± 6.0 | 59.1 | 72.4 | ± 6.9 | 69.5 | 75.7 | ± 7.1 | 63.5 | 59.5 | ± 6.8 | 67.3 | 75.3 | ± 8.7 | 56.2 | 73.4 | ± 10.3 |
| | 2 | 46.1 | 50.4 | ± 5.4 | 49.6 | 51.2 | ± 12.4 | 46.6 | 50.4 | ± 5.0 | 49.7 | 51.2 | ± 12.5 | 7.9 | 6.4 | ± 190.1 | 15.5 | 15.5 | ± 0.0 |
| | 3 | 37.7 | 36.6 | ± 6.3 | 37.4 | 32.4 | ± 7.0 | 41.2 | 43.2 | ± 5.7 | 39.4 | 34.6 | ± 6.6 | 19.6 | 17.4 | ± 15.1 | 14.9 | 15.9 | ± 15.9 |
| | 4 | 23.5 | 17.8 | ± 5.4 | 25.4 | 19.9 | ± 7.0 | 33.8 | 36.8 | ± 9.6 | 36.0 | 35.1 | ± 8.8 | 18.4 | 15.6 | ± 4.6 | 14.8 | 12.0 | ± 6.4 |
| | 5 | 28.4 | 26.9 | ± 2.2 | 27.5 | 25.4 | ± 2.0 | 28.4 | 26.9 | ± 2.2 | 27.5 | 25.4 | ± 2.0 | - | - | - | - | - | - |
| | 6 | 38.9 | 35.9 | ± 2.6 | 37.9 | 35.3 | ± 2.8 | 40.6 | 37.2 | ± 2.4 | 39.6 | 36.1 | ± 2.7 | 24.4 | 28.3 | ± 5.9 | 24.6 | 28.0 | ± 6.0 |

– = 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 7

# Activities at Road Border-Crossing Points

Table A7.1 shows the time and cost spent on activities of outbound road shipments from the indicated country at selected border-crossing points.

## Table A7.1: 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 |
| Khorgos | PRC | 1 | 76 | 77.5 | 72.4 | 0.2 | 1.1 | 0.8 | 1.6 | 0.8 | | 0.2 | | | | | 0.5 | | | | 21.7 | | 63.0 | | |
| Alashankou | PRC | 1,2 | 41 | 61.7 | 46.0 | 0.1 | 1.1 | 0.9 | 2.0 | | | 0.1 | | | | | | | | | 4.0 | | 53.4 | | |
| Kuryk | KAZ | 2 | 4 | 61.6 | 39.5 | 0.1 | 0.1 | | 6.8 | | | | | | | 0.1 | 0.1 | | | | | 0.1 | 54.3 | | |
| Chaman | PAK | 5,6 | 84 | 57.5 | 57.1 | 0.6 | 45.6 | | 0.9 | | | 0.6 | | | 0.6 | | 0.6 | | | | | | 9.0 | | |
| Peshawar | PAK | 5,6 | 516 | 31.6 | 28.0 | | 20.8 | | 2.4 | | | | | | | | 0.6 | | | | 4.3 | | 13.8 | | |
| Torugart | KGZ | 1 | 5 | 25.8 | 4.2 | 0.1 | 0.1 | | 0.9 | | | 0.1 | | | | | | | | | | | 41.3 | | |
| Shirkhan Bandar | AFG | 2,5,6 | 120 | 17.2 | 16.7 | 0.8 | 1.0 | | 1.3 | 0.6 | | 0.7 | | | 0.6 | | | | | | 4.6 | | 7.7 | | |
| Torghondi | AFG | 2,6 | 84 | 14.6 | 14.8 | 0.7 | 0.7 | | 0.8 | | | | | | 0.6 | | 0.7 | | | | 3.7 | | 7.9 | | |
| Irkeshtam | KGZ | 2,5 | 3 | 11.5 | 0.3 | 0.1 | 0.1 | | 1.0 | | | 0.1 | | | | | | | | | | | 32.0 | | |
| Karasu | PRC | 0 | 45 | 10.5 | 10.7 | 0.2 | 0.7 | | 2.2 | | | 0.2 | | | | | 0.5 | | | | 2.3 | | 4.4 | | |
| Pakhtaabad (Dusti) | TAJ | 3 | 21 | 10.1 | 11.2 | 0.7 | 1.0 | | 0.5 | 0.6 | | 0.3 | 0.2 | | | 0.5 | 0.5 | 0.5 | | | | | 6.2 | | |
| Tazhen | KAZ | 2,6 | 115 | 10.0 | 10.9 | 0.6 | 1.0 | | 0.4 | 0.5 | | 0.2 | 0.1 | | | 0.5 | 0.5 | 0.5 | | | | | 7.1 | 8.0 | 10.0 |
| Takeshikent | PRC | 4 | 20 | 9.9 | 9.4 | 0.2 | 1.1 | 0.8 | 2.1 | 0.7 | | 0.2 | | | | | | | | | 3.9 | | 4.4 | | |
| Alat | UZB | 2,3 | 32 | 9.7 | 7.6 | 0.6 | 1.0 | | 0.4 | 0.4 | | | | | | 0.5 | 0.5 | 0.5 | | | | | 6.3 | | |
| Farap | TKM | 2,3 | 1 | 7.4 | 7.4 | 0.8 | 1.3 | | | | | | | | | 0.7 | 0.6 | 0.4 | | | | | 3.7 | | |
| Dautota | UZB | 2,6 | 164 | 7.3 | 8.0 | 0.4 | 0.7 | 0.1 | 0.3 | 0.5 | | 0.2 | 0.1 | | | 0.5 | 0.4 | 0.5 | | | | | 5.2 | 0.1 | 8.0 |
| Baku | AZE | 2 | 26 | 7.2 | 7.2 | 0.1 | | | 7.0 | | 0.1 | | | | | | | | | | | 0.1 | | 0.7 | |
| Yallama | UZB | 3,6 | 161 | 6.8 | 9.3 | 0.4 | 0.7 | | 0.3 | 0.4 | 0.2 | 0.2 | 0.1 | | | 0.5 | 0.4 | 0.6 | | | | | 6.0 | | |
| Sarahs | TKM | 3 | 1 | 6.2 | 6.2 | 0.3 | 0.5 | | | | | | | | | | 0.5 | 0.6 | | | | | 4.3 | | |
| Sarpi | GEO | 2 | 24 | 6.2 | 6.1 | 0.2 | 0.3 | | 0.2 | 0.1 | | 0.2 | 0.1 | | | 0.1 | 0.1 | | | | | | 5.2 | | |
| Erenhot | PRC | 4 | 150 | 6.0 | 2.9 | 1.1 | 1.4 | | 2.3 | | | 1.1 | | | | | 1.1 | 0.2 | | | 3.3 | | 1.5 | 0.2 | |
| Konysbayeva | KAZ | 3,6 | 4 | 5.9 | 5.7 | 0.4 | 0.5 | | 0.4 | 0.2 | | 0.2 | | | | 0.2 | 0.2 | | | | | | 5.5 | | |
| Sarp | OTH | 2 | 9 | 5.5 | 5.3 | 0.3 | 0.4 | | 0.2 | | | 0.1 | 0.1 | | | 0.1 | 0.1 | | | | | | 4.3 | | |
| Hairatan | AFG | 3,6 | 156 | 5.5 | 5.3 | 0.6 | 0.8 | | 0.8 | | | | | | 0.6 | | | | | | 2.8 | 0.6 | | | |
| Oibek | UZB | 2,3,6 | 1 | 5.3 | 5.3 | 0.2 | 0.2 | | | | | | | | | | | | | | | | 5.0 | | |
| Saryasia | UZB | 3 | 121 | 4.8 | 3.8 | 0.2 | 1.7 | | 0.3 | 0.3 | 0.3 | 0.2 | | | | 0.3 | 0.4 | 0.5 | | | | | 5.9 | | |
| Torugart | PRC | 1 | 33 | 4.2 | 4.6 | 0.1 | | | 1.9 | | | 0.2 | | | | | | | | | 0.7 | | 1.4 | | |
| Zhaisan | KAZ | 1,6 | 86 | 3.2 | 3.0 | 0.2 | | | 0.4 | 0.1 | 0.2 | 0.2 | 0.1 | | | 0.1 | 0.1 | | | | | | 2.5 | | |
| Kurmangazy | KAZ | 6 | 105 | 3.1 | 2.9 | 0.4 | 3.6 | | 0.3 | 0.1 | | 0.2 | 0.1 | | | 0.2 | 0.1 | 0.1 | | | 5.1 | 2.0 | 2.2 | | |
| Kairak | KAZ | 1 | 7 | 3.1 | 3.1 | 0.3 | | | 0.5 | 0.2 | | 0.2 | 0.2 | | | 0.2 | 0.1 | | | | | | 2.2 | | |
| Khiyagt | RUS | 4 | 120 | 3.0 | 2.6 | 0.3 | 1.5 | | | | | 0.2 | | | | 0.2 | | 0.2 | | | | 0.1 | 0.9 | | |
| Krasnyi Most | AZE | 2 | 4 | 2.9 | 3.0 | 0.1 | 0.1 | 0.1 | 0.0 | | | | | | | | | | | | | | 2.6 | 3.1 | |

*continued on next page*

**Table A7.1** *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 |
| Taskala | KAZ | 1, 6 | 26 | 2.9 | 3.1 | 0.6 | | | 0.3 | 0.2 | | 0.2 | | | | 0.2 | 0.1 | 0.1 | | | | | 2.2 | | |
| Krasnyi Yar | RUS | 6 | 14 | 2.8 | 2.8 | 0.3 | | | 0.2 | 0.1 | | 0.2 | 0.3 | | | 0.1 | 0.1 | | | | | | 1.9 | | |
| Yarant | MON | 4 | 25 | 2.7 | 2.3 | 0.2 | 0.7 | | 0.9 | | | 0.2 | | | | | | | | | 0.7 | | 1.3 | | |
| Dustlik | UZB | 2 | 13 | 2.7 | 2.7 | 0.1 | 0.4 | | 1.3 | 0.2 | | 0.2 | | | | | | | | | | | 10.0 | | |
| Karamyk | TAJ | 2,3,5 | 2 | 2.7 | 2.7 | 0.1 | 0.4 | | 2.0 | 0.2 | | | | | | | | | | | | | | | |
| Tsiteli Khidi | GEO | 2 | 26 | 2.4 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | | | | 0.1 | | | | | | | | | 0.1 | 2.2 | 0.3 | |
| Fotehobod | TAJ | 2,3,6 | 3 | 2.4 | 2.0 | 0.3 | 0.7 | | 0.3 | 0.1 | | 0.2 | | | | 0.1 | 0.1 | | | | | | 2.0 | | |
| Novomarkovka | RUS | 1,6 | 8 | 2.3 | 2.9 | 0.3 | | | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | | | 0.2 | 0.1 | | | | | | 1.8 | | |
| Karamyk | KGZ | 2,3,5 | 27 | 2.2 | 2.3 | 0.3 | 0.3 | | 0.5 | 0.2 | 0.3 | 0.3 | | | | 0.3 | | 0.3 | | | | | | | |
| Troitsk | RUS | 1 | 1 | 2.2 | 2.2 | 0.2 | | | 2.0 | | | | | | | | | | | | | | | | |
| 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 | | | | |
| Dostuk | KGZ | 2 | 6 | 1.6 | 1.5 | 0.1 | 0.3 | | 1.1 | | 0.3 | | | | | | | | | | | | | | |
| Karasu | KAZ | 1 | 16 | 1.3 | 1.2 | 0.3 | | | 10 | | | | | | | | | | | | | | | | |
| Petuchovo | RUS | 1,6 | 2 | 1.2 | 1.2 | 0.2 | | | 1.0 | | | | | | | | | | | | | | | | |
| Ak-Tilek | KGZ | 1 | 34 | 0.8 | 0.3 | 0.2 | | | 0.7 | | | | | | | | | | | | | | | | |
| Kyzyl-Bel | KGZ | 0 | 1 | 0.7 | 0.7 | 0.1 | 0.4 | | 0.2 | | | | | | | | | | | | | | | | |
| Merke | KAZ | 1,3 | 1 | 0.6 | 0.6 | 0.4 | | | 0.3 | | | | | | | | | | | | | | | | |
| Ak Zhol | KGZ | 1 | 1 | 0.4 | 0.4 | 0.2 | | | 0.3 | | | | | | | | | | | | | | | | |

| | | | | Cost ($) | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Total | | Activities | | | | | | | | | | | | | | | | | | | |
| BCP | Country | Corridor | Count | | Median | i | ii | iii | iv | v | vi | vii | viii | ix | x | xi | xii | xiii | xiv | xv | xvi | xvii | xviii | | |
| Khorgos | PRC | 1 | 76 | 5809 | 6134 | 0 | 86 | 51 | 4 | 50 | | 0 | | | | | 2 | | | | 5,666 | | 0 | | |
| Alashankou | PRC | 1,2 | 41 | 610 | 642 | 0 | 122 | 82 | 6 | | | 0 | | | | | | | | | 400 | | 0 | | |
| Kuryk | KAZ | 2 | 4 | 263 | 266 | 0 | 131 | | 50 | | | | | | | 4 | 38 | | | | | 40 | 0 | 8 | |
| Chaman | PAK | 5,6 | 84 | 54 | 55 | 11 | 11 | | | | | 11 | | | 11 | | 10 | | | | | | | | |
| Peshawar | PAK | 5,6 | 516 | 309 | 292 | | 275 | | 5 | | | | | | | | 10 | | | | 50 | | | | |
| Torugart | KGZ | 1 | 5 | 2 | 0 | 0 | 0 | | 2 | | | 0 | | | | | | | | | | | | | |
| Shirkhan Bandar | AFG | 2,5,6 | 120 | 335 | 340 | 10 | 17 | 17 | 10 | 20 | | 100 | | | 9 | | | | | | 155 | | 18 | | |
| Torghondi | AFG | 2,6 | 84 | 309 | 321 | 9 | 54 | | | | | | | | 8 | | 18 | | | | 220 | | | | |
| Irkeshtam | KGZ | 2,5 | 3 | 1 | 0 | 0 | 0 | | 2 | | | 0 | | | | | | | | | | | | | |
| Karasu | PRC | 0 | 45 | 156 | 67 | 0 | 0 | | 8 | | | 0 | | | | | 0 | | | | 148 | | 0 | | |
| Pakhtaabad (Dusti) | TAJ | 3 | 21 | 66 | 59 | 4 | 10 | | 15 | 7 | | | | | | 12 | 13 | 18 | | | | | | | |
| Tazhen | KAZ | 2,6 | 115 | 62 | 48 | 5 | 17 | | 12 | 8 | | | 5 | | | 11 | 11 | 18 | | | | | 0 | 6 | 0 |
| Takeshikent | PRC | 4 | 20 | 842 | 922 | 0 | 82 | 49 | 8 | 0 | | 0 | | | | | | | | | 703 | | 0 | | |
| Alat | UZB | 2,3 | 32 | | | | | | | | | | | | | | | | | | | | | | |
| Farap | TKM | 2,3 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| Dautota | UZB | 2,6 | 164 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | 0 | 8 | 28 |
| Baku | AZE | 2 | 26 | 110 | 90 | 0 | | | 48 | | 0 | | | | | | | | | | | 67 | | 12 | |
| Yallama | UZB | 3,6 | 161 | 21 | 21 | | | | 21 | | | | | | | | | | | | | | | | |
| Sarahs | TKM | 3 | 1 | | | | | | | | | | | | | | | | | | | | | | |

*continued on next page*

**Table A7.1** *continued*

| | | | | Cost ($) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Total | | Activities | | | | | | | | | | | | | | | | | | |
| BCP | Country | Corridor | Count | | Median | i | ii | iii | iv | v | vi | vii | viii | ix | x | xi | xii | xiii | xiv | xv | xvi | xvii | xviii | | |
| Sarpi | GEO | 2 | 24 | 10 | 10 | | 10 | | | | | | | | | | | | | | | | | |
| Erenhot | PRC | 4 | 150 | 54 | 16 | 0 | 45 | 0 | 0 | | | 0 | | | | | 31 | | | | | 8 | 0 | 0 |
| Konysbayeva | KAZ | 3,6 | 4 | 41 | 42 | 4 | 19 | | 8 | 8 | | | | | | 8 | 10 | | | | | | | |
| Sarp | OTH | 2 | 9 | 30 | 30 | | 30 | | | | | | | | | | | | | | | | | |
| Hairatan | AFG | 3,6 | 156 | 160 | 162 | 9 | 11 | | | | | | | | 10 | | | | | | 126 | 11 | | |
| Oibek | UZB | 2,3,6 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | 0 | |
| Saryasia | UZB | 3 | 121 | 131 | 135 | 15 | 24 | | 8 | 5 | 10 | 5 | | | | 8 | | 5 | | 54 | | | 0 | |
| Torugart | PRC | 1 | 33 | 6 | 10 | 0 | | | 6 | | | 0 | | | | | | | | | 0 | | 0 | |
| Zhaisan | KAZ | 1,6 | 86 | 6 | 5 | 10 | | | 5 | | | | | | | | | | | | | | | |
| Kurmangazy | KAZ | 6 | 105 | 7 | 5 | 6 | | | 5 | | | | | | | 9 | 5 | | | | | | | |
| Kairak | KAZ | 1 | 7 | 18 | 18 | 13 | | | 6 | 10 | | | | | | 11 | 5 | | | | | | | |
| Khiyagt | RUS | 4 | 120 | 12 | 12 | | 16 | | | | | | | | | | | | | | | 8 | | |
| Krasnyi Most | AZE | 2 | 4 | 26 | 29 | 0 | 26 | 0 | 0 | | | | | | | | | | | | | | 0 | 7 |
| Taskala | KAZ | 1, 6 | 26 | 7 | 5 | 7 | | | 5 | | | | | | | | | | | | | | | |
| Krasnyi Yar | RUS | 6 | 14 | | | | | | | | | | | | | | | | | | | | | |
| Yarant | MON | 4 | 25 | 2 | 0 | 0 | 0 | | 2 | | | 0 | | | | | | | | | 0 | | | |
| Dustlik | UZB | 2 | 13 | 15 | 14 | 3 | 9 | | 3 | 4 | | | | | | | | | | | | | 0 | |
| Karamyk | TAJ | 2,3,5 | 2 | 21 | 21 | 3 | 10 | | 3 | 4 | | | | | | | | | | | | | | |
| Tsiteli Khidi | GEO | 2 | 26 | 52 | 65 | 0 | 0 | 0 | 0 | | | | 29 | | | | | | | | | 65 | 0 | 10 |
| Fotehobod | TAJ | 2,3,6 | 3 | 57 | 55 | | 52 | | 5 | | | | | | | | | | | | | | | |
| Novomarkovka | RUS | 1,6 | 8 | 0 | 0 | 0 | | | 0 | | | | | | | | | | | | | | | |
| Karamyk | KGZ | 2,3,5 | 27 | 45 | 48 | 3 | 23 | | 3 | 3 | 5 | 3 | | | | 3 | | 3 | | | | | | |
| Troitsk | RUS | 1 | 1 | 19 | 19 | 12 | | | 7 | | | | | | | | | | | | | | | |
| Panji Poyon | TAJ | 2,5,6 | 120 | 20 | 16 | 2 | 5 | | 2 | 2 | 2 | 5 | | | | 3 | | 2 | | | | | | |
| Dostuk | KGZ | 2 | 6 | 10 | 11 | 1 | 7 | | 2 | | 5 | | | | | | | | | | | | | |
| Karasu | KAZ | 1 | 16 | 14 | 13 | 10 | | | 4 | | | | | | | | | | | | | | | |
| Petuchovo | RUS | 1,6 | 2 | 0 | 0 | 0 | | | 0 | | | | | | | | | | | | | | | |
| Ak-Tilek | KGZ | 1 | 34 | 7 | 7 | 6 | | | 2 | | | | | | | | | | | | | | | |
| Kyzyl-Bel | KGZ | 0 | 1 | 12 | 12 | 2 | 10 | | 0 | | | | | | | | | | | | | | | |
| Merke | KAZ | 1,3 | 1 | 20 | 20 | 15 | | | 5 | | | | | | | | | | | | | | | |
| Ak Zhol | KGZ | 1 | 1 | 7 | 7 | 5 | | | 2 | | | | | | | | | | | | | | | |

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 A7.2 shows the time and cost spent on activities of **inbound** road shipments to the indicated country at selected border-crossing points

## Table A7.2: 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 |
| Peshawar | PAK | 5,6 | 1 | 120.0 | 120.0 | | 96.0 | | | | | | | | | | 6.0 | | | | 6.0 | | 12.0 | | |
| Dostyk | KAZ | 1,2 | 41 | 46.8 | 41.4 | 0.2 | 4.5 | | 2.1 | | | 0.2 | | | | | | | | | 24.0 | | 31.0 | | |
| Yarant | MON | 4 | 20 | 25.9 | 27.1 | 0.2 | 1.4 | 1.0 | 2.2 | 0.7 | | 0.3 | | | | | | | | | | | 25.3 | | |
| Torkham | AFG | 5,6 | 516 | 22.2 | 18.2 | 0.8 | 9.6 | | 0.8 | | | 0.7 | | 0.6 | 0.6 | 0.6 | | | | | | 0.8 | 10.1 | | |
| Nur Zholy | KAZ | 1 | 76 | 19.6 | 6.9 | 0.2 | 2.6 | | 1.7 | 1.2 | | 0.1 | | | | | | | | | 15.1 | | 10.8 | | |
| Kuryk | KAZ | 2 | 26 | 17.7 | 14.7 | 0.1 | 0.2 | 0.1 | 0.3 | | 0.1 | | | | | 0.1 | 0.2 | | | 4.0 | | 0.1 | 16.5 | 8.8 | 40.0 |
| Spin Buldak | AFG | 5,6 | 84 | 13.8 | 11.5 | 0.6 | 3.3 | | 0.9 | | | 0.6 | | | | 0.7 | | | | | 0.7 | | 8.2 | | |
| Saryasia | UZB | 3 | 21 | 11.0 | 6.3 | 0.6 | 0.9 | | 4.2 | 0.6 | | 0.2 | 0.1 | | | 0.5 | 0.5 | 0.5 | | | | | 3.8 | | |
| Farap | TKM | 2,3 | 34 | 9.4 | 9.0 | 0.6 | 1.1 | | 0.4 | 0.4 | | 0.6 | | | | 0.5 | 0.5 | 0.6 | | | 1.9 | 0.3 | 4.1 | | |
| Dautota | UZB | 2,6 | 212 | 9.3 | 6.5 | 0.4 | 2.3 | 0.1 | 3.2 | 0.5 | 0.3 | 0.2 | 0.1 | | 0.1 | 0.5 | 0.4 | 0.5 | | 5.0 | | | 3.8 | 0.2 | 0.1 |
| Panji Poyon | TAJ | 2,5,6 | 120 | 7.8 | 6.9 | 0.9 | 0.6 | | 1.6 | 0.5 | | 0.6 | | | 0.6 | | | | 5.7 | | | | | | |
| Kulma | TAJ | 0 | 45 | 7.6 | 9.7 | 0.1 | 1.5 | | 2.3 | | | 0.2 | | | | | | | | | | | 6.4 | | |
| Altanbulag | MON | 4 | 119 | 5.4 | 5.5 | 0.2 | 2.1 | | 0.2 | | | 0.1 | | | | 0.2 | | 0.2 | | | | | 2.5 | | |
| Takeshikent | PRC | 4 | 25 | 5.4 | 5.0 | 0.2 | 0.9 | 0.7 | 0.8 | | | 0.2 | | | | | | | | | 2.6 | | 1.0 | 47.8 | |
| Konysbayeva | KAZ | 3,6 | 161 | 5.1 | 4.9 | 0.5 | 0.8 | | 0.4 | 0.4 | 0.3 | 0.2 | 0.1 | | | 0.4 | 0.3 | 0.5 | | | | | 3.7 | | |
| Zamiin-Uud | MON | 4 | 150 | 5.0 | 3.5 | 1.1 | 1.8 | | 0.7 | | | 0.8 | | | | | 0.3 | 0.2 | | | | | 0.6 | | |
| Tazhen | KAZ | 2,6 | 164 | 4.7 | 3.1 | 0.5 | 0.8 | 0.1 | 0.4 | 0.4 | 0.2 | 0.2 | 0.1 | 0.1 | | 0.3 | 0.3 | 0.5 | | | | | 3.6 | 0.2 | 0.1 |
| Fotehobod | TAJ | 2,3,6 | 1 | 4.7 | 4.7 | 0.2 | 0.2 | | | | | | | | | 0.2 | 0.2 | | | | | | 4.0 | 0.2 | |
| Torugart | KGZ | 1 | 36 | 4.1 | 5.2 | 0.2 | 0.6 | | 1.8 | | | 0.5 | | | | 1.5 | | | | | | | | | |
| Krasnyi Most | AZE | 2 | 26 | 3.7 | 2.8 | 0.1 | 0.1 | 0.1 | 0.0 | | 0.1 | | 0.1 | | | 0.1 | 0.1 | | | | 8.0 | 0.1 | 2.7 | 0.1 | 0.1 |
| Alat | UZB | 2,3 | 5 | 3.5 | 2.0 | 0.4 | 0.9 | | 0.7 | 0.2 | | 0.1 | 0.1 | | | 0.8 | 0.3 | 0.6 | | | | | 4.4 | | |
| Yallama | UZB | 3,6 | 4 | 3.4 | 4.0 | 0.3 | 0.4 | | 0.9 | 0.3 | | 0.2 | 0.1 | | | 0.3 | 0.2 | | | | | | 2.5 | | |
| Oibek | UZB | 2,3,6 | 3 | 3.0 | 2.9 | 0.3 | 0.4 | | 1.8 | 0.1 | 0.2 | 0.1 | 0.1 | | | | 0.2 | | | | | | | | |
| Pakhtaabad (Dusti) | TAJ | 3 | 122 | 2.8 | 1.7 | 0.4 | 0.7 | | 0.4 | 0.3 | 0.3 | 0.4 | 0.1 | | | 0.4 | 0.4 | 0.6 | | | | 0.2 | 3.6 | | 0.1 |
| Dostuk | KGZ | 2 | 13 | 2.5 | 2.1 | 0.1 | 0.3 | | 2.0 | 0.1 | | 0.3 | 0.1 | | | 0.1 | 0.1 | | | | | | 2.0 | | |
| Pogodaevo | KAZ | 0 | 18 | 2.5 | 2.6 | 0.8 | | | | | | | | | | | | | | | | | 1.7 | | |
| Karamyk | KGZ | 2,3,5 | 2 | 2.4 | 2.4 | 0.1 | 0.2 | | 2.0 | 0.1 | | | | | | | | | | | | | | | |
| Kurmangazy | KAZ | 6 | 72 | 2.3 | 2.2 | 0.6 | 3.3 | | 0.5 | 0.2 | | 0.2 | 0.1 | | | 0.1 | 0.1 | | | | 4.6 | | 1.7 | | |
| Veseloyarsk | RUS | 3 | 1 | 2.3 | 2.3 | 0.3 | | | 2.0 | | | | | | | | | | | | | | | | |
| Petuchovo | RUS | 1,6 | 1 | 2.2 | 2.2 | 0.2 | | | 2.0 | | | | | | | | | | | | | | | | |
| Karamyk | TAJ | 2,3,5 | 3 | 2.2 | 2.8 | 0.1 | 0.4 | | 1.5 | 0.2 | 0.2 | | | | | | | | | | | | | | |
| Taskala | KAZ | 1, 6 | 1 | 2.0 | 2.0 | 0.5 | | | | | | | | | | | | | | | | | 1.5 | | |
| Sarp | OTH | 2 | 24 | 2.0 | 1.9 | 0.3 | 0.5 | | 0.5 | 0.2 | 0.2 | 0.2 | 0.2 | | | 0.2 | 0.1 | | | | 0.1 | 0.2 | | | |
| Dustlik | UZB | 2 | 6 | 1.9 | 2.2 | 0.1 | 0.5 | | 1.3 | | 0.3 | | | | | | | | | | | | | | |
| Mashtakovo | RUS | 0 | 8 | 1.7 | 1.5 | 0.3 | | | 0.6 | 0.2 | | 0.2 | 0.1 | | | 0.2 | 0.1 | | | | | 0.1 | | | |
| Zhaisan | KAZ | 1,6 | 8 | 1.5 | 1.2 | 0.3 | | | 0.9 | 0.2 | 0.3 | 0.2 | 0.2 | | | 0.2 | 0.1 | | | | | | | | |
| Karasu | KAZ | 1 | 33 | 1.5 | 1.2 | 0.4 | | | 1.1 | | | | | | | | | | | | | | | | |
| Troitsk | RUS | 1 | 8 | 1.5 | 1.2 | 0.2 | | | 0.8 | 0.2 | | 0.2 | 0.1 | | | 0.2 | 0.1 | | | | | 0.1 | | | |
| Tsiteli Khidi | GEO | 2 | 4 | 1.4 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | | | 0.1 | 0.1 | | | | | 0.1 | 1.2 | | |

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**Table A7.2** *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 |
| Ozinki | RUS | 1, 6 | 8 | 1.3 | 1.3 | 0.3 | | | 0.4 | 0.2 | | 0.2 | 0.1 | | | 0.1 | 0.1 | | | | | 0.1 | | | |
| Sarpi | GEO | 2 | 9 | 1.3 | 1.2 | 0.2 | 0.3 | | 0.2 | | | 0.2 | 0.1 | | 0.2 | 0.1 | 0.1 | | | | | 0.1 | | | |
| Novomarkovka | RUS | 1,6 | 86 | 1.3 | 1.2 | 0.2 | | 0.3 | 0.4 | 0.2 | | 0.2 | 0.1 | | | 0.2 | 0.1 | | | | | 0.1 | | | |
| Guliston | TAJ | 0 | 1 | 1.2 | 1.2 | 0.1 | 0.6 | | 0.6 | | | | | | | | | | | | | | | | |
| Krasnyi Yar | RUS | 6 | 70 | 1.2 | 1.2 | 0.3 | | | 0.3 | 0.2 | 0.2 | 0.2 | 0.1 | | | 0.2 | 0.1 | 0.1 | | | | 0.1 | | | |
| Irkeshtam | KGZ | 2,5 | 6 | 1.2 | 0.7 | 0.1 | 0.3 | | 0.8 | | | | | | | | | | | | | | | | |
| Ak-Tilek | KGZ | 1 | 16 | 1.0 | 0.3 | 0.2 | | | 0.8 | | | | | | | | | | | | | | | | |
| Serkhet Abad | TKM | 2,6 | v2 | 0.7 | 0.8 | | | | 0.7 | | | | | | | | | | | | | | | | |
| Chaldovar | KGZ | 1,3 | 3 | 0.7 | 0.9 | 0.2 | | | 0.1 | 0.1 | | 0.2 | 0.1 | | | 0.1 | 0.1 | | | | | | | | |
| Jalgan | TAJ | 2,3,5 | 24 | 0.6 | 0.6 | | | | | | | | | | | 0.2 | | 0.2 | | 0.3 | | | | | |
| Baku | AZE | 2 | 4 | 0.5 | 0.5 | 0.1 | | 0.1 | 0.0 | | | | | | | 0.1 | 0.1 | | | 0.3 | | 0.1 | | 0.1 | 0.2 |

| | | | | Cost ($) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 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 |
| Peshawar | PAK | 5,6 | 1 | 525 | 525 | | 450 | | | | | | | | | | 25 | | | | 50 | | | | |
| Dostyk | KAZ | 1,2 | 41 | 4840 | 612 | 0 | 527 | | 8 | | | 0 | | | | | | | | | 11,767 | | 0 | | |
| Yarant | MON | 4 | 20 | 205 | 208 | 0 | 126 | 54 | 70 | 20 | | 0 | | | | | | | | | | | 0 | | |
| Torkham | AFG | 5,6 | 516 | 242 | 223 | 30 | 190 | | | | | | | 10 | 9 | 19 | | | | | | 11 | 30 | | |
| Nur Zholy | KAZ | 1 | 76 | 3918 | 280 | 0 | 262 | | 5 | 30 | | 0 | | | | | | | | | 13,850 | | 0 | | |
| Kuryk | KAZ | 2 | 26 | 312 | 280 | 2 | 173 | 4 | 2 | | 1 | | | | | 6 | 52 | | | 200 | | 68 | 0 | 60 | 134 |
| Spin Buldak | AFG | 5,6 | 84 | 37 | 41 | 9 | 9 | | | | | 9 | | | | 9 | | | | | | | | | |
| Saryasia | UZB | 3 | 21 | | | | | | | | | | | | | | | | | | | | | | |
| Farap | TKM | 2,3 | 34 | | | | | | | | | | | | | | | | | | | | | | |
| Dautota | UZB | 2,6 | 212 | 86 | 96 | 18 | 31 | 0 | 9 | 5 | 10 | 5 | | | 0 | 7 | 0 | 5 | | 150 | | | 0 | 9 | 63 |
| Panji Poyon | TAJ | 2,5,6 | 120 | 188 | 167 | 11 | 50 | | 11 | 50 | | 11 | | | 11 | | | | 90 | | | | | | |
| Kulma | TAJ | 0 | 45 | 10 | 12 | 0 | 0 | | 10 | | | 0 | | | | | | | | | | | 0 | | |
| Altanbulag | MON | 4 | 119 | 8 | 9 | | 4 | | 4 | | | | | | | | | | | | | | | | |
| Takeshikent | PRC | 4 | 25 | 221 | 221 | 0 | 80 | 44 | 2 | | | 0 | | | | | | | | | 95 | | 0 | 0 | |
| Konysbayeva | KAZ | 3,6 | 161 | 52 | 43 | 6 | 15 | | 9 | 7 | 5 | | 26 | | | 10 | 11 | 18 | | | | | | | |
| Zamiin-Uud | MON | 4 | 150 | 38 | 9 | 15 | 32 | 0 | 3 | | | 0 | | | | | | | | | | 0 | | | |
| Tazhen | KAZ | 2,6 | 164 | 60 | 50 | 7 | 23 | 3 | 8 | 9 | 5 | | 8 | | 10 | 10 | 11 | 18 | | | | | 0 | 23 | 10 |
| Fotehobod | TAJ | 2,3,6 | 1 | 160 | 160 | 20 | 120 | | | | | | | | | 10 | 10 | | | | | | 0 | 23 | |
| Torugart | KGZ | 1 | 36 | 40 | 50 | 0 | 2 | | 8 | | | 16 | | | | 21 | | | | | | | | | |
| Krasnyi Most | AZE | 2 | 26 | 120 | 97 | 0 | 25 | 0 | 0 | | 0 | | 56 | | | 11 | 12 | | | | 0 | 25 | 0 | 53 | 37 |
| Alat | UZB | 2,3 | 5 | | | | | | | | | | | | | | | | | | | | | | |
| Yallama | UZB | 3,6 | 4 | 15 | 15 | | | | 15 | | | | | | | | | | | | | | | | |
| Oibek | UZB | 2,3,6 | 3 | 15 | 15 | | | | 15 | | | | | | | | | | | | | | | | |
| Pakhtaabad (Dusti) | TAJ | 3 | 122 | 82 | 71 | 9 | 30 | | 5 | 4 | 3 | 13 | 20 | | | 6 | 12 | 4 | | | 8 | 200 | 0 | | 23 |
| Dostuk | KGZ | 2 | 13 | 11 | 8 | 1 | 7 | | 3 | 1 | | | | | | 5 | | | | | | | 0 | | |
| Pogodaevo | KAZ | 0 | 18 | 6 | 5 | 6 | | | | | | | | | | | | | | | | | | | |

*continued on next page*

**Table A7.2** *continued*

| | | | | Cost ($) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 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 | 2 | 12 | 12 | 1 | 7 | | 2 | 2 | | | | | | | | | | | | | | | |
| Kurmangazy | KAZ | 6 | 72 | 7 | 5 | 7 | | | 8 | 10 | | | | | | 10 | 10 | | | | | | | | |
| Veseloyarsk | RUS | 3 | 1 | 6 | 6 | 6 | | | 0 | | | | | | | | | | | | | | | | |
| Petuchovo | RUS | 1,6 | 1 | 3 | 3 | 0 | | | 3 | | | | | | | | | | | | | | | | |
| Karamyk | TAJ | 2,3,5 | 3 | 22 | 22 | 1 | 9 | | 3 | 9 | 6 | | | | | | | | | | | | | | |
| Taskala | KAZ | 1, 6 | 1 | 5 | 5 | 5 | | | | | | | | | | | | | | | | | | | |
| Sarp | OTH | 2 | 24 | 209 | 110 | | 30 | | 29 | | | | 61 | | | | | | | | | 400 | | | |
| Dustlik | UZB | 2 | 6 | 12 | 12 | 1 | 7 | | 3 | | 3 | | | | | | | | | | | | | | |
| Mashtakovo | RUS | 0 | 8 | 74 | 70 | | | | | | | | 62 | | | | | | | | | 51 | | | |
| Zhaisan | KAZ | 1,6 | 8 | 19 | 15 | 11 | | | 8 | 10 | | | 45 | | | 10 | | | | | | | | | |
| Karasu | KAZ | 1 | 33 | 18 | 18 | 11 | | | 7 | | | | | | | | | | | | | | | | |
| Troitsk | RUS | 1 | 8 | 16 | 15 | 0 | | | 7 | | | | | | | | | | | | | 18 | | | |
| Tsiteli Khidi | GEO | 2 | 4 | 33 | 33 | 0 | 0 | 0 | 0 | | | | | | | 0 | 0 | | | | | 65 | 0 | | |
| Ozinki | RUS | 1, 6 | 8 | 68 | 53 | | | | | | | | 63 | | | | | | | | | 52 | | | |
| Sarpi | GEO | 2 | 9 | 100 | 100 | | 10 | | | | | | 20 | | | | | | | | | 70 | | | |
| Novomarkovka | RUS | 1,6 | 86 | 57 | 50 | 4 | | | 7 | | | | 66 | | | | | | | | | 47 | | | |
| Guliston | TAJ | 0 | 1 | 24 | 24 | 4 | 14 | | 6 | | | | | | | | | | | | | | | | |
| Krasnyi Yar | RUS | 6 | 70 | 55 | 50 | | | | | | | | 66 | | | | | | | | | 45 | | | |
| Irkeshtam | KGZ | 2,5 | 6 | 12 | 13 | 3 | 8 | | 1 | | | | | | | | | | | | | | | | |
| Ak-Tilek | KGZ | 1 | 16 | 7 | 7 | 4 | | | 2 | | | | | | | | | | | | | | | | |
| Serkhet Abad | TKM | 2,6 | 12 | | | | | | | | | | | | | | | | | | | | | | |
| Chaldovar | KGZ | 1,3 | 3 | 33 | 45 | 5 | | | 5 | | | | 30 | | | 10 | | | | | | | | | |
| Jalgan | TAJ | 2,3,5 | 24 | 69 | 69 | 3 | 20 | | 2 | 3 | 2 | 4 | | | | 3 | | 5 | | 27 | | | | | |
| Baku | AZE | 2 | 4 | 43 | 40 | 0 | | 0 | 0 | | | | | | | 0 | 3 | | | | | 40 | | 41 | 463 |

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 8

# Activities at Rail Border-Crossing Points

Table A8 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 A8: Time and Cost Spent at Rail Border-Crossing Points, Outbound and Inbound

**Rail (Outbound 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 |
| Alashankou | PRC | 1,2 | 212 | 80.2 | 42.4 | | | | | | | | | | | | 2.0 | 0.5 | 0.5 | 2.3 | 2.1 | | | 39.3 | | 185.0 | 194.9 | | |
| Khorgos | PRC | 1 | 189 | 58.7 | 43.0 | | | | | | | | | | | | 1.5 | 0.5 | 0.5 | 2.1 | 2.1 | | | 43.2 | | 158.4 | 125.1 | | |
| Erenhot | PRC | 4 | 132 | 36.2 | 36.1 | | | | | | | | | | | | 2.5 | 6.1 | | 1.6 | | 7.8 | 6.9 | 44.2 | 24.1 | 13.8 | | 0.2 | |
| Bolashak | KAZ | 5 | 1 | 30.2 | 30.2 | | | | | | | | | | | | 0.3 | 0.4 | 0.5 | | | | | | 29.0 | | | | |
| Altynkol | KAZ | 1 | 1 | 13.3 | 13.3 | | | | | | | | | | | | 0.3 | 0.7 | 0.3 | | | | | | 12.0 | | | | |
| Saryagash | KAZ | 3,6 | 40 | 11.3 | 14.6 | | 2.5 | | | | 0.5 | | | | | | 1.6 | 0.4 | 0.3 | | | | | 14.1 | 2.7 | | | | |
| Zamiin-Uud | MON | 4 | 105 | 9.8 | 4.4 | | | | | | | | | | | 1.7 | 1.6 | | | 1.3 | 4.5 | | 21.9 | 36.9 | 16.0 | 6.9 | 2.6 | | |
| Dostyk | KAZ | 1,2 | 2 | 6.7 | 6.7 | | | | | | | | | | | | 0.3 | 0.5 | 0.3 | | | | | | 5.5 | | | | |
| Merke | KAZ | 1,3 | 5 | 6.6 | 7.5 | | 1.3 | | | | 0.3 | | | | | | | 0.5 | 0.3 | | | | | | 7.3 | | | | |
| Keles | UZB | 3,6 | 3 | 6.0 | 6.0 | | | | | | | | | | | | | | | | | | | | 6.0 | | | | |
| Bekabad | UZB | 2 | 1 | 6.0 | 6.0 | | | | | | | | | | | | | | | | | | | | 6.0 | | | | |
| Torghondi | AFG | 2,6 | 84 | 3.9 | 3.9 | 1.6 | 1.6 | | | | | | | | | | 0.7 | | | | | | | | | | | | |
| Naushki | RUS | 4 | 49 | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | 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 |
| Alashankou | PRC | 1,2 | 212 | 8 | 0 | | | | | | | | | | | | 1 | | | 0 | 0 | | | 8 | | | 0 | | |
| Khorgos | PRC | 1 | 189 | 15 | 19 | | | | | | | | | | | | 4 | | | 0 | 0 | | | 13 | | | 0 | | |
| Erenhot | PRC | 4 | 132 | 18 | 0 | | | | | | | | | | | | 0 | 0 | | 0 | | 0 | 0 | 32 | 0 | 0 | | 81 | |
| Bolashak | KAZ | 5 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Altynkol | KAZ | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Saryagash | KAZ | 3,6 | 40 | 132 | 125 | | 200 | | | | 90 | | | | | | 125 | | | | | | | 0 | | | | | |
| Zamiin-Uud | MON | 4 | 105 | 4 | 5 | | | | | | | | | | | 2 | 3 | | | 5 | 0 | | 0 | 0 | 0 | 0 | 0 | | |
| Dostyk | KAZ | 1,2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Merke | KAZ | 1,3 | 5 | 175 | 175 | | 100 | | | | 75 | | | | | | | | | | | | | | | | | | |
| Keles | UZB | 3,6 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bekabad | UZB | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Torghondi | AFG | 2,6 | 84 | 224 | 234 | 108 | 105 | | | | | | | | | | 11 | | | | | | | | | | | | |
| Naushki | RUS | 4 | 49 | 20 | 20 | | | | | | | | | | | 20 | | | | | | | | | | | | | |

*continued on next page*

**Table A8** *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 |
| Erenhot | PRC | 4 | 105 | 184.5 | 6.9 | | | | | 3.1 | 2.1 | | | | | 2.0 | | | | | | | 804.3 | 50.5 | 19.7 | 12.9 | | | |
| Dostyk | KAZ | 1,2 | 132 | 70.0 | 66.0 | | | | | 2.9 | | | | 3.0 | | | 1.9 | 0.4 | 0.4 | 2.2 | 1.6 | | 49.7 | | 12.5 | | 29.3 | | |
| Altynkol | KAZ | 1 | 171 | 65.9 | 61.8 | | | | | 2.0 | | | | | 122.0 | | 1.3 | 0.4 | 0.4 | 3.9 | 1.4 | | 59.8 | | 11.4 | | 37.4 | | |
| Zamiin-Uud | MON | 4 | 132 | 13.1 | 7.4 | | | 1.5 | | 3.0 | | | | 3.0 | | 1.8 | 1.8 | | 1.4 | 1.3 | 3.8 | | 26.8 | | 14.4 | | | | |
| Sukhbaatar | MON | 4 | 49 | 12.2 | 6.6 | | | | | | 2.1 | | | | | 1.6 | 1.7 | | | | | | | | 25.4 | 6.6 | 10.5 | | |
| Termez | UZB | 3,6 | 24 | 8.7 | 9.0 | 8.2 | | | | | | | | | | | 0.6 | | | | | | | | | | | | |
| Keles | UZB | 3,6 | 40 | 4.5 | 2.8 | | | | | | | | | | | | 3.2 | | | | | | | | 6.8 | | | | |
| Saryagash | KAZ | 3,6 | 3 | 4.0 | 4.2 | | | | | | | | | | | | 0.4 | 0.5 | 0.4 | | | | | | 2.7 | | | | |
| Serkhetyaka | TKM | 5 | 1 | 4.0 | 4.0 | | | | | | | | | | | | | | | | | | | | 4.0 | | | | |
| Serkhet Abad | TKM | 2,6 | 84 | 3.7 | 3.8 | | | 0.8 | | | | | | | | | 2.4 | 0.8 | | | | | | | | | | | |
| Chaldovar | KGZ | 1,3 | 7 | 1.6 | 1.0 | | 1.3 | | | | 0.4 | | | | | | | 0.7 | 0.3 | | | | | | 0.9 | | | | |
| Naushki | RUS | 4 | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | 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 |
| Erenhot | PRC | 4 | 105 | 288 | 113 | | | | | 101 | 2 | | | | | 1 | | | | | | | 841 | 47 | 0 | 0 | | | |
| Dostyk | KAZ | 1,2 | 132 | 398 | 425 | | | | | 279 | | | | 0 | | | 120 | | | 0 | 0 | | 0 | | 0 | | 0 | | |
| Altynkol | KAZ | 1 | 171 | 276 | 425 | | | | | 202 | | | | | 200 | | 71 | | | 4 | 0 | | 0 | | 0 | | 0 | | |
| Zamiin-Uud | MON | 4 | 132 | 55 | 46 | | | 15 | | 31 | | | | 0 | | 2 | 7 | | 97 | 5 | 0 | | 0 | | 0 | | | | |
| Sukhbaatar | MON | 4 | 49 | 5 | 5 | | | | | | 0 | | | | | 2 | 3 | | | | | | | | 0 | 0 | 0 | | |
| Termez | UZB | 3,6 | 24 | 117 | 117 | 105 | | | | | | | | | | | 12 | | | | | | | | | | | | |
| Keles | UZB | 3,6 | 40 | 155 | 155 | | | | | | | | | | | | 155 | | | | | | | | | | | | |
| Saryagash | KAZ | 3,6 | 3 | 7 | 6 | | | | | | | | | | | | 7 | | | | | | | | | | | | |
| Serkhetyaka | TKM | 5 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Serkhet Abad | TKM | 2,6 | 84 | 81 | 80 | | | 20 | | | | | | | | | 50 | 11 | | | | | | | | | | | |
| Chaldovar | KGZ | 1,3 | 7 | 175 | 175 | | 100 | | | | 75 | | | | | | | | | | | | | | | | | | |
| Naushki | RUS | 4 | 111 | | | | | | | | | | | | | | | | | | | | | | | | | | |

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) Marshalling, (xxi) Waiting for priority trains to pass, (xxii) For other reasons, 1. Others 1, 2. Others 2.
Source: Asian Development Bank.

# CAREC Corridor Performance Measurement and Monitoring Annual Report 2021

Using data from real-time road and rail cargo shipments, the Corridor Performance Measurement and Monitoring (CPMM) mechanism assesses the efficiency of the six Central Asia Regional Economic Cooperation (CAREC) transport corridors that link CAREC member countries. It considers travel time and costs and the ease of crossing borders. Analysis of 2021 CPMM data show improvement on border-crossing time on the six CAREC corridors, while exhibiting increase in transport and border-crossing costs. This report informs policy makers about transport and trade blockages and aims to help guide infrastructure investment and trade facilitation reform and modernization.

**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.

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