

# CARECCPMM

## Corridor Performance Measurement and Monitoring

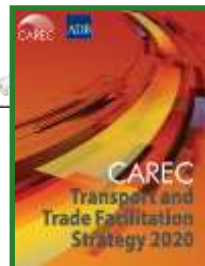
**CAREC SENIOR OFFICIALS' MEETING**  
17-18 June 2015 | Bangkok, Thailand

# Transport Corridors & CPMM



## What is CPMM?

- Detailed measurement and monitoring of corridor efficiency
- Identify bottlenecks, Improve predictability

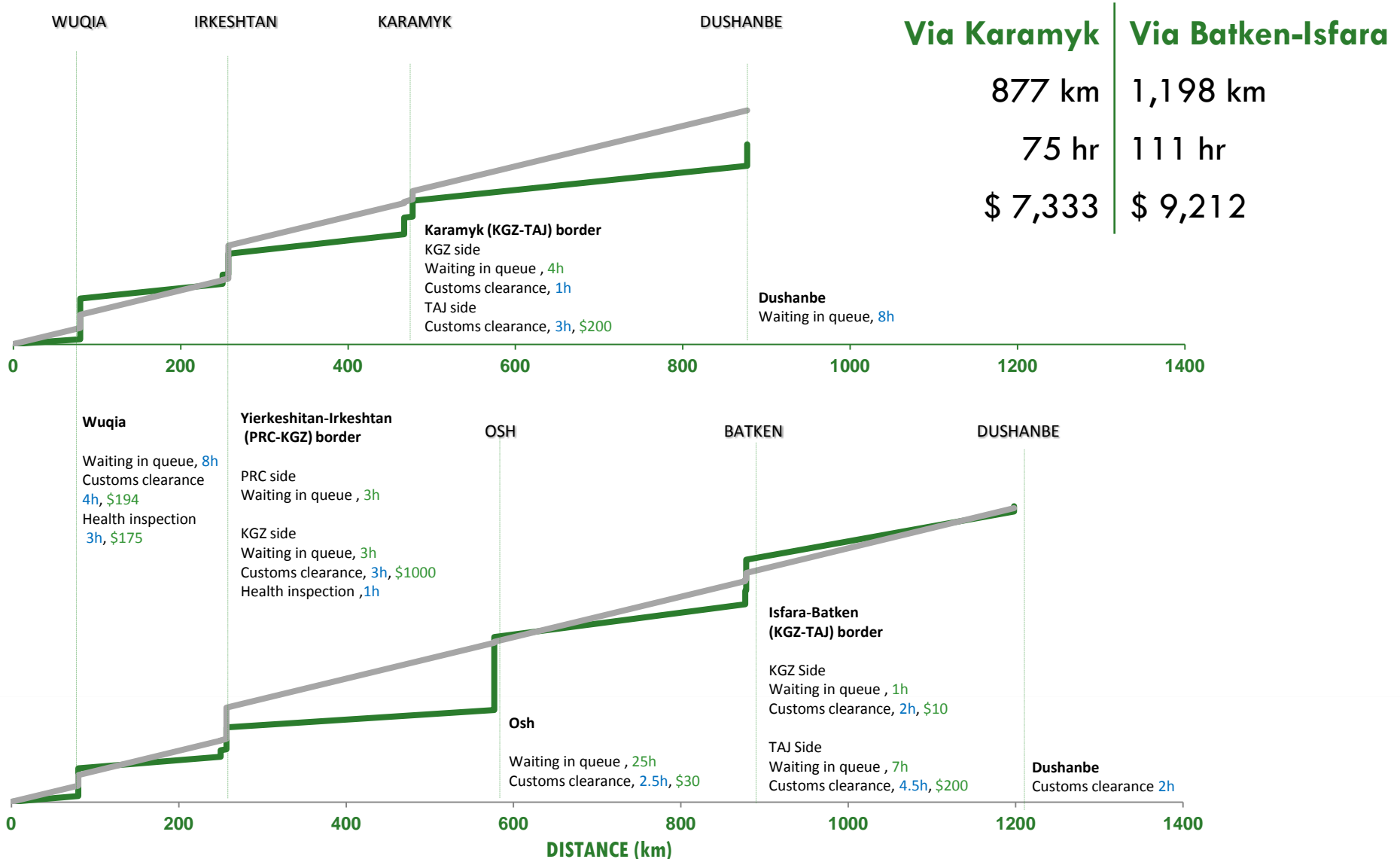


# Institutional Arrangements: CPMM Partners

The screenshot displays the CAREC website interface. At the top, it features a navigation bar with the slogan "Together we will reduce the time and distance!" and the text "CAREC Federation of Carrier and Forwarder Associations". Below this is a main menu with options like HOME, ABOUT CFCFA, ABOUT CAREC, CPMM, ASSOCIATIONS, NEWS, EVENTS, USEFUL INFORMATION, and CONTACTS. On the left side, there are several vertical menu items including "Directory of transport and forwarding companies", "Directory of insurance companies", "Directory of customs brokers", "Directory of logistics centers and warehouses", "Register the company", "Write a review on border crossing points in CAREC countries", "Read reviews about border crossing points", and "Cost of petrol and fuel in CAREC countries". The central part of the page shows a row of national flags representing CAREC member countries, followed by a large group photograph of CAREC members. To the right of the photo is a "Last news" section with several headlines, such as "Invitation for Regional Conference/Forum for Freight Forwarders, Multimodal Transport Operators and Logistics Service Providers" and "Zhengzhou, China's fastest growing cargo airport, to test Leipzig as hub". On the far right, there are two vertical banners: one for "ASSOCIATION FOR DEVELOPMENT OF BUSINESS LOGISTICS" and another for "Transport & Logistics Information Portal Logistika.uz".

# Time/Cost-Distance (TCD) Methodology

Sample TCD: Kashi (PRC) — Dushanbe (TAJ)





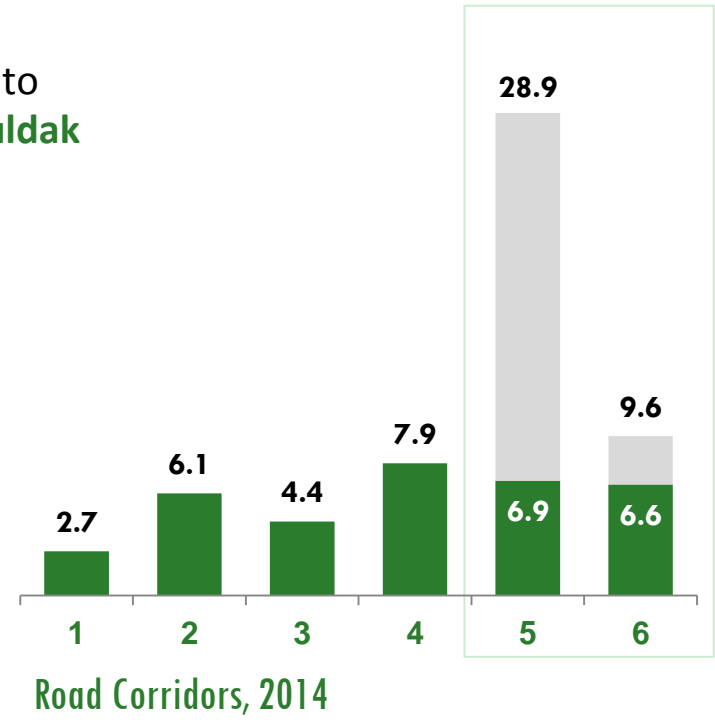
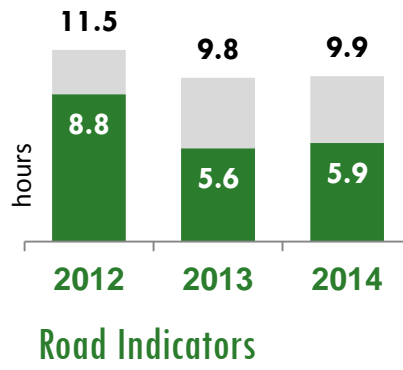
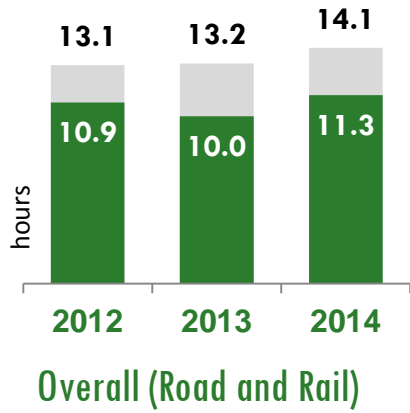
# Trade Facilitation Indicators (TFIs)

			2012	2013	2014
<b>TFI1</b>	Time to Clear a BCP in hours	Avg	10.9	10.0	14.1
		Median	4.2	5.3	5.8
<b>TFI2</b>	Cost Incurred at BCP in US\$	Avg	157	235	172
		Median	76	120	125
<b>TFI3</b>	Cost Incurred to Travel a Corridor Section in US\$, per 500km per 20 ton	Avg	941	1,467	1,360
		Median	598	1,018	937
<b>TFI4</b>	Speed to Travel on CAREC Corridors (SWD) in kph	Avg	23.0	20.0	20.8
		Median	25.0	18.2	20.6
	Speed without Delay (SWOD) in kph	Avg	38.1	36.3	40.2
		Median	35.5	34.2	41.4

# TFI1: Time to Clear Borders Pakistan Data Scenario

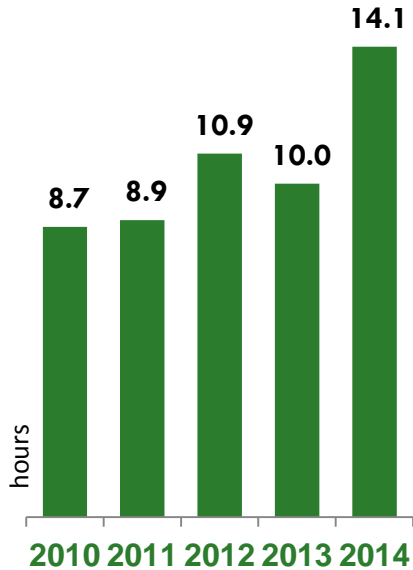
- Among indicators, only **TFI1 (time to clear a BCP)** for **road** was severely affected by the inclusion of Pakistan data in to the CPMM sample (particularly BCPs along **Corridors 5 and 6**).
- This is largely due to long border crossing from Pakistan to Afghanistan at **Torkham-Peshawar** and **Chaman-Spin Buldak**

Without Pakistan   
With Pakistan\* 



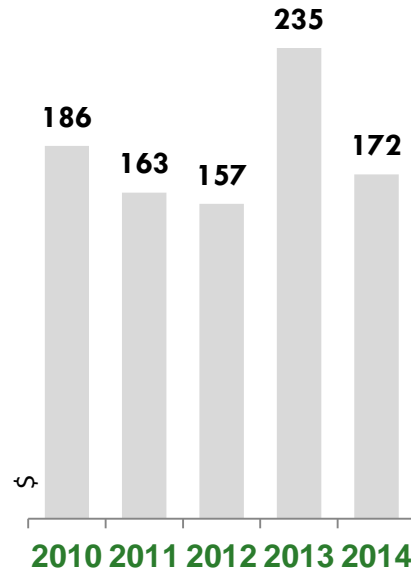
\*PIFFA submissions since 2012 enables CPMM to estimate Pakistan data prior to its formal inclusion into CAREC corridors in 2014

# TFI Trends 2010-2014



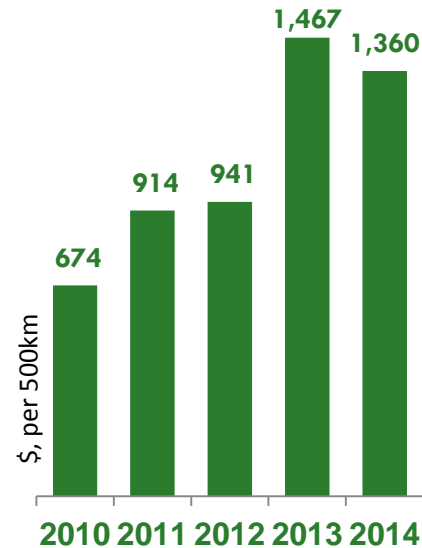
## TFI1

Time to Clear a BCP



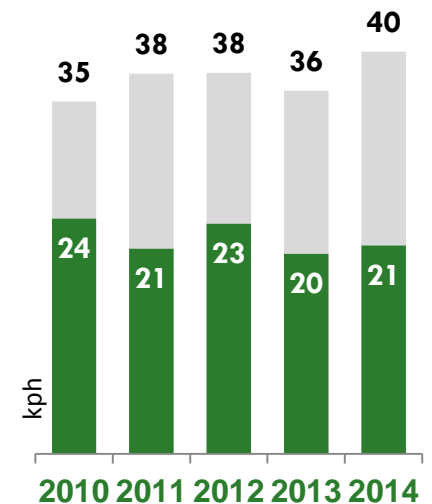
## TFI2

Cost Incurred at BCP



## TFI3

Cost Incurred to Travel a Corridor Section

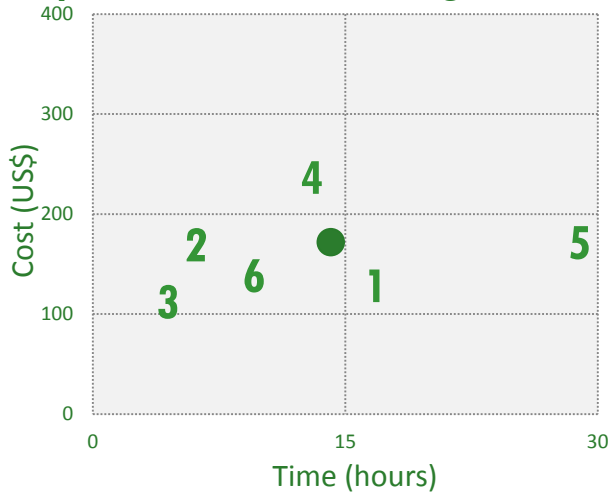


## TFI4

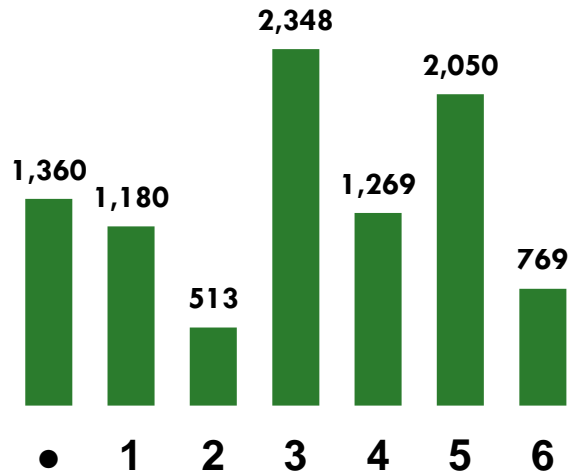
Speed to Travel on CAREC Corridors (SWD)

# Corridor Comparison

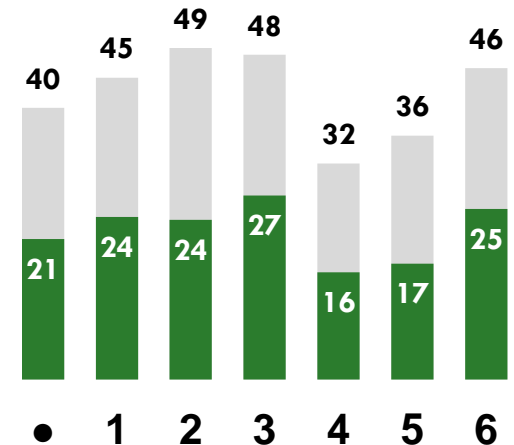
**Time (TFI1) and Cost (TFI2) spent at border crossing**



**TFI3 Cost Incurred to travel a corridor section, per 500km, in \$**



**Speed Indicators (TFI4) in kph**



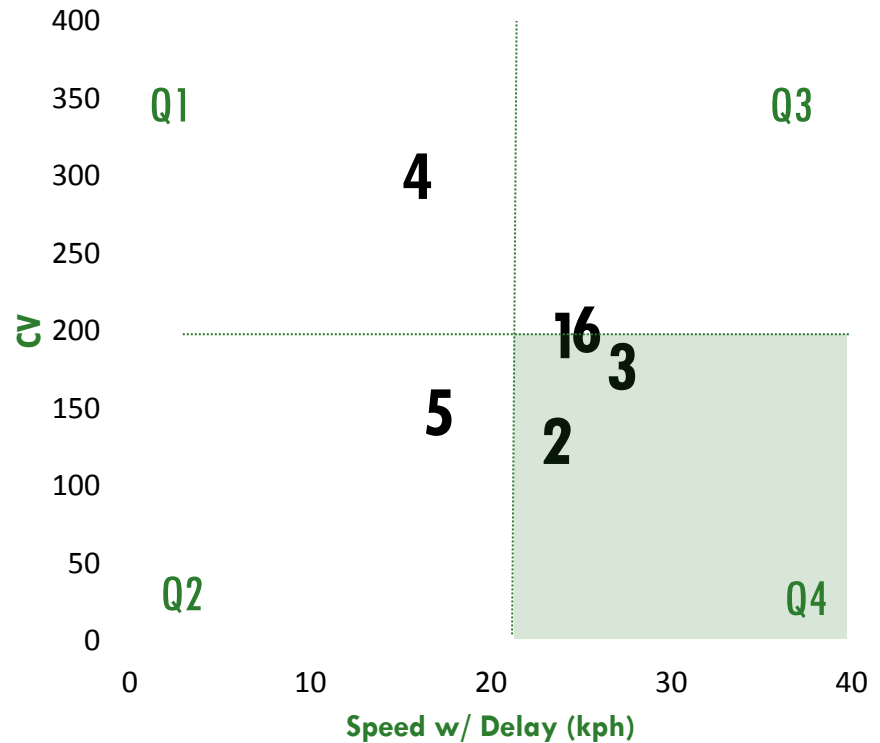
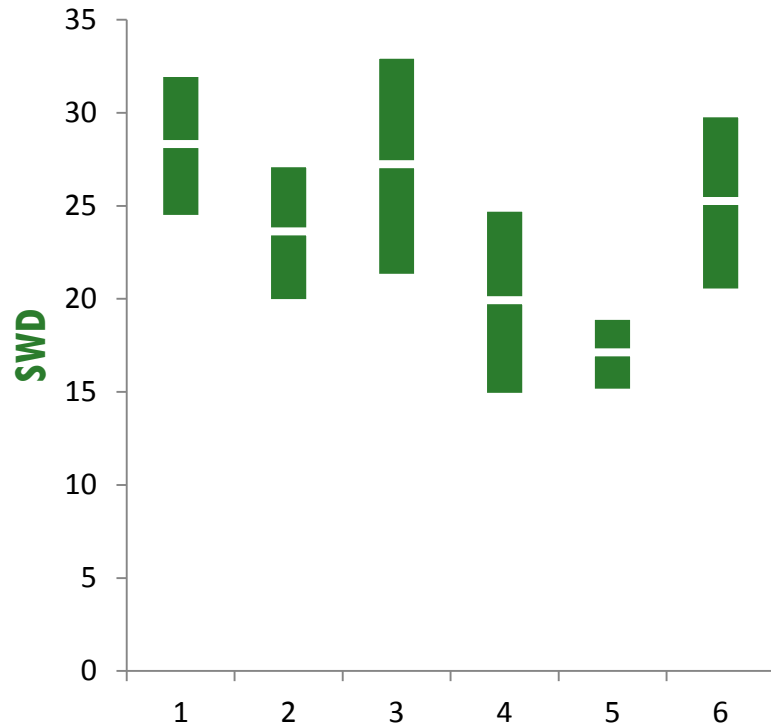
- Compared to other corridors, Corridor 3 averaged the least cost and least delay to cross a border.

- However, data suggest that it is substantially cheaper to travel along Corridor 2.

- In terms of speed, Corridors 1, 2, 3 and 6 SWOD estimates are above average. However, Corridor 3 reveal efficient border crossing with a narrow SWOD-SWD gap percentage.



# Variation in Sample



- The Coefficient of Variation (CV) measures uncertainty, reliability, and predictability.
- The quadrants provide the relative efficiency of corridors in terms of SWD.

# CAREC BCPs

- CPMM also highlights BCPs with lengthy delays (in hours) during border clearance procedures

## OUTBOUND TRAFFIC

<b>Chaman</b>	PAK	5,6	36.0
<b>Peshawar</b>	PAK	5,6	33.9
<b>Khorgos</b>	PRC	1	19.3
<b>Erenhot</b>	PRC	4	15.3
<b>Tazhen</b>	KAZ	2,6	7.3
<b>Dautota</b>	UZB	2,6	6.9
<b>Yallama</b>	UZB	3,6	6.4
<b>Alat</b>	UZB	2,3	6.2
<b>Sarabs</b>	TKM	3	6.1
<b>Dustlik</b>	UZB	2	6.0
<b>Sarasiya</b>	UZB	3	5.7
<b>Farap</b>	TKM	2,3	5.5
<b>Merke</b>	KAZ	1,3	5.3

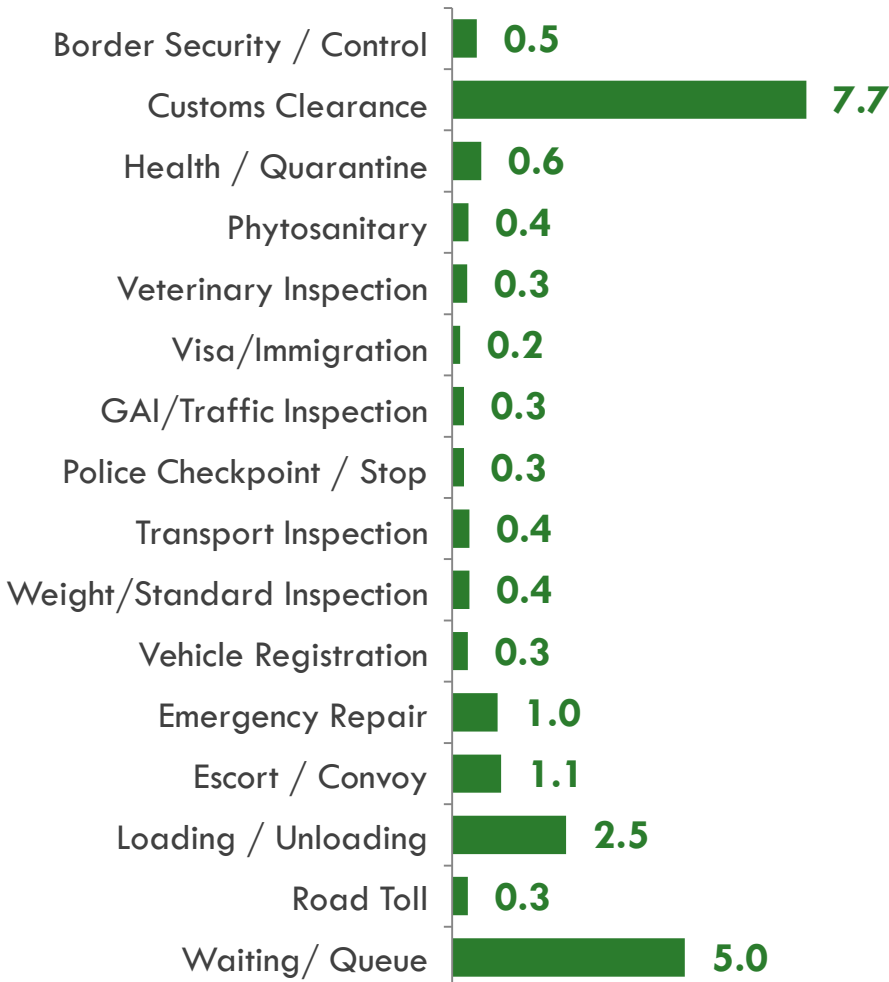
## INBOUND TRAFFIC

<b>Spin Buldak</b>	AFG	5,6	60.0
<b>Torkham</b>	AFG	5,6	36.9
<b>Peshawar</b>	PAK	5,6	25.2
<b>Khorgos</b>	PRC	1	13.5
<b>Sherkhan Bandar</b>	AFG	2,5,6	10.6
<b>Zamyn Uud</b>	MON	4	8.8
<b>Tazhen</b>	KAZ	2,6	7.8
<b>Konysbayeva</b>	KAZ	3,6	7.5
<b>Farap</b>	TKM	2,3	7.3
<b>Dustlik</b>	UZB	2	7.2
<b>Khorgos</b>	KAZ	1	6.8
<b>Fotehobod</b>	TAJ	2,3,6	6.6
<b>Chaldovar</b>	KGZ	1,3	6.5

# Delays at the border

## Average duration of delays at BCPs

2014, Road transport, in hours



Among activities with high duration, **customs clearance** stands out. In 2014, the average delay for customs clearance rose to 7.7 due to lengthy procedures at Chaman and Peshawar.

**Waiting in queues and loading/unloading** are very time-consuming, and are frequently experienced during shipments, specifically in these BCPs, when entering neighboring countries

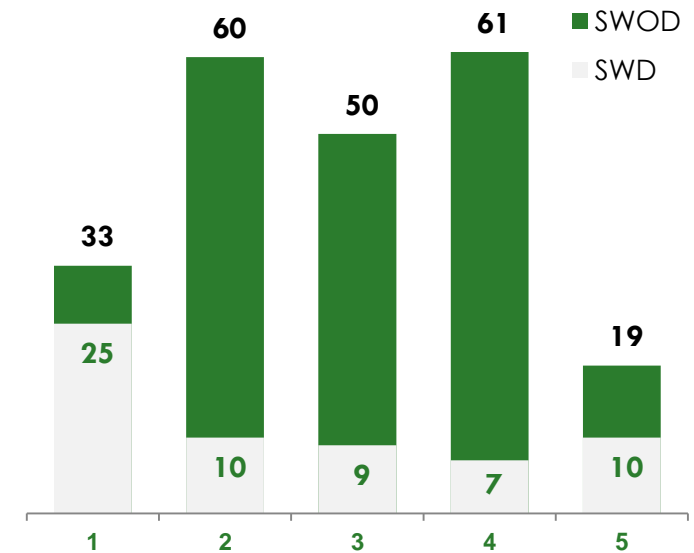
- Peshawar (PAK), 12 hrs
- Chaman (PAK), 12 hrs
- Khorgos (PRC), 11 hrs

# Rail Transport Efficiency

- Activities time is very high, constituting about 80%, in conventional trains moving along CAREC Corridor 1 and 4, hence the huge gap in the SWOD and SWD estimates.
- Despite the slow movement during transit, the express train service from Chongqing-Duisburg (**Route 1**) crosses borders faster and registers faster SWDs.

Long delays at the border are often due to:

- Unavailability of wagons
- Waiting time for Reloading
- Restriction on Entry
- Other common reasons such as 'Transload at Gauge Change Point', and 'Waiting for Priority Trains to Pass' are important, but there is limited intervention possible.



## Route 1: Chongqing-Duisburg Express Train

Route 2: Chongqing-Almaty

Route 3: Urumqi-Almaty

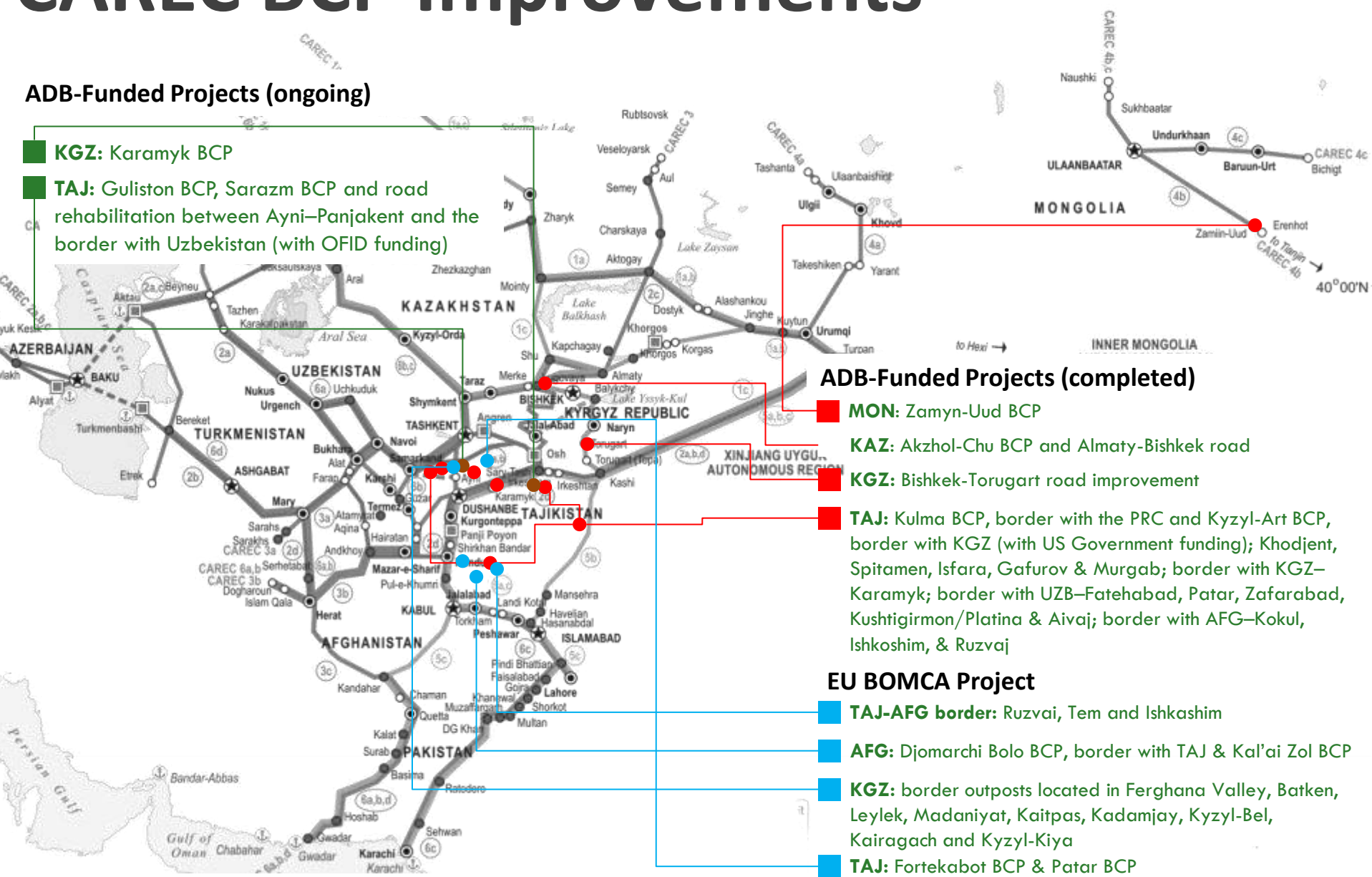
Route 4: Chongqing-Ulaan Baatar

Route 5: Tianjin-Ulaan Baatar

# CAREC BCP Improvements

## ADB-Funded Projects (ongoing)

- **KGZ:** Karamyk BCP
- **TAJ:** Guliston BCP, Sarazm BCP and road rehabilitation between Ayni–Panjakent and the border with Uzbekistan (with OFID funding)



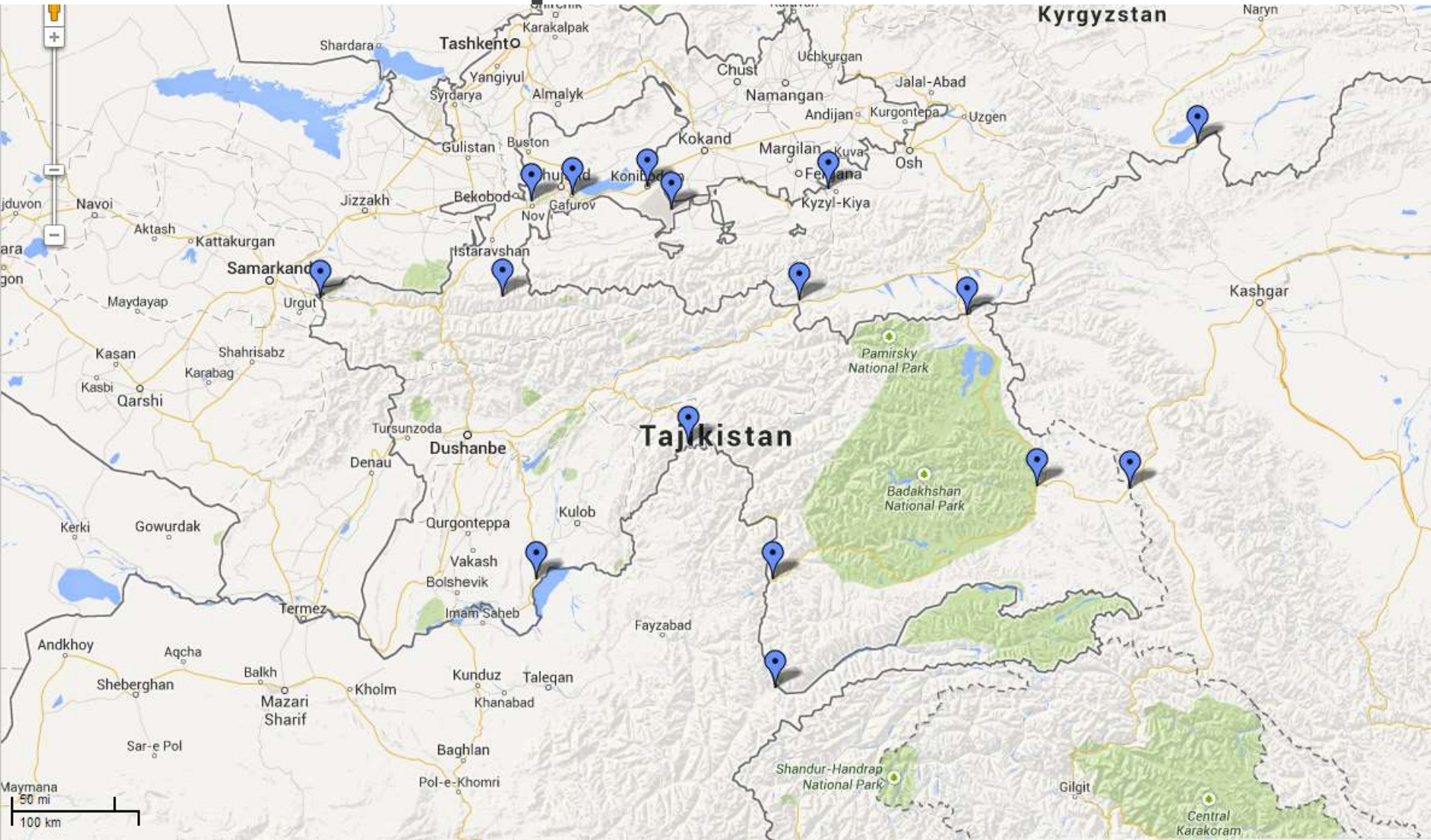
## ADB-Funded Projects (completed)

- **MON:** Zamyun-Uud BCP
- **KAZ:** Akzhol-Chu BCP and Almaty-Bishkek road
- **KGZ:** Bishkek-Torugart road improvement
- **TAJ:** Kulma BCP, border with the PRC and Kyzyl-Art BCP, border with KGZ (with US Government funding); Khodjent, Spitamen, Isfara, Gafurov & Murgab; border with KGZ–Karamyk; border with UZB–Fatehabad, Patar, Zafarabad, Kushtigirmon/Platina & Aivaj; border with AFG–Kokul, Ishkoshim, & Ruzvaj

## EU BOMCA Project

- **TAJ-AFG border:** Ruzvaj, Tem and Ishkashim
- **AFG:** Djomarchi Bolo BCP, border with TAJ & Kal'ai Zol BCP
- **KGZ:** border outposts located in Ferghana Valley, Batken, Leylek, Madaniyat, Kaitpas, Kadamjay, Kyzyl-Bel, Kairagach and Kyzyl-Kiya
- **TAJ:** Fortekabot BCP & Patar BCP

# CAREC BCP Improvements



# Examining the Competitive Environment

- By route – some options not accessible to all
- By mode – comparative advantages don't always apply
- By country – some countries discourage transit traffic

# Looking Ahead

## Fine-tuning CPMM

- Expanding coverage of railway movements
- Examining how best to measure and monitor performance of trade logistics services

## Reducing Delays at BCPs

- Inviting proposals for new RIBS projects
- Replicating best practice (JCC, express rail experience)

## Improving Accessibility