CARECCPMM Corridor Performance Measurement and Monitoring

CAREC SENIOR OFFICIALS' MEETING 27-28 June 2014 | Manila, Philippines

Transport Corridors & CPMM



What is CPMM?

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

Institutional Arrangements: CPMM Partners



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Time/Cost-Distance (TCD) Methodology

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



Trade Facilitation Indicators (TFIs)

		_	2010	2011	2012	2013
TFII	Time to Clear a BCP	Avg Median	8.7	7.9	10.9	10.0
TFI2	Cost Incurred at BCP		186 114	156 90	157 76	235 120
TFI3	Cost Incurred to Travel a Corridor Section in US\$, per 500km per 20 ton		712 405	959 637	999 621	1,482 1,003
TFI4	Speed to Travel on CAREC Corridors (SWD)		23.5 22.6	21.9 20.2	22.9 25.0	19.9 18.2
	Speed without Delay (SWOD) in kph		35.2 37.5	38.0 39.9	37.8 35.5	36.1 34.2

TFI Trends 2010-2013







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)

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Corridor Comparison



- Compared to other corridors, Corridor 3 averaged the least cost to cross a border. Others have similar values with varying average time to cross a border.
- However, data suggest that it is cheaper to travel along Corridor 2, while activities are less costly in Corridor 3.
- In terms of speed, Corridors 1, 2, and 6 SWOD estimates are above average. However, Corridor 6 reveal efficient border crossing with a narrow SWOD-SWD gap percentage.

Variation in Sample



- The Coefficient of Variation (CV) measures the uncertainty in the speed estimates, and lower values are preferred which means delivery time is consistent.
- 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

INBOUND TRAFFIC

Dostyk	KAZ	52.1
Khorgos	KAZ	11.2
Yallama	UZB	9.4
Sarahs	TKM	8.8
Tazhen	KAZ	8.6
Sherkhan Bandar	AFG	7.6
Irkeshtan	KGZ	7.2
Zamyn Uud	MON	7.2
Keles	UZB	6.9
Konysbayeva	KAZ	6.8
Chaldovar	KGZ	6.6
Farap	ТКМ	6.6
Dautota	UZB	6.1
Dusti	TAJ	5.3
Fotehobod	TAJ	5.1

OUTBOUND TRAFFIC

Khorgos	PRC	28.2
Dautota	UZB	9.6
Sarahs	ТКМ	8.7
Konysbayeva	KAZ	8.6
Tazhen	KAZ	8.4
Yallama	UZB	8.0
Alat	UZB	7.4
Farap	ТКМ	7.3
Sarasiya	UZB	6.9
Oibek	UZB	6.6
Merke	KAZ	6.5
Erenhot	PRC	5.9
Keles	UZB	5.7
Kurmangazy	KAZ	5.4
Irkeshtan	PRC	5.2

Delays at the border

Average duration of delays at BCPs

2013, Road transport, in hours 0.5 **Border Security / Control** 0.7 Customs (Single Window) 1.9 **Customs** Clearance 0.5 Health / Quarantine 0.3 **Phytosanitary** 0.3 **Veterinary Inspection** 0.2 Visa/Immigration 0.3 **GAI/Traffic Inspection** 0.3 **Police Checkpoint / Stop** 0.4 **Transport Inspection** Weight/Standard Inspection 0.4 0.2 Vehicle Registration **Emergency Repair** 1.5 Escort / Convoy 0.9 Loading / Unloading Road Toll 0.3 Waiting/Queue

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

- Khorgos (PRC), outbound, 32 hrs
- Karasu (KAZ), inbound, 24 hrs
- Nizhni Pianj (TAJ), outbound, 17 hrs

Among activities with high costs, only **customs clearance fees** are regularly encountered during border crossing. Costs for emergency repairs are rarely encountered, while escort/convoy services fees depends on the area of shipment.

3.0

4.6

11 **CAREC BCP** Improvements Naushki **ADB-Funded Projects (ongoing)** Sukhbaatar Ruhlsovs Undurkhaan 60 KGZ: Karamyk BCP Veseloyarsk ULAANBAATAR Banuun-Hr l Ilaanhaishin TAJ: Guliston BCP, Sarazm BCP and road rehabilitation between Same MONGOLIA Ayni-Panjakent and the border with Uzbekistan (with OFID Zharvk Charskaya Zamiin-U funding) Lake Zavsan 48 (a)Aktogay Takeshiken OO Zhezkazohan Yarant 40°00'N Mointy Alashankou KAZAKHSTAN Lake Balkhash Jinghe JUrumgi Kyzyl-Ord MOO Korgas INNER MONGOLIA ZERBAIJAN to Hexi -JZBEKISTAN BAKU **ADB-Funded Projects (completed)** Nokus ssyk-Kul Urgench MON: Zamyn-Uud BCP REPUBLIC TASHKENT Turkmenbashi TURKMENISTAN KAZ: Akzhol-Chu BCP and Almaty-Bishkek road XINJIANG UYGU AUTONOMOUS REC ASHGABAT KGZ: Torugart BCP and Bishkek-Torugart road improvement USHANBE TAJIKISTAN 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 & Guliston; border with UZB— Fatehabad, Patar, Zafarabad, Kushtigirmon/Platina & Aivaj; border with AFG—Kokul, Ishkoshim, & Ruzvaj ISLAMABAD FGHANISTA **EU BOMCA Project** Kandaha TAJ-AFG border: Ruzvai, Tem and Ishkashim DG. AFG: Djomarchi Bolo BCP, border with TAJ & Kal'ai Zol BCP Surah J Bandar-Abbas KGZ: border outposts located in Ferghana Valley, Batken, Leylek, Madaniyat, Kaitpas, Kadamjay, Kyzyl-Bel, Kairagach and Kyzyl-Kiya Gulf of TAJ: Fortekabot BCP & Patar BCP Oman Karachi

CAREC Corridor Performance Measurement and Monitoring

2013 Annual Report

CAREC BCP Improvements



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Looking Ahead

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