### CARECCPMM Corridor Performance Measurement and Monitoring

CHINA

#### CAREC SENIOR OFFICIALS' MEETING

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EGYPT

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**CAREC Corridor Performance Measurement and Monitoring** 

# **Transport Corridors and CPMM**



### Institutional Arrangements: CPMM Partners



Country	Associations
Afghanistan	AAFFCO
Azerbaijan	ABADA
Kazakhstan	KFFA
	KAZATO
Kyrgyz Republic	KGZ FOA
<u>.</u>	ASMAP / AIA
Mongolia	MNCCI / NTTFC
100	NARTAM
Pakistan	PIFFA
PRC	IMLA
	XULA
Tajikistan	ABBAT
Uzbekistan	ADBL
-	AIRCUZ

For more information, visit http://cfcfa.net/

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# Time/Cost-Distance (TCD) Methodology

#### Sample TCD from Topa (PRC) – Bishkek (KGZ) in 2010



These TCD observations are collected on a monthly basis from selected CFCFA member associations since 2009

# **Trade Facilitation Indicators (TFIs)**

		2011			2012		
	Indicator	Mean	Median	Margin*	Mean	Median	Margin*
TFI1	Time to Clear a Border Crossing Point, in hours	7.9	4.1	± 0.5	10.9↑	4.2	± 0.7
TFI2	Cost Incurred at Border Crossing Clearance, in US\$	156	90	± 4	157	76↓	± 6
TFI3	Cost Incurred to Travel a Corridor Section, in US\$, per 500km per 20 ton	959	637	± 27	999 <b>↑</b>	621	± 43
TFI4	Speed to Travel on CAREC Corridors, in kph (SWD)	21.9	20.2	± 1.6	22.9 <b>↑</b>	25.0 <b>个</b>	± 0.4
SWOD	Speed without Delay, in kph	38.0	39.9	± 2.1	37.8	35.5↓	± 0.6

\*Note: "Margin" refers to absolute margin of error, at 95% level of confidence, in the mean estimates.

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## **TFI Trends**

## Time to Clear a BCP 2010-2012 in hours



## **TFI Highlights**

Corridor 1 suffered the most delays specifically at While some of the indicators sustained Dostyk-Alashankou (KAZ-PRC) and Khorgostheir momentum from the previous year, Khorgos (KAZ-PRC) due to the negative effect TFI1 showed serious deterioration in 2012. of Customs Union to non-member countries. ULAANBAATAR Serious delays at the border were observed in BCPs along Corridors 1, 2, and 4, where border clearance took an MONGOL average of more than 10 hours. Hovd Zamyn-Uu Charskaya KAZAKHSTAN 00 Corridor 4 suffered from serious delays in rail Kyzyl-Orda ZERBAIJAN transport at Erenhot-Zamyn Uud (PRC-MON) due to change in railway gauge when entering the opposite side of the border. **LASHKEN** Waiting in gueues contributed the most to delays In Corridor 5, trucks were held up at Irkeshtan (PRC) due to adverse weather and at Karamik (KGZ) because of temporary closure of the border to transit shipments. 87 The most notable increase happened in Corridor 1, especially via Alashankou-Dostyk and Time to Clear a BCP Khorgos-Khorgas. Unfortunately, these are also the gateways of goods into Central Asia. The long crossing time at these BCPs resulted in the

nika for TELL in 2012

## **TFI Trends**

## Cost Incurred at BCPs 2010-2012 in \$



The trend of average cost incurred at border crossing clearance (TFI2) remained **relatively constant** in 2012.

Kos Aral QO Novomarkovka

**Dostyk-Ala Shankou (KAZ-PRC)**,along Corridor 1, remained the most expensive BCPs to cross per crossing when entering the opposite side of the border.

Samples show that **customs clearance fees at Dostyk** are expensive in comparison with other BCPs. Other samples indicate **high costs in change of railways gauge**.



#### **Cost Incurred at BCPs**

Zamyn-Uud (MON) is particularly expensive due to high customs clearance cost.

MONGO

Hovd

00

ONaushk

ULAANBAATAR

Zamyn-Uu

Suhbaatiin

Meanwhile, improvements are seen in BCPs along Corridors 4, 5 and 6.

#### XINJIANG UYGUR

Aktogar

The average was relatively unchanged. Firstly, the TFI2 for Corridor 1 remained relatively constant. Secondly, while Corridors 3 and 4 experienced an increase in cost, Corridors 2,5 and 6 showed a reduction. Thus at an aggregate level, TFI2 demonstrated a stable trend between 2011 and 2012.

## **TFI Highlights**

## **TFI Trends**

### Cost Incurred to Travel a Corridor Section 2010-2012 in \$, per 500-km, per 20-ton



**TFI Highlights** 



### **Cost Incurred to Travel a Corridor Section**

## **TFI Trends**

CPMM 2012

### Speed to Travel on CAREC Corridors 2010-2012 in kph



## **TFI Highlights**



### Speed to Travel on CAREC Corridors

# **Detailed Corridor Data**

\$22

+07

#### **CPMM also measures and provides**

11: Time to C

20.6

21.2

164.2

707.3

416.4

28.4

22.4

31.3

39.6

37.5

128.2 135.9 571.5

660.6

444.0

25.8

24.7

26.6

53.9

31.6

- statistics, data trends, trade facilitation indicators
- for corridors, sub-corridors and key BCPs
  Trade Facilitation Indicators
- for road and rail transport

2010 2011

20

600

400

30 15

	1 2 3 4 1 2 3 4			2010	2011	Q1	Q2
hours			Overall	17.9	8.5	12.1	21.
_	$\sim$	문	Road	12.7	6.2	3.4	15
		-	Rail	24.5	21.2	21.9	23
		_					
_		~	Overall	158.6	155.9	224.5	159.
		Ē	Road	174.1	142.9	302.5	209
USŞ	/		Rail	142.7	235.0	168.7	136
		_					
/			Overall	636.6	802.9	836.1	597.
	Ē	Road	744.2	909.0	846.4	802	
		<b>—</b>	Rail	503.0	477.0	813.5	477
uss	$\sim$	_					
			Overall	28.8	25.6	34.9	29.
-		Ē	Road	29.5	29.9	45.0	25
			Rail	28.4	21.9	10.1	29
		_					
		-	Overall	39.2	44.6	42.1	37.
1 koh		S S	Road	48.6	52.1	54.8	43
		8	Rail	33.8	38.0	11.1	35
				_			
	Lege	Leger	xd:	2010	2011		
				Read	Rall		



±05

+05

3.8

14.0

1.3

± 0.7

2.0

8.8 12.0

12.7 6.5

±2.0

±0.6

2011

5.5

13.6

44.7

24.7

699.1

540.4

25.9

30.2

23.4

55.0

35.2

### **Corridor Comparison**



#### TFI3 Cost Incurred to travel a corridor section per 500km



#### 

Compared to other corridors, Corridor 6 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 4.

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

#### Time (TFI1) and Cost (TFI2) spent at border crossing, 2012 Speed Indicators (TFI4), 2012

## 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.

# **Border Crossing Delays and Cost**

#### Average Duration and Cost spent at BCPs

2012 Report, Road Transport	Duration (hrs)	Cost (US\$)
A. Border Security / Control	0.5	22
B. Customs (Single Window)	0.4	30
C. Customs Clearance	1.9	136
D. Health / Quarantine	0.7	20
E. Phytosanitary	0.3	9
F. Veterinary Inspection	0.3	9
G. Visa/Immigration	0.3	55
H. GAI/Traffic Inspection	0.2	8
I. Police Checkpoint / Stop	0.2	8
J. Transport Inspection	0.3	24
K. Weight/Standard Inspection	0.4	13
L. Vehicle Registration	0.2	10
M. Emergency Repair	1.8	133
N. Escort / Convoy	1.2	134
O. Loading / Unloading	3.5	94
P. Road Toll	0.3	49
Q. Waiting/ Queue 11.0		60

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

- (1) Alashankou (PRC) / Dostyk (KAZ)
- (2) Torugart (PRC)
- (3) Khorgos (PRC)
- (4) Tazhen (KAZ)
- (5) Karamik (KGZ)
- (6) Irkeshtan (PRC)
- (7) Ayraton (UZB)

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.

# **Policy Implications**



# **Hypothesis Tests**

#### **Customs Union**

#### Average Duration at BCPs 2012 Report, Road Transport, in hours



According to CPMM data, total border clearance duration in KAZ-RUS BCPs clearly dropped, in either direction, after the implementation of Customs Union.

However, significant increase in border-crossing duration was also observed when entering KAZ from a non-CU member country (NCU) from **9 to 22 hours**.

This overall increase is mainly due to increase in the following activities:

- waiting in queues
- customs clearance
- health/quarantine
- transport inspection

# **Hypothesis Tests**

#### **Use of TIR Carnets**

#### Average Duration and Cost of Customs Clearance at BCPs 2012 Report



In 2012, the use of TIR carnets proved advantageous when shipments undergo custom related procedures, in terms of cost and time. Data suggest significant overall difference when compared to non-TIR cargoes.

#### **Perishable Goods**

Average Duration at BCPs 2012 Report, Road Transport, in hours



CPMM data also reveal that perishable goods spend significantly less time at BCPs during border crossing in road transport. However, evidence suggest that BCP clearance duration is not statistically significant for rail transport.

Cost data, on the other hand, reveal no significant difference between perishable and non-perishable goods.

# Looking Forward

- CPMM Manual
- Improvement of data collection on rail transport
- Training of CPMM coordinators to improve their skills and do their own analysis, and
- Enhancement of the CFCFA/CPMM website to be more user-friendly

# Thank You!

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