

Infrastructure development and trade facilitation in North and Central Asia

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Infrastructure development and trade facilitation toward SET

1. Promoting participation in the global value chain
2. Developing transport service sector
3. Renewable energy generation and export to South Asia



Promoting participation in global trade

More Trade and FDI

→ Diversification / Value Addition

Learning-by-doing effect
Export sophistication
Technical spill over

Institutional arrangement

- Trade Facilitation: paperless trade, SPS/TBT
- Regional Economic Partnership
- Transport Facilitation: vehicle standards

Physical Infrastructure

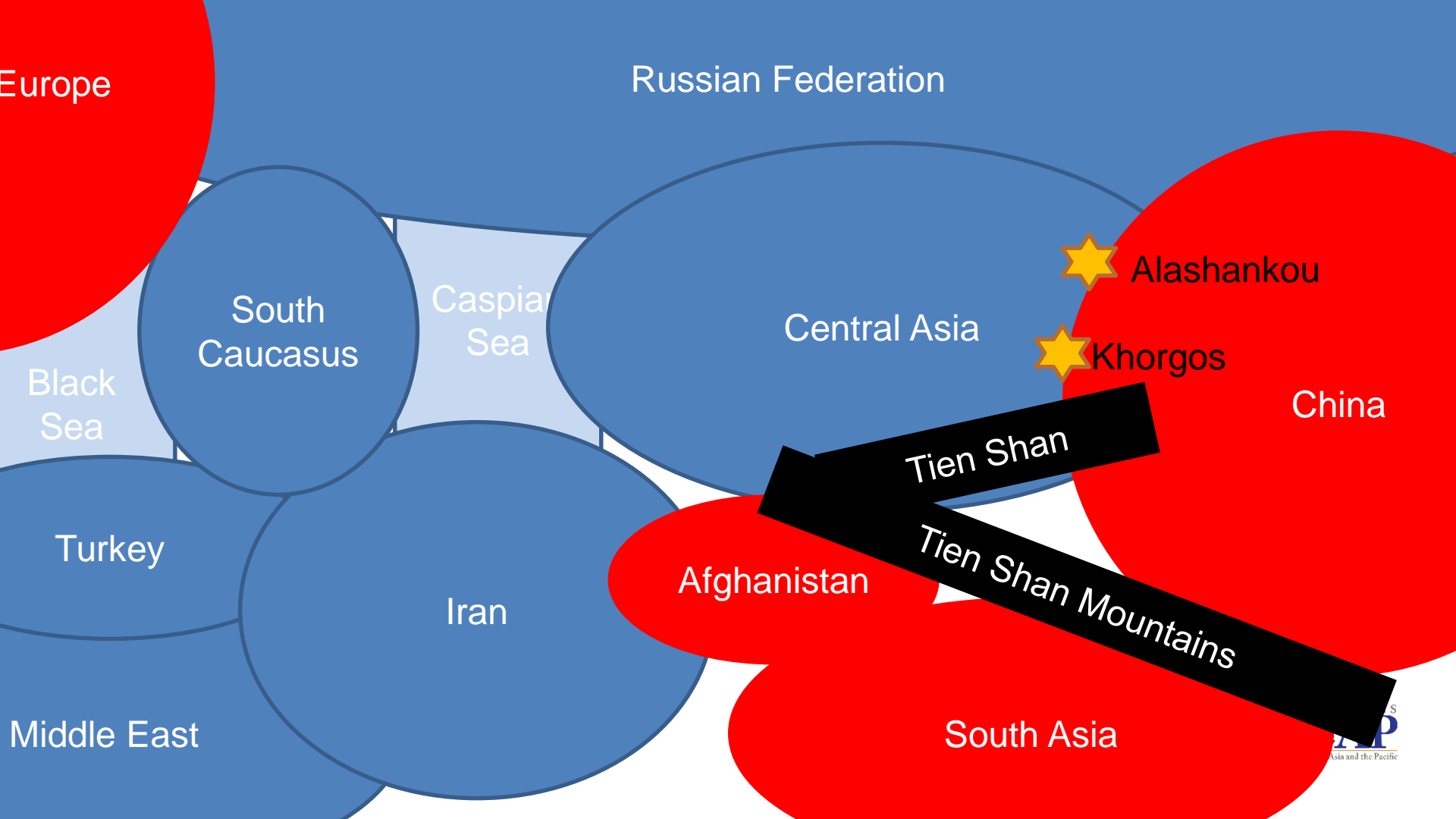
- Transport: roads, railways, dry ports, border controls
- ICT: fiber optics network, mobile network

Geographical and political constraints

Geopolitical constraints in NCA

- Landlocked
 - Mountainous
 - Caspian and Black Sea
 - Sparsely populated
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- Afghanistan
 - Kashmir region
 - Middle East

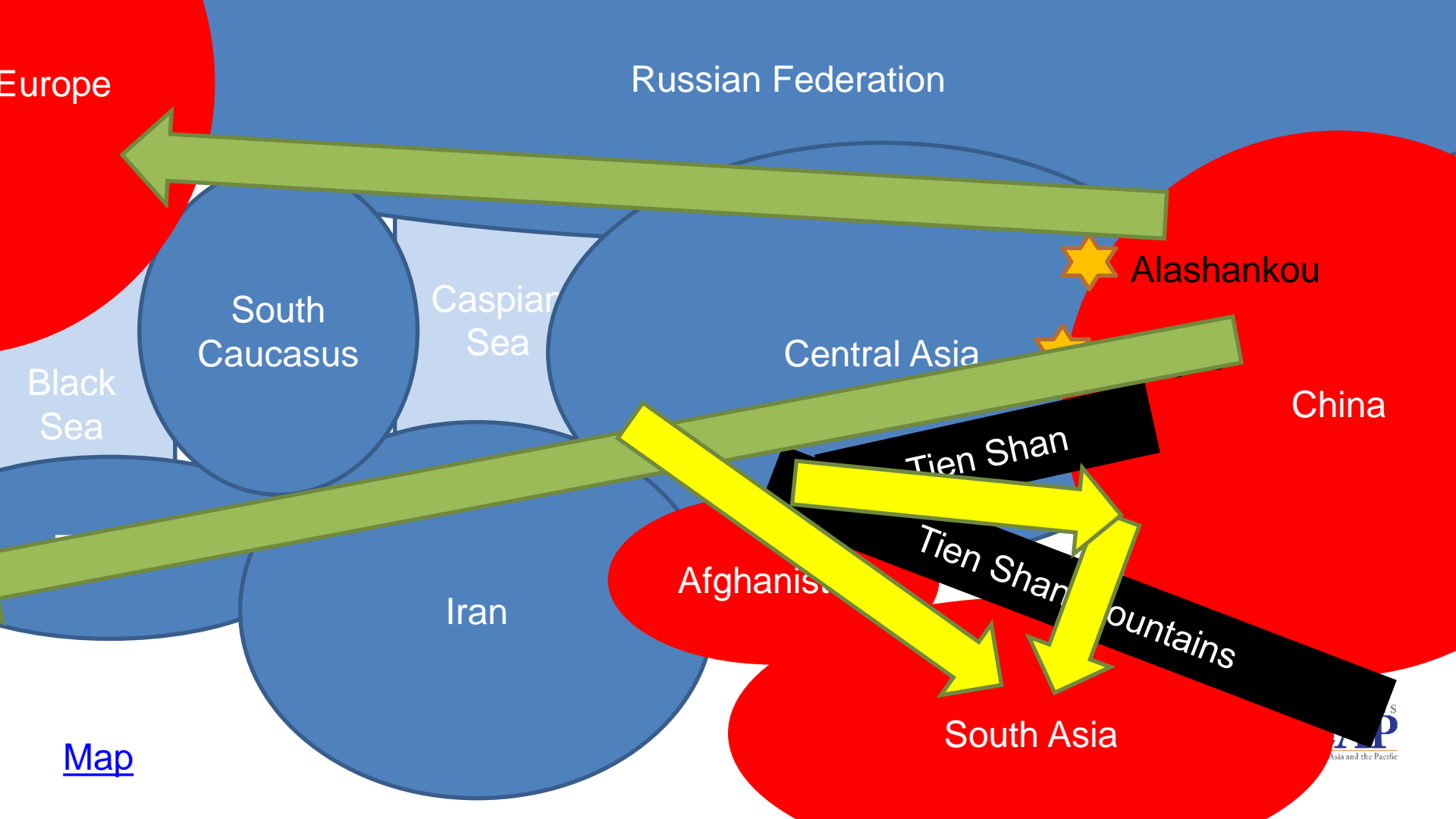
[Map](#)



Physical Infrastructure in NCA



[Map](#)



[Map](#)

Physical infrastructure: Transport

- **Southward transport routes are limited, which hinders export potential to South Asia.**
 - **Afghanistan**
 - No physical railway connection between Afghanistan and Central Asia
 - Regional Economic Cooperation Conference on Afghanistan (RECCA) and Istanbul Process
 - **Uzbekistan/Kyrgyzstan-China-Pakistan**
 - Missing links in road and railway in Kyrgyzstan
 - Kashmir region: Karakoram Highway

Physical infrastructure: Transport

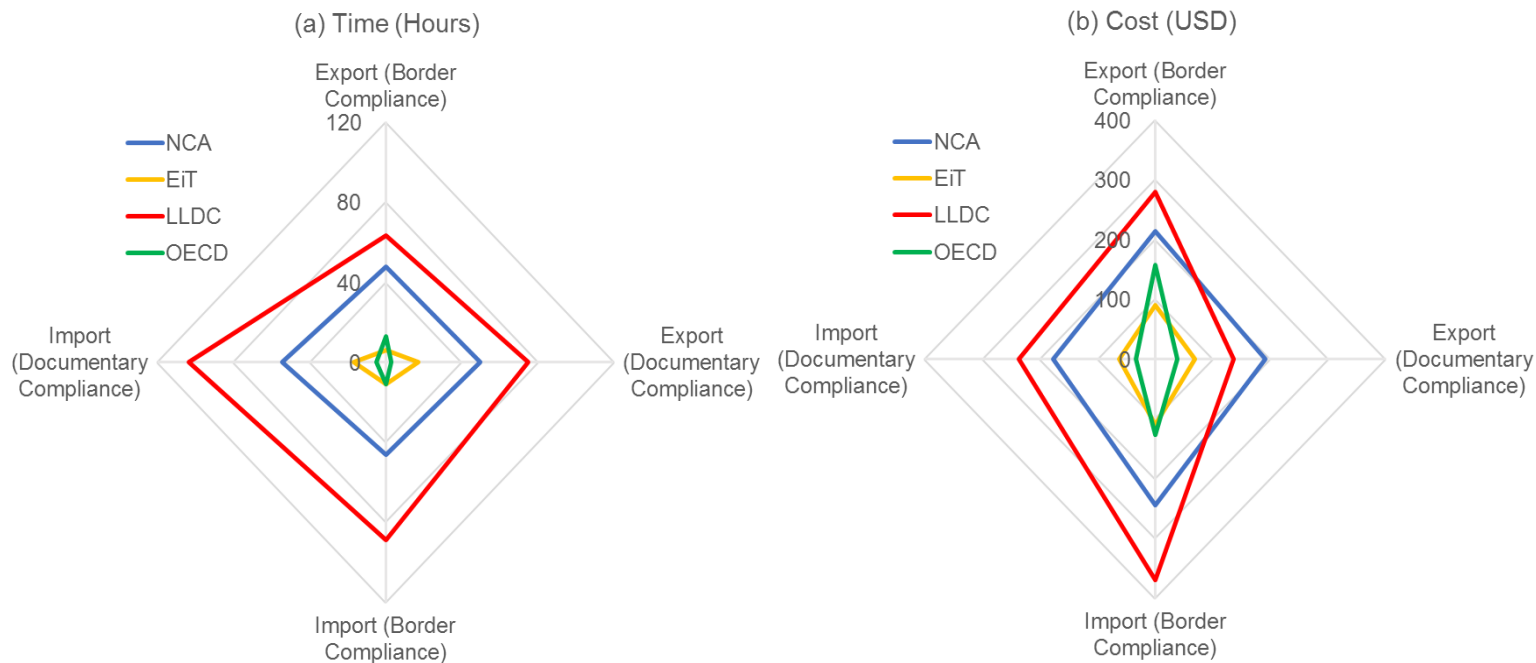
- **Transport connectivity with China**
 - New Eurasian Land Bridge: China-Kazakhstan-Russia-Europe
 - Road freight through Khorgos
 - Uzbekistan/Kyrgyzstan-China-Pakistan



Physical infrastructure: road quality

	Total (km)	Primary (%)	Class I (%)	Class-II (%)	Class III (%)	Below III (%)	Report Year
Armenia	966	0.0	15.2	74.6	6.0	4.1	2013
Azerbaijan	1,449	0.0	37.5	62.5	0.0	0.0	2017
Georgia	1,148	0.0	7.8	92.2	0.0	0.0	2017
Kazakhstan	12,828	0.0	4.3	42.1	49.8	3.7	2010
Kyrgyzstan	1,763	0.0	0.0	17.2	75.1	7.7	2013
Russian Federation	17,310	0.0	14.5	77.7	2.9	5.0	2017
Tajikistan	1,912	0.0	1.0	51.2	0.0	47.8	2015
Turkmenistan	2,204	0.0	2.7	0.0	96.2	1.1	2008
Uzbekistan	2,966	0.0	40.3	37.1	22.6	0.0	2008
South Caucasus	3563	0.0	21.9	75.3	1.6	1.1	
Central Asia	21673	0.0	8.5	35.9	48.5	7.1	
ESCAP aggregate	127,375	11.7	21.0	39.5	19.9	7.2	

Institutional arrangement: custom and border control

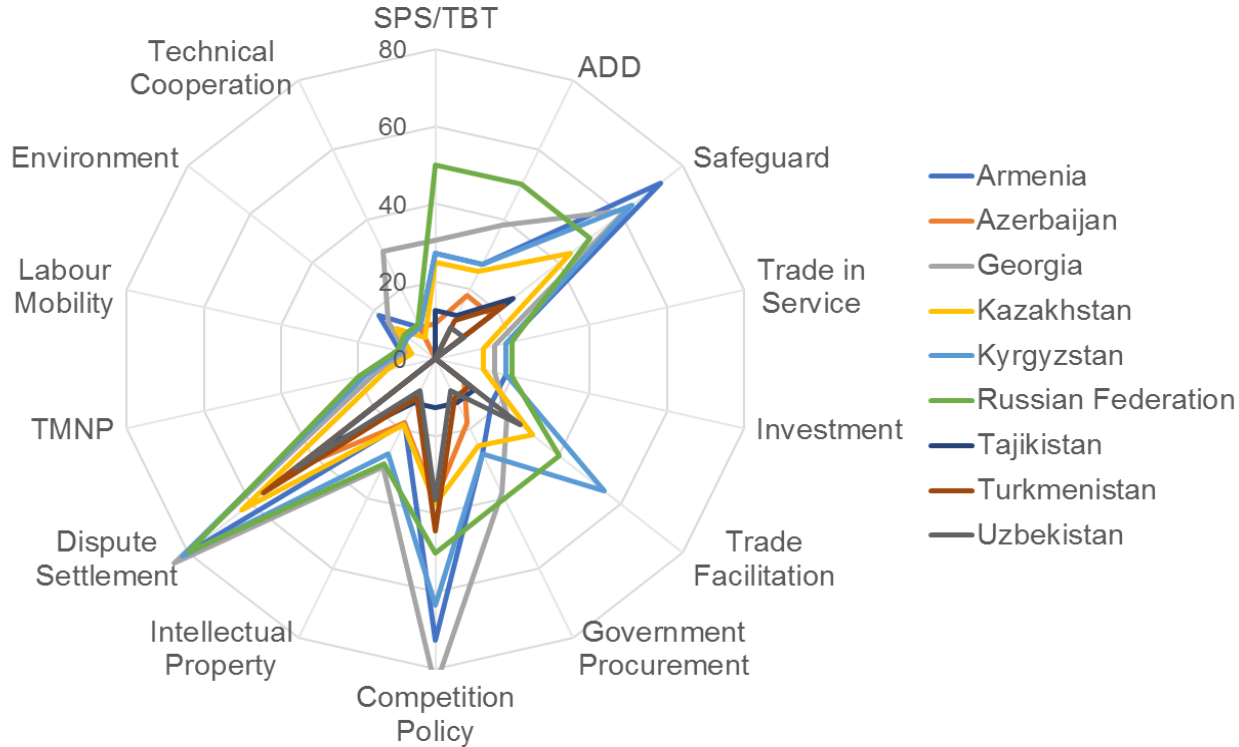


Institutional arrangement: PTA

	Number of preferential trade agreements	
	Bilateral	Plurilateral
Armenia	8 5 NCA, Moldova, Ukraine, Belarus	2 EAEU
Azerbaijan	8 4 NCA, Russia, Belarus, Moldova, Ukraine	4 ECOTA, GUAM, EU***
Georgia	10 5 NCA, Russia, Moldova, Turkey, Ukraine, China**	4 EU, GUAM, EFTA*
Kazakhstan	11 6 NCA, Russia, Moldova, Ukraine, Belarus, Serbia	6 EAEU, ECOTA
Kyrgyzstan	8 4 NCA, Russia, Belarus, Moldova, Ukraine	3 EAEU, ECOTA
Russian Federation	6 5 NCA, Serbia	4 EAEU
Tajikistan	6 4 NCA, Belarus, Ukraine	2 ECOTA
Turkmenistan	7 3 NCA, Russia, Belarus, Moldova, Ukraine	2 ECOTA
Uzbekistan	9 5 NCA, Russia, Belarus, Moldova, Ukraine	2 ECOTA
Eurasian Economic Union	7 Viet Nam, China**, Islamic Republic of Iran**, Egypt***, India***, Israel***, Republic of Korea***	



Institutional arrangement: PTA quality



Institutional arrangement: trade facilitation

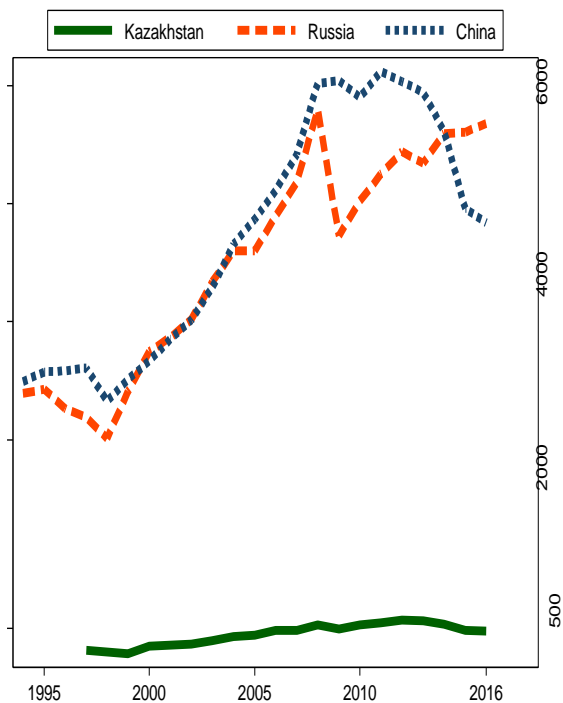
	(a) WTO Trade Facilitation Agreement	(b) Share of items notified under Category (%)			(c) Implementation ratio of facilitation measures (%)
		A	B	C	
Armenia	Ratified	50.8	41.6	7.6	53.8
Azerbaijan	(observer)				75.3
Georgia	Ratified	92.4	0.0	7.6	-
Kazakhstan	Ratified	44.1	23.5	32.4	50.4
Kyrgyzstan	Ratified	12.2	16.4	71.4	38.0
Russian Federation	Ratified	100.0	0.0	0.0	68.8
Tajikistan	-	53.8	-	-	50.4
Turkmenistan	(not member)				-
Uzbekistan	(observer)				25.8

Promoting participation in global trade

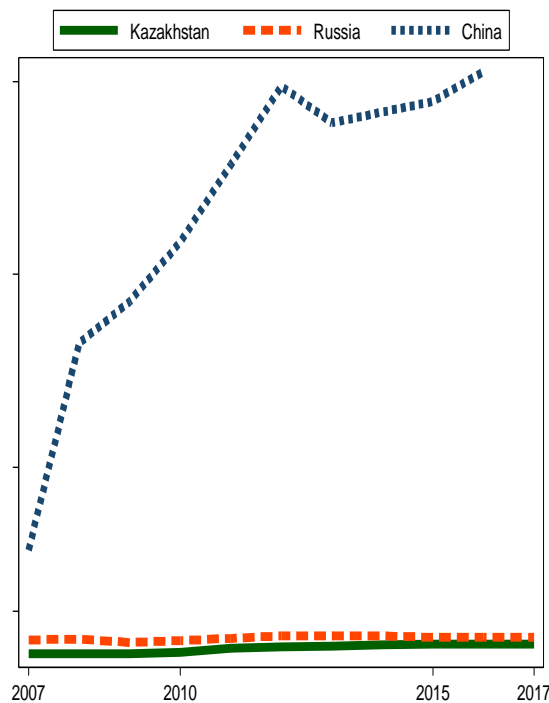
- Developing and upgrading road and intermodal infrastructure toward China and South Asia
- Supporting Afghanistan to resume its political and economic stability for southward exports
- Encouraging ratification of intergovernmental agreements on trade facilitation and its full implementation, especially paperless trade
- Accelerating the process of accession to the WTO and ratification of the WTO TFA Agreement
- Deepening bilateral and plurilateral economic integration through upgrading agreements with wider scope.
- Aiming for broader economic integration through participating in APFTA or bloc agreements

Developing Transport Service Sector

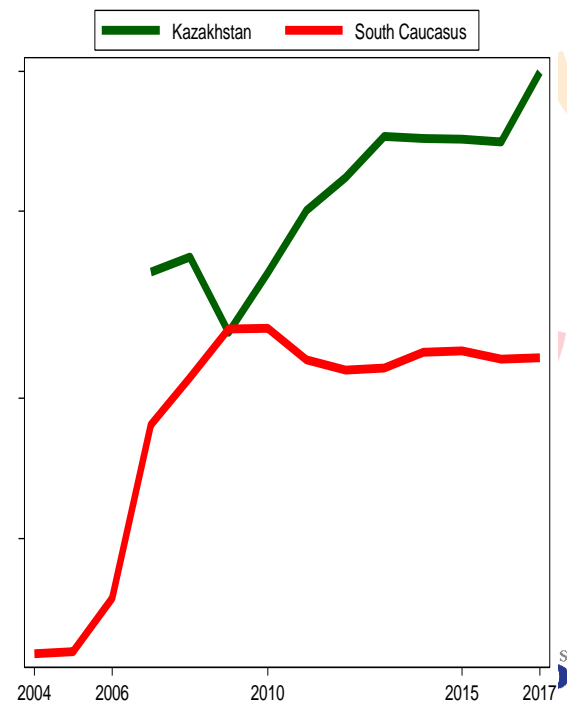
(a) Railway Freight



(b) Road Freight



(c) Pipeline Freight



Developing Transport Service Sector



Logistical Performance Index

Infrastructure

Custom/Border control

Quality logistics services

Tracking ability

ICT network for logistical service

- Quality, reliable and resilient information infrastructure is a backbone for digitalizing trade documents as well as fostering transport-related services.
- **Fibre optic cable networks cover most of populated areas.** However, less redundancy in networks.
- **Full coverage of mobile network has yet to be achieved for ubiq.**
- High-speed and high-capacity ICT infrastructure is required for 5G networks.



Dry ports for logistical centres

	Intergovernmental Agreement on		
	(a) Asian Highway Network	(b) Trans-Asian Railway Network	(c) Dry Ports
Armenia	Ratified	Signed	Signed
Azerbaijan	Ratified with declaration	Signed with declaration	-
Georgia	Approved	Approved	-
Kazakhstan	Approved	Signed	Acceded
Kyrgyzstan	Ratified	-	-
Russian Federation	Definitively Signed	Accepted	Approved
Tajikistan	Ratified	Approved	Approved
Turkmenistan	Acceded	Acceded	Acceded
Uzbekistan	Definitively Signed	Ratified	-

Developing Transport Service Sector

- Upgrade road infrastructure
- Develop dry ports as logistical hubs
- Increase the redundancy of optic-fibre networks for resilience
- Upgrade ICT network for ubiquitous mobile communication (vehicle tracking)



Renewable energy generation and export to South Asia

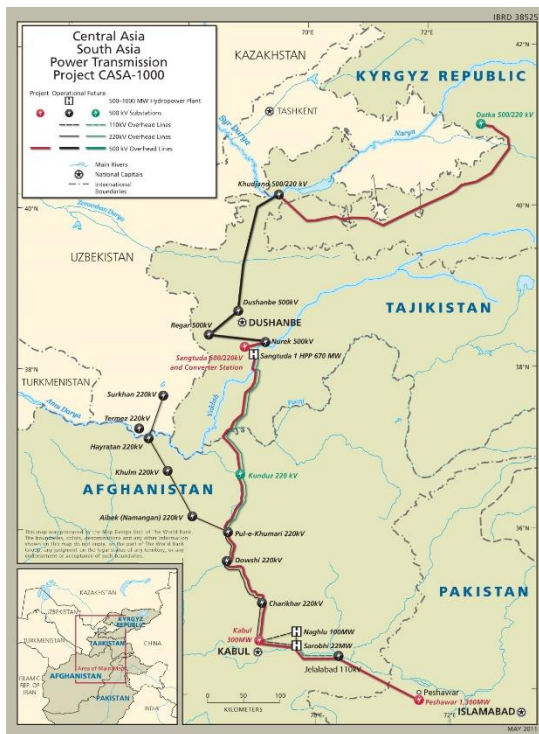
	Installed power plant capacity		Net electricity trade (GWh)	Renewable energy technical potential (MW)		
	Capacity (MW)	Main source		Solar	Wind	Small hydro
Armenia	4,113	natural gas	954	39,700	500	300
Azerbaijan	7,910	natural gas	982	115,200	4,500	400
Georgia	3,919	hydro (76%)	80	96,600	2,300	4,500
Kazakhstan	25,223	coal	1,254	3,760,000	35,400	4,800
Kyrgyzstan	3,965	hydro (80%)	-132	267,000	1,500	1,800
Tajikistan	6,577	hydro (90%)	1,325	195,000	2,000	23,000
Turkmenistan	4,676	natural gas	3,201	65,500	10,000	1,300
Uzbekistan	12,813	natural gas	1,480	593,000	1,600	1,800

Renewable energy generation and export to South Asia

- Central Asia has rich endowment of wind, solar and hydro resources.
- With recent technological advancement in electricity generation, transmission and storage, **this subregion has high potential to export energy to energy-scarce South Asia.**
- This contributes to reduction in greenhouse gas emission, abatement in air pollution and forming green economy at the regional level.



Renewable energy generation and export to South Asia



CASA-1000

- Kyrgyzstan-Tajikistan-Afghanistan-Pakistan
- 220 kV line

Energy security in Asia

- Total Primary Energy Supply (TPES) per capita in South and South-West Asia is 709 kg, while 3914 kg in Central Asia.

Renewable energy generation and export to South Asia

- **Connecting the CASA-1000 line with the Energy Link of the South Asia Association for Regional Cooperation (SAARC)** is promising but has been delayed due to political difficulties.
- ESCAP Asian Energy Superhighway.



Renewable energy generation and export to South Asia

- Assess the optimal location of renewable powerplants
- Invest in renewable energy technology
- Accelerate integration of the electricity transmission system in Central Asia
- Develop southward electricity transmission line
- Supporting Afghanistan to resume its political and economic stability for southward exports
- Integrate the international line with South Asian power network



Discussion

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