



**DECADE
OF >>>
ACTION**



**SPECA Working
Group on
Innovation and
Technology for
Sustainable
Development**



THURSDAY, 30 JULY 2020

**12:30-15:30
(ALMATY TIME)**

Digital connectivity and e-resilience as a foundation infrastructure: perspectives during Covid-19

ICT and Development Section, IDD, ESCAP



Highlight on E-resilience through Asia-Pacific Information Superhighway

- Connectivity
- Traffic and Network Management
- Broadband for All
- E-resilience

Ref https://www.unescap.org/commission/75/document/E75_INF5E.pdf





Connectivity

The co-deployment of fibre-optic cable systems along transport and energy infrastructure as an effective and cost-efficient means to develop universal seamless information and communication connectivity space.



We keep emphasizing and sensitizing of the policymakers on the **need to invest in sustainable infrastructure** to fight against COVID-19 and beyond.

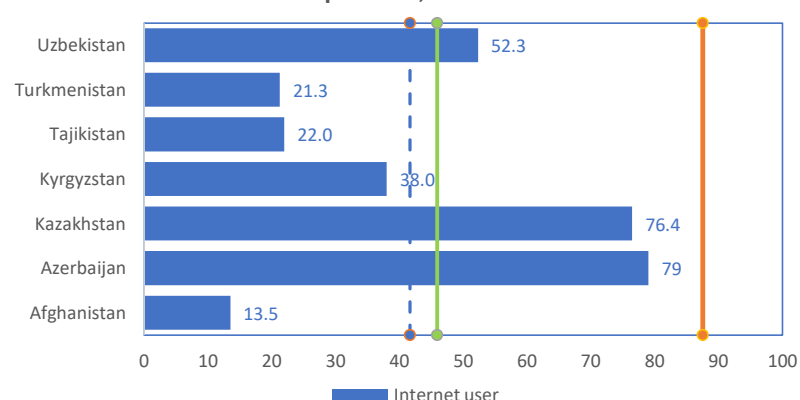


We view the digital infrastructure as a **meta- infrastructure**, and a **foundation** for all digital technologies.

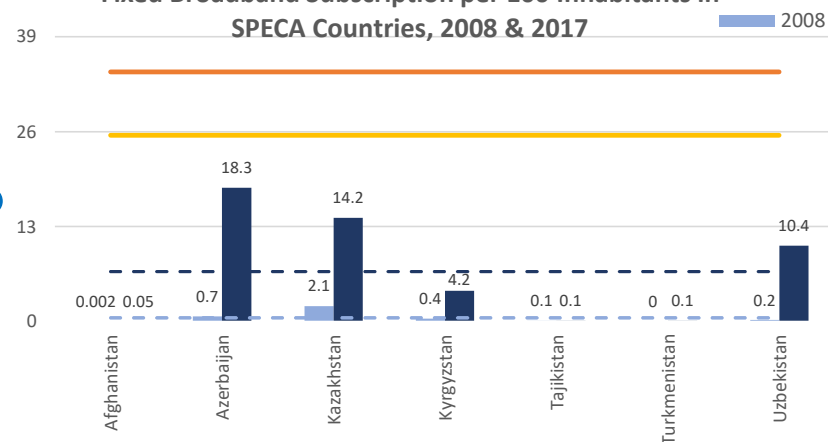


Unless investments are made in **next generation of networks**, ultra high-speed broadband, the application of those technologies will never really **reach the true potential**.

Internet Users in SPECA Countries in Percentage of Population, 2017



Fixed Broadband Subscription per 100 Inhabitants in SPECA Countries, 2008 & 2017



Source: Produced by ESCAP based on data from the ITU, World Telecommunication/ICT Indicators database 2019 (December 2019 Edition)

Note: The top six ICT advanced economies are the most advanced economies in terms of the ICT development index (IDI); the Republic of Korea, Hong Kong China, Japan, New Zealand, Australia, and Singapore.

Traffic & Network Management

The establishment of carrier neutral internet exchange points (IXPs) can promote more **intra-regional content exchange** as well as improve the **reliance, quality** and **cost** of internet connectivity.



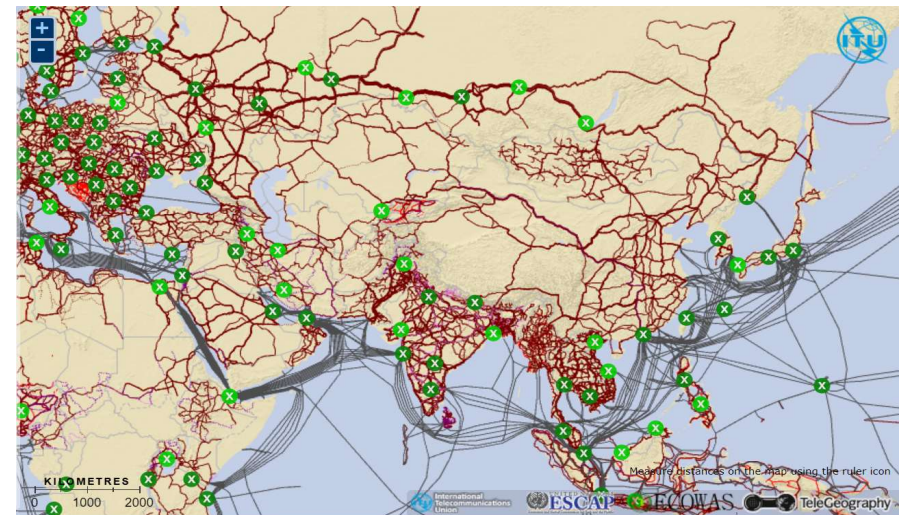
The urgent need is to enhance fixed-broadband access, its affordability and quality (both speed and latency)



This need requires investments in the deployment of **fibre-optic infrastructure** on the one hand, and the establishment of **carrier-neutral Internet exchange points (IXPs)** for efficient interconnections between Internet service providers (ISPs), on the other.

Country	Prices of Fixed and Mobile Broadband								
	Fixed (wired) broadband subscription charge			Price of handset-based mobile prepaid broadband plan			Price of universal serial bus (USB)/dongle-based mobile postpaid broadband plan		
	2014	2017	Change (%)	2014	2017	Change (%)	2014	2017	Change (%)
Afghanistan	42.6	25.2	-40.8	8.3	11.2	34.9	11.6	11.2	-3.4
Azerbaijan	2.0	1.8	-12.5	0.8	0.5	-34.0	1.4	0.7	-49.7
Kazakhstan	1.1	0.9	-23.3	0.6	0.7	18.7	0.6	0.7	18.7
Kyrgyzstan	10.5	8.5	-19.2	7.8	1.0	-86.7	9.2	4.4	-52.2
Tajikistan	—	—	—	11.0	5.3	-51.8	11.0	5.3	-51.8
Turkmenistan	3.5	3.3	-6.6	1.5	0.2	-88.8	9.3	3.0	-67.9
Uzbekistan	3.4	2.5	-26.2	2.8	3.3	21.6	20.6	16.7	-18.9

Source: Produced by ESCAP based on data from the ITU, World Telecommunication/ICT Indicators database 2019 (December 2019 Edition)



Source: ITU Interactive Transmission//ESCAP Asia-Pacific Information Superhighway Maps



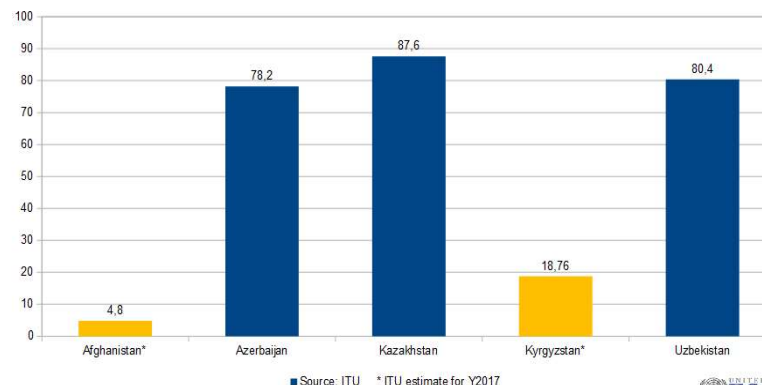
Broadband for All

With concern that the digital divide is widening in the region, it's recommended expanding investments in next generation infrastructure networks, recognizing the benefits, including the cost-effectiveness of co-deployment of fibre-optic cables along passive infrastructure networks.

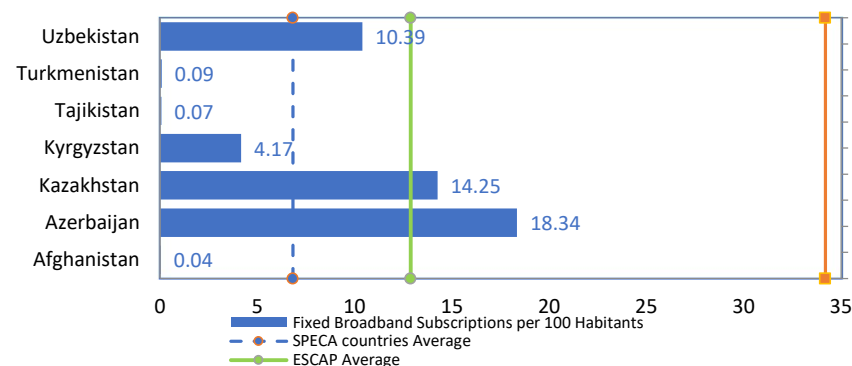
Extention of the information and communications technology (ICT) connectivity to remote and rural areas has been a perennial challenge in the development community of the region.

Mechanisms to expand ICT access in unserved and underserved areas are required. In this regard, the universal access and service funds like UASF could be instrumental and new innovative mechanisms need to be considered.

Households with Internet access at home 2018



Fixed Broadband Subscription per 100 Inhabitants in SPECA Countries, 2017



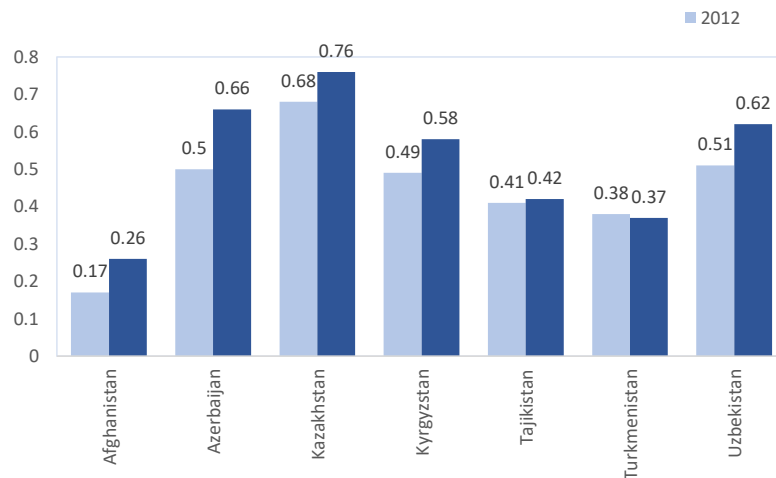
Source: Produced by ESCAP based on data from the ITU, World Telecommunication/ICT Indicators database 2019 (December 2019 Edition)

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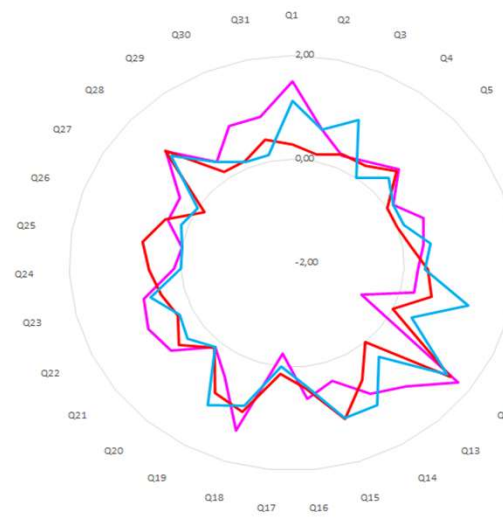
E-resilience

E-Government Development Index in SPECA Countries, 2012 and 2018



Source: Produced by ESCAP based on ESCAP based on United Nations E-Government Survey Report 2012-2018

Average Mongolia Average Kazakhstan Average Kyrgyzstan



Legend
Scoring Points
-2: not ready (lowest)
0: neutral/reserved (I don't know)
2: very ready (highest)
Question Sections
Q1-9: ICT network infrastructure resilience
Q10-18: ICT for societal resilience
Q19-26: Policy and legal provisions for e-resilience against pandemic
Q27-31: Collaborative actions to harness technologies against pandemic

Source: Perception-based survey on e-resilience readiness in RECI project target countries, by participants of the webinar of 3 July 2020

Mainstreaming e-resilience in all phases of disaster management, including COVID 19 pandemic, requires **concerted efforts by various actors in myriad sectors**, as well as **coherent policy** and a **sound budget**.



Bandwidth demand surges during crises, notably COVID-19 lockdowns, place severe pressure on network capacity.



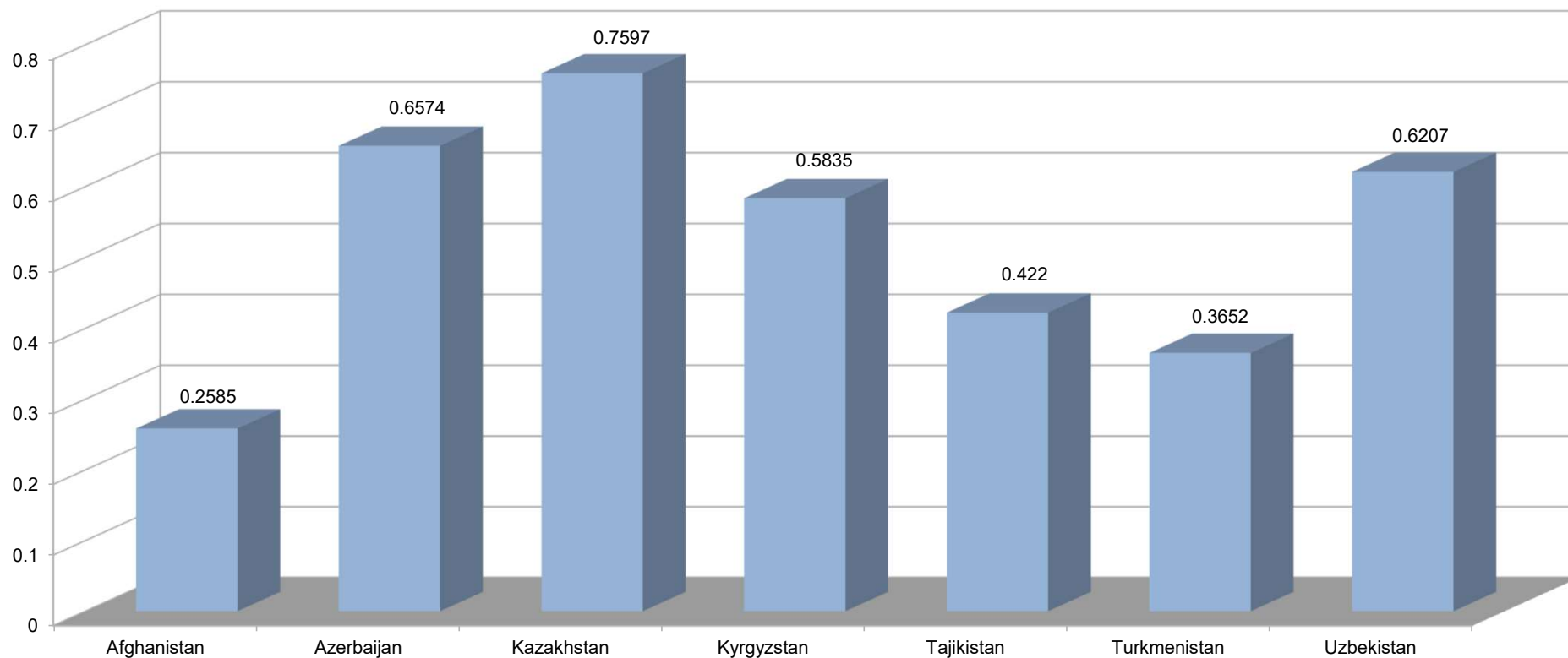
An e-resilience tool and index that support Governments' assess the capacity of digital infrastructure and digital systems to handle the crises of the future.

Overview of ICT Indices for SPECA countries For E-resilience Readiness Toolkit

Afghanistan, Azerbaijan, Kazakhstan, Kyrgyzstan,
Tajikistan, Turkmenistan, and Uzbekistan

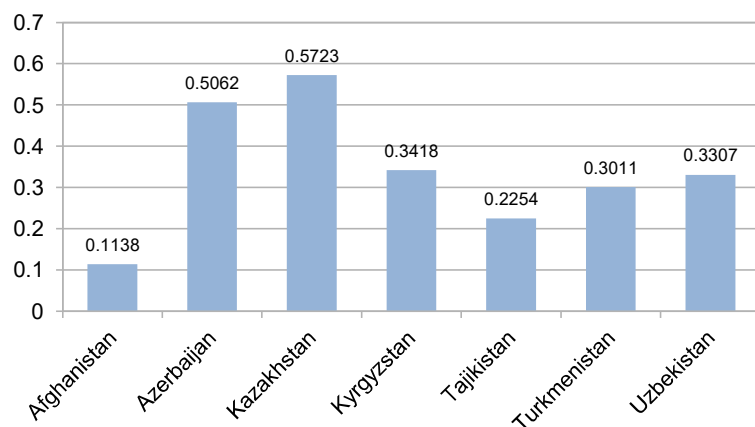


E-Government Development Index (EGDI) Y2018



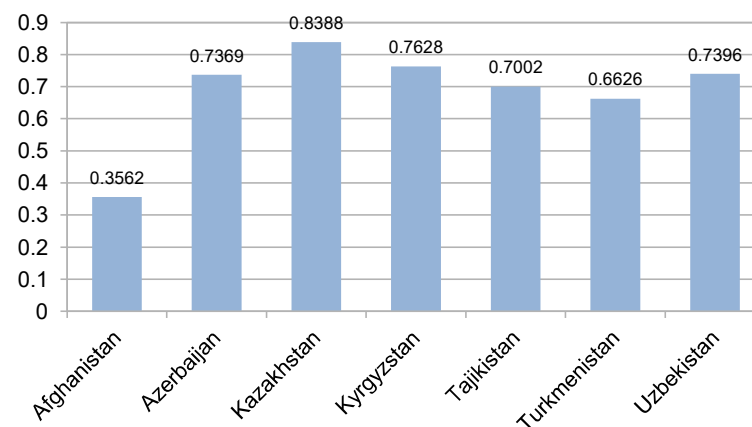
■ Source: United Nations E-government survey 2018

Telecommunication Infrastructure Index (TII)



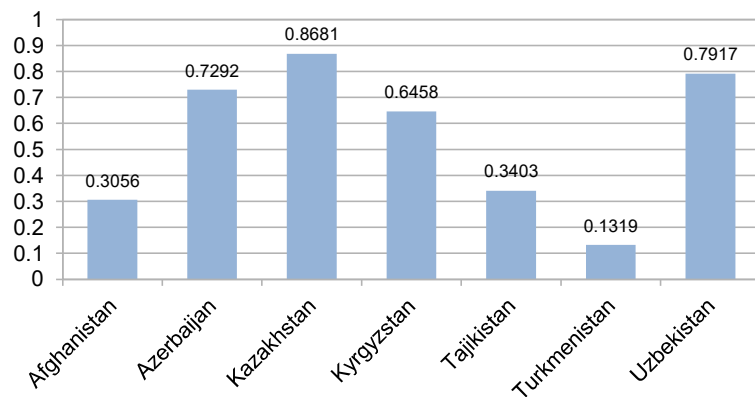
Source: United Nations E-government survey 2018

Human Capital Index (HCI)



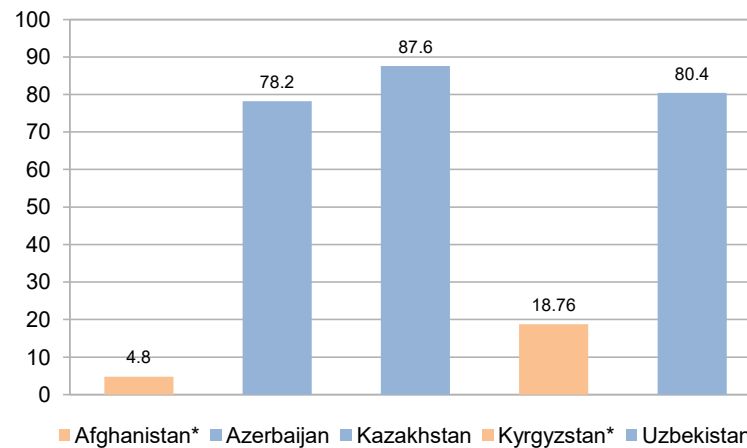
Source: United Nations E-government survey 2018

Online Service Index (OSI)



Source: United Nations E-government survey 2018

Households with internet access at home 2018



E-resilience framework from a pandemic management perspective



Addressing the Transboundary Dimensions of the 2030 Agenda through Regional
Economic Cooperation and Integration in Asia and the Pacific (RECI) 2018-2021

ICT/DRR



Transport

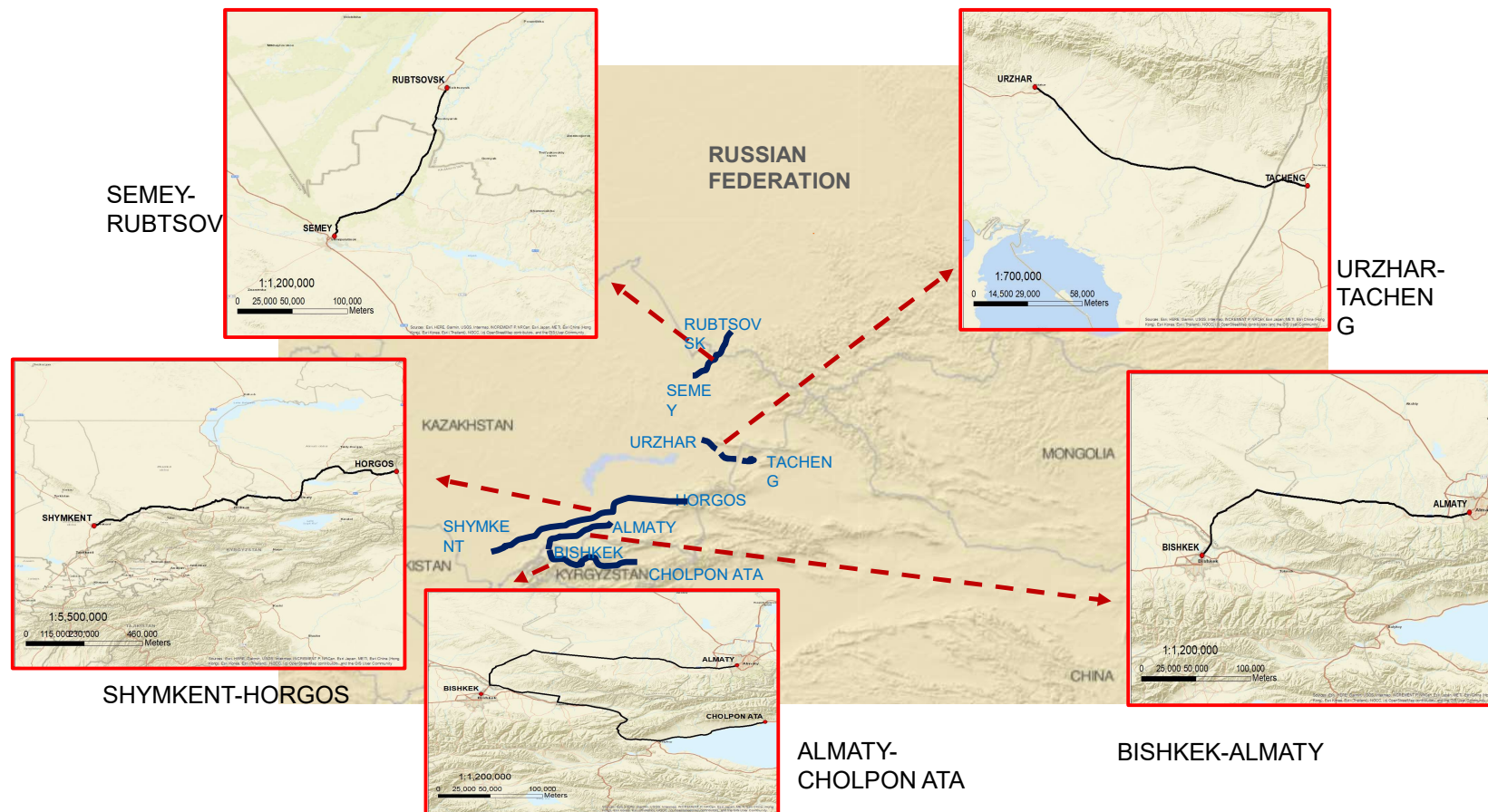


Energy



Financing the Master Plan
RECI 2020-2021

Future Smart corridors in Kyrgyzstan-Kazakhstan-Mongolia



Addressing the Transboundary Dimensions of the 2030 Agenda through Regional Economic Cooperation and Integration in Asia and the Pacific (RECI) 2018-2021

Business Plan- One Year

Integrated Approaches

RECI ACTION FRAMEWORK FOR IMPLEMENTATION

1. National Intersectoral Policies
2. Legislations, Rules & Regulations
3. RECI Planning & Design
4. RECI Economy & Municipal Finance
5. National Implementation

National:

*Intra & Inter-ministerial
Working Groups*

Per Sector

DRR

Energy

Financing

ICT

Transport



List of Tools/Approaches



Social
Inclusion

Visualisation of
Sector Interlinkages &
Leverage Points

Master Plan RECI –
Four Years

Work Plan RECI 2020-2021

1. Develop a single information platform with automation and simulation modules on determining compatibility, economic efficiency, and identification of infrastructure projects that lend themselves to ICT deployment for smart corridors.
2. Analyse e-resilience from pandemic management perspective and support a common work plan for digital transformation in Kazakhstan, Kyrgyzstan and Mongolia

Reference materials:

- ICT and Disaster Risk Reduction theme of ESCAP website:

<https://www.unescap.org/our-work/ict-disaster-risk-reduction>

- E-resilience for Pandemic Recovery: intercountry consultations in preparation for CICTSTI, 3 July 2020:

<https://www.unescap.org/events/e-resilience-pandemic-recovery-intercountry-consultations-preparation-cictsti>

- Committee on Information and Communications Technology, Science, Technology and Innovation, Third Session (Virtual Meeting)

<https://www.unescap.org/intergovernmental-meetings/committee-information-and-communications-technology-science-technology-and-innovation-third>



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Thank you!

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