

ESCAP Technical Paper

Broadband for Central Asia and the road ahead

**Economic development through improved
Regional Broadband Networks**

**Macro-level study of 4 selected broadband
markets in Central Asia**

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Abstract

The overall objective of this study is to identify country specific needs for broadband communication in Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan with a view to developing a regional broadband network and to providing data and information to relevant stakeholders for further examination and discussion on this matter.

This study assesses the overall ICT development in the selected countries with a focus on the telecommunication sector and examined key ICT policy and regulatory frameworks which have impacts on the development of a regional and national broadband network. It also collected data and information on Internet and broadband usage and attempted to forecast future growth as an indication of a need for a regional broadband network.

The report finds that broadband telecommunication networks have been planned and developed in the four countries during the last few years and the number of broadband subscribers is increasing steadily in some countries and slowly in others. In general, the mobile market was found to be the key driver of growth of the overall telecoms market. Demand for Internet access has also shown high growth, with broadband access becoming increasingly popular. With increased demand for bandwidth of international channels, providing connectivity to the Internet seems to be growing accordingly.

Based on the findings, identified challenges and opportunities, the report also made concrete recommendations mainly on the need for strengthening regional cooperation for the development of such a broadband network among countries in the sub-region.

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ABBREVIATIONS

ADB	Asian Development Bank
ADSL	asymmetric digital subscriber line
AIC	Agency for Information and Communication
ATS	analog telephone switchboard
BBC	British Broadcasting Corporation
CDMA	code division multiple access
CIS	Commonwealth of Independent States
DAMA	demand assigned multiple access
DSL	digital subscriber line
DWDM	dense wavelength division multiplexing
EBRD	European Bank for Reconstruction and Development
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
ETTH	Ethernet
FOCL	fiber optical communication line
Gbps	gigabit per second
GDP	gross domestic product
GPRS	general packet radio service
ICC	International Center of Communication
ICT	information and communication technology
IFC	International Finance Corporation
IP	Internet protocol
IP/MPLS	Internet protocol/ multi-protocol label switching
ISDN	integrated services digital network
ISP	Internet service provider
ITU	International Telecommunication Union
JBIC	Japanese Bank for International Cooperation
Kbps	kilobit per second
LAN	local area network
LCF	linear-cable facilities
MB	megabyte

Mbps	megabit per second
MIGA	Multilateral Investment Guarantee Agency
MMS	multimedia messaging service
NGN	next generation networks
OECD	Organization for Economic Co-operation and Development
OSI	open system interconnection
PDH	plesiochronous digital hierarchy
RCC	Regional Commonwealth in the field of Communications
RS	rural settlements
SCO	Shanghai Cooperation Organization
SDH	synchronous digital hierarchy
SHDSL	single-pair high-speed digital subscriber line
SMS	short message service
TAE	Trans Asia Europe
UzACI	Communication and Information Agency of Uzbekistan
VAT	value added tax
VoIP	voice over Internet protocol
WAP	wireless access point
WLL	wireless local loop

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