UNITED NATIONS ESCAP
Economic and Social Commission for Asia and the Pacific

CURRENT SITUATION AND EMERGING TRENDS OF ICT DEVELOPMENT TOWARD NORTHEAST ASIAN ECONOMIC INTEGRATION

ICT and Development Section
ICT and Disaster Risk Reduction Division
ESCAP

January 2018

IMPROVING REGIONAL BROADBAND CONNECTIVITY THROUGH THE
ASIA-PACIFIC INFORMATION SUPERHIGHWAY

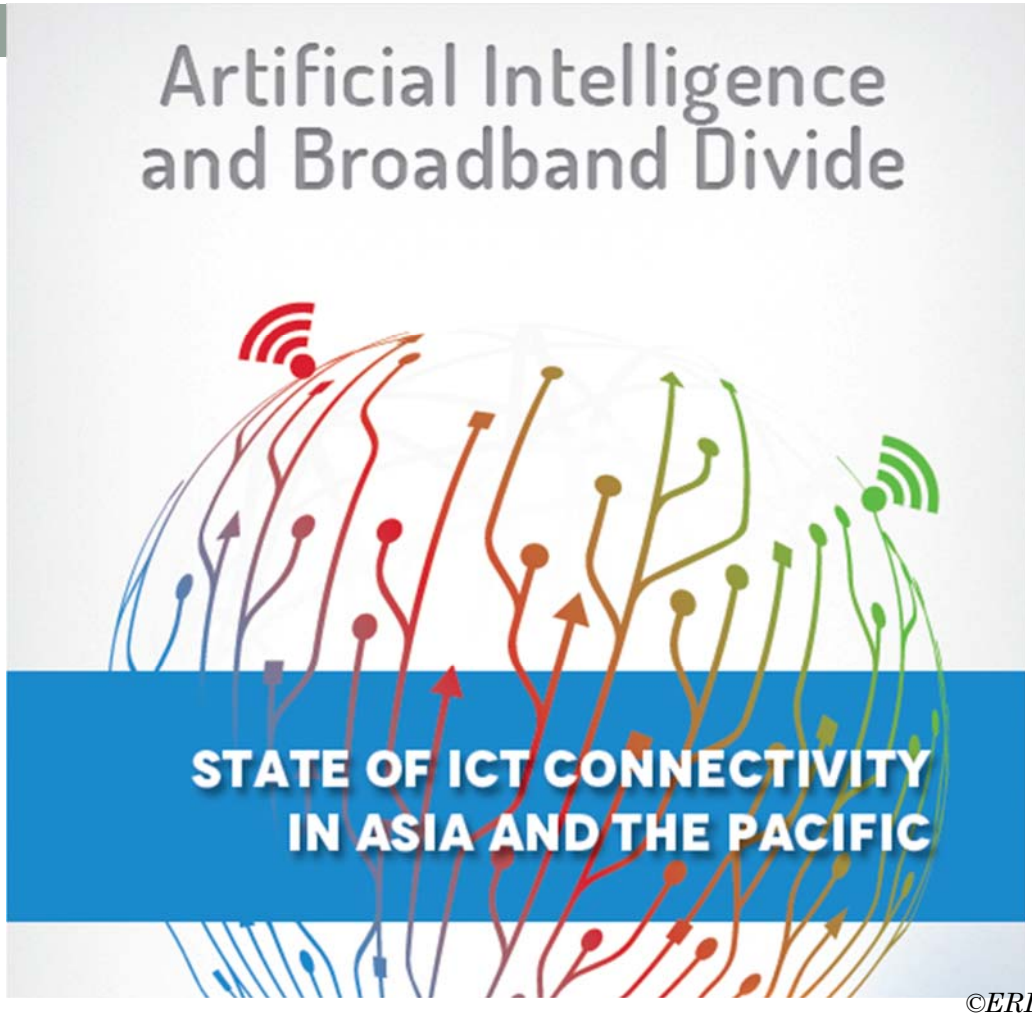
United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)

- Established 1947, HQ in Bangkok, Thailand
- Regional development arm of the United Nations for the Asia-Pacific region.
- 53 Member States and 9 Associate Members
- The region is home to 4.1 billion people, or two thirds of the world's population

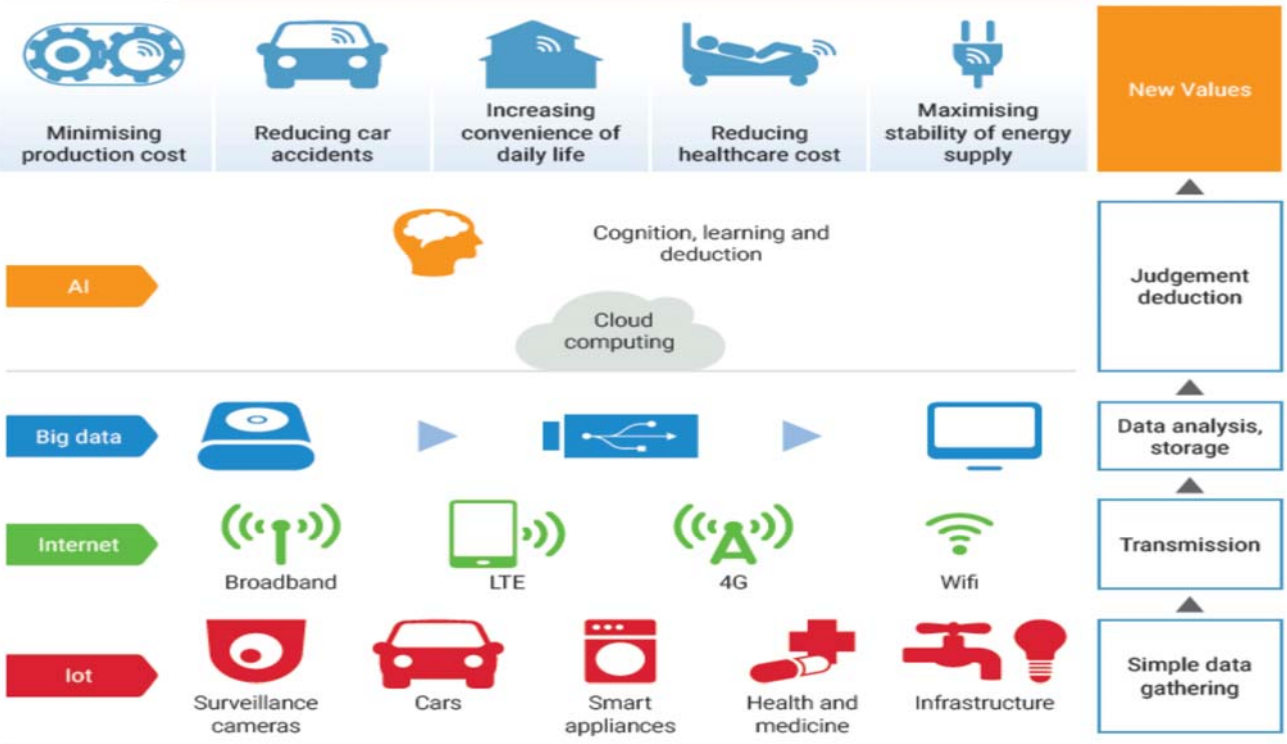
For more information (http://www.unescap.org/)

IMPROVING REGIONAL BROADBAND CONNECTIVITY THROUGH THE
ASIA-PACIFIC INFORMATION SUPERHIGHWAY

ESCAP's Analytical Work



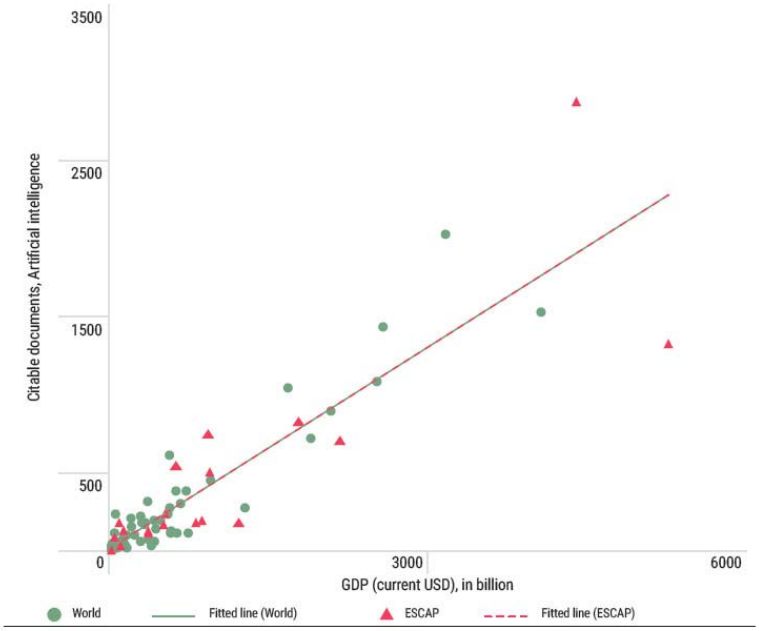
Artificial Intelligence (AI) Landscape



Source: Korean Ministry of Science, ICT and Future Planning, "Mid- to Long-Term Master Plan in Preparation for the Intelligent Information Society: Managing the Fourth Industrial Revolution", undated. Available from http://www.msip.go.kr/dynamic/file/afieldfile/msse56/1352869/2017/07/20/Master%20Plan%20for%20the%20intelligent%20information%20society.pdf

Artificial Intelligence (AI) and Economic Development

Figure 4. The relationship between AI research and size of the economy, 2016



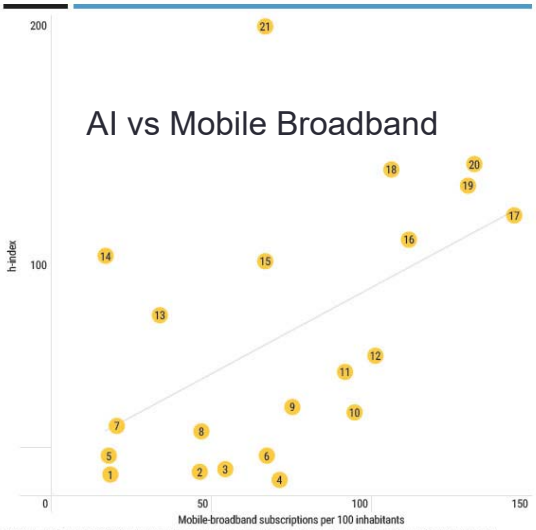
Source: Produced by ESCAP, based on GDP data from World Bank World Development Indicators (accessed July 2017); and number of citable documents in AI research from Scimago Journal & Country Rank. Available from http://www.scimagojr.com/countryrank.php?category=1702 (accessed July 2017).

Note: Sample does not contain China and the US.

- Positive relationship between AI and economic development (GDP) in Asia and the Pacific region.

Artificial Intelligence (AI) and Connectivity

Figure 12. The relationship between h-index in AI research and mobile-broadband subscriptions per 100 inhabitants in the Asia-Pacific region, 2016

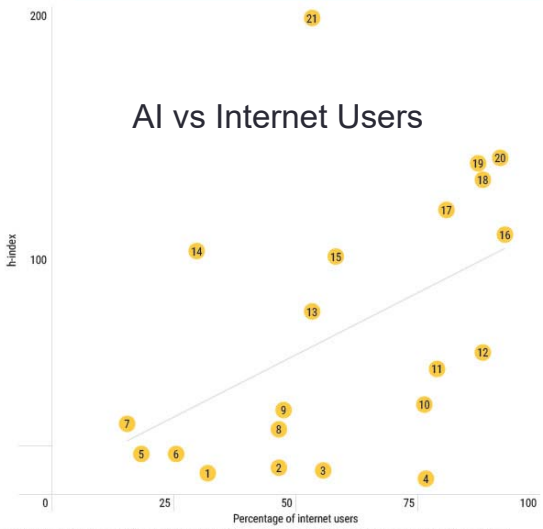


1 Sri Lanka; 2 Philippines; 3 Fiji; 4 Kazakhstan; 5 Bangladesh; 6 Indonesia; 7 Pakistan; 8 Viet Nam; 9 Russian Federation; 10 Thailand; 11 Malaysia; 12 New Zealand; 13 Iran, Islamic Republic; 14 India; 15 Turkey; 16 Japan; 17 Singapore; 18 Hong Kong, China; 19 Australia; 20 Japan; 21 China

Source: Produced by ESCAP, based on mobile-broadband data from ITU World Telecommunication/ICT Indicators Database (accessed July 2017); and h-index in AI research from Scimago Journal & Country Rank. Available from http://www.scimagojr.com/countryrank.php?category=1702 (accessed July 2017).

Note: Macao, China, has been dropped as an outlier.

Figure 13. The relationship between the h-index in AI research and the percentage of Internet users in the Asia-Pacific region, 2016



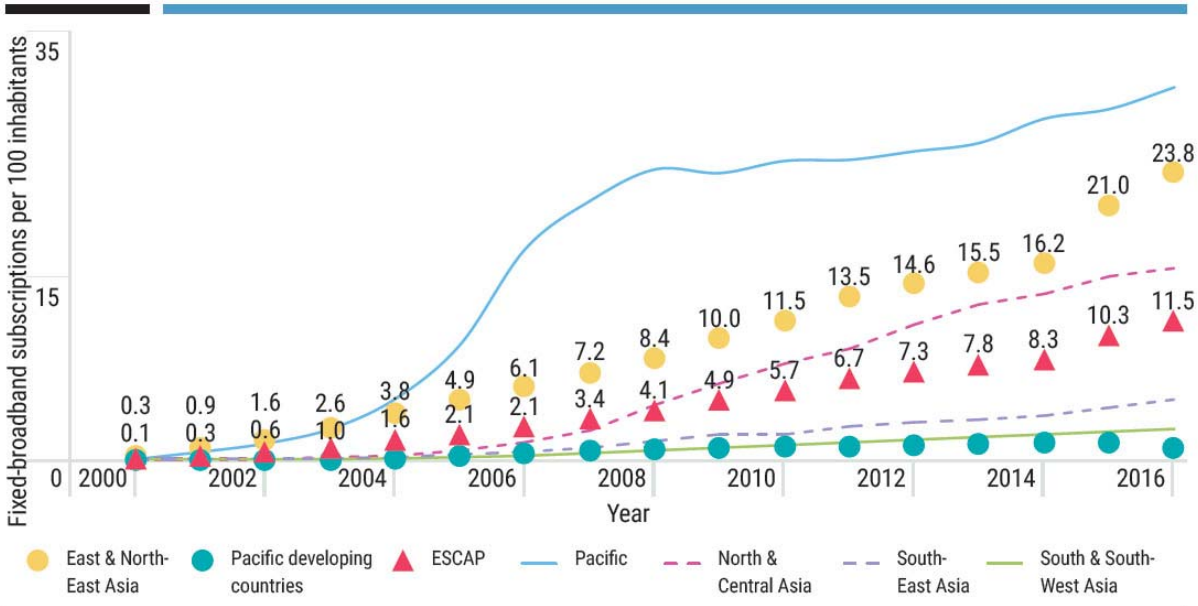
1 Sri Lanka; 2 Fiji; 3 Philippines; 4 Kazakhstan; 5 Bangladesh; 6 Indonesia; 7 Pakistan; 8 Viet Nam; 9 Thailand; 10 Russian Federation; 11 Malaysia; 12 New Zealand; 13 Iran, Islamic Republic; 14 India; 15 Turkey; 16 Korea, Republic of; 17 Singapore; 18 Australia; 19 Hong Kong, China; 20 Japan; 21 China

Source: Produced by ESCAP, based on Internet users data from ITU World Telecommunication/ICT Indicators Database (accessed July 2017); and h-index in AI research from Scimago Journal & Country Rank. Available from http://www.scimagojr.com/countryrank.php?category=1702 (accessed July 2017).

Positive correlation between AI and broadband connectivity

Digital Divide by Fixed Broadband Subscriptions

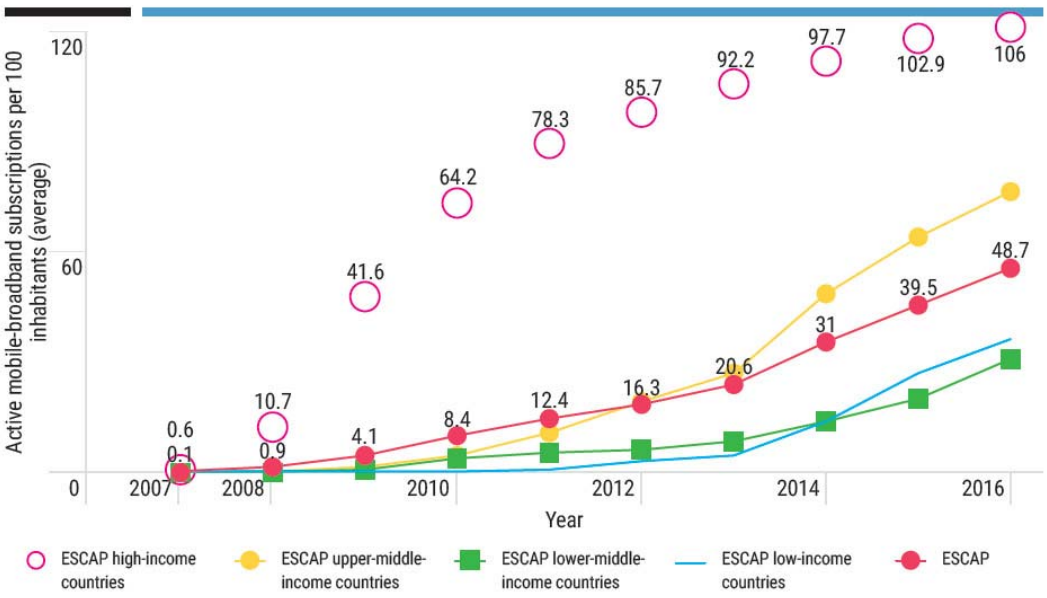
Figure 19. Fixed-broadband subscriptions per 100 inhabitants by ESCAP subregion in 2016



Source: Produced by ESCAP, based on data from ITU World Telecommunication/ICT Indicators Database (accessed July 2017).

Digital Divide by Mobile Broadband Subscriptions

Figure 28. **Mobile-broadband subscriptions per 100 inhabitants by subregion, 2007-2016**



Source: Produced by ESCAP, based on data from ITU World Telecommunication/ICT Indicators Database (accessed July 2017).

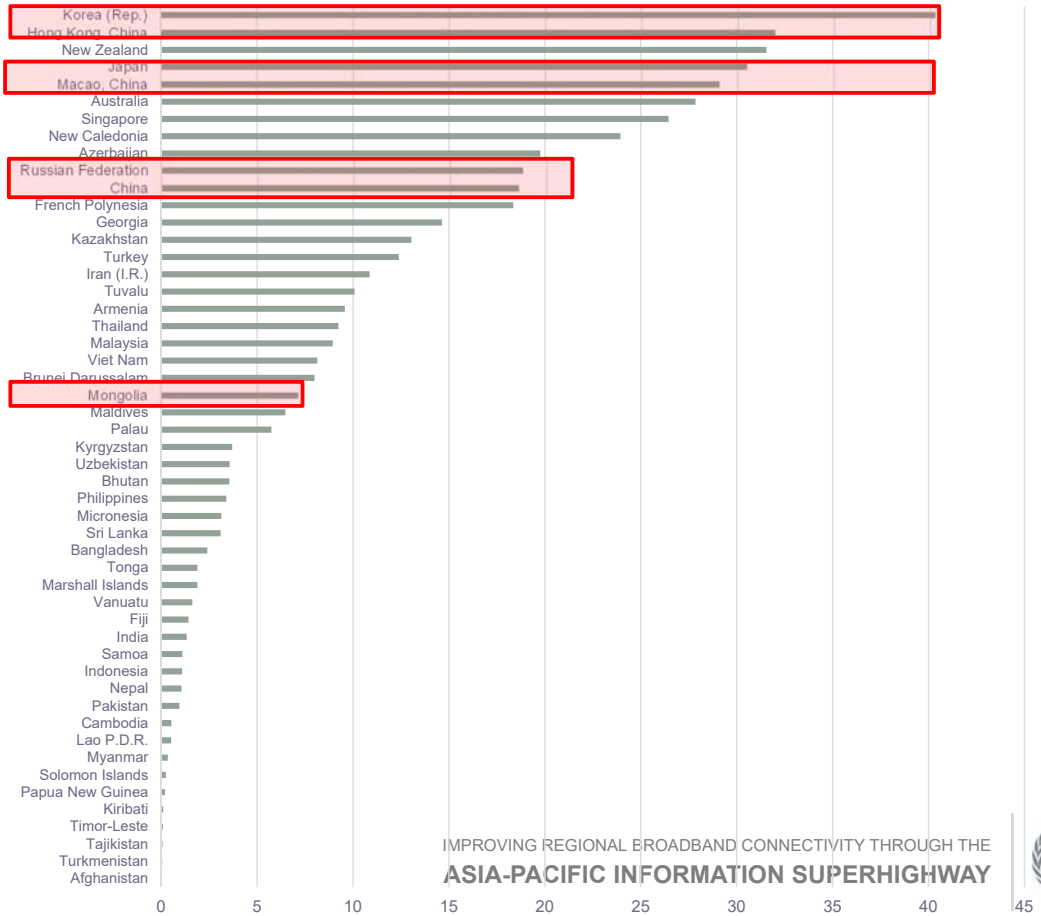
Digital Divide in ESCAP

Comparison of standard deviation analysis of fixed- and mobile-broadband subscriptions by subregion, 2016

Subregion	Fixed Broadband Standard Deviation	Mobile Broadband Standard Deviation
East and North-East Asia	Reduced	Reduced
South-East Asia	Reduced	Reduced (since 2013)
South and South-West Asia	Increased	Increased
North and Central Asia	Increased	Reduced (since 2014)
Pacific	Increased	Increased

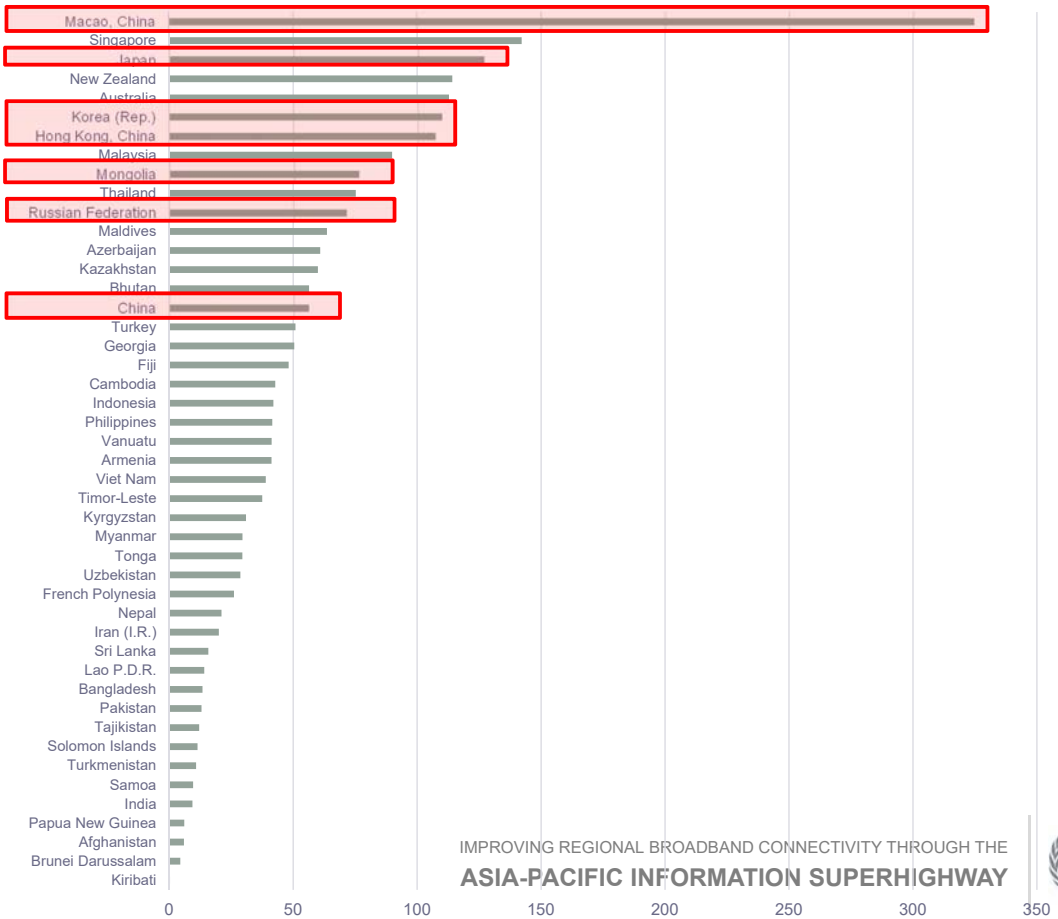
Overall digital divide has been reduced but some regions are stuck at low adoption rates

Fixed Broadband Penetration Rates (per 100) 11

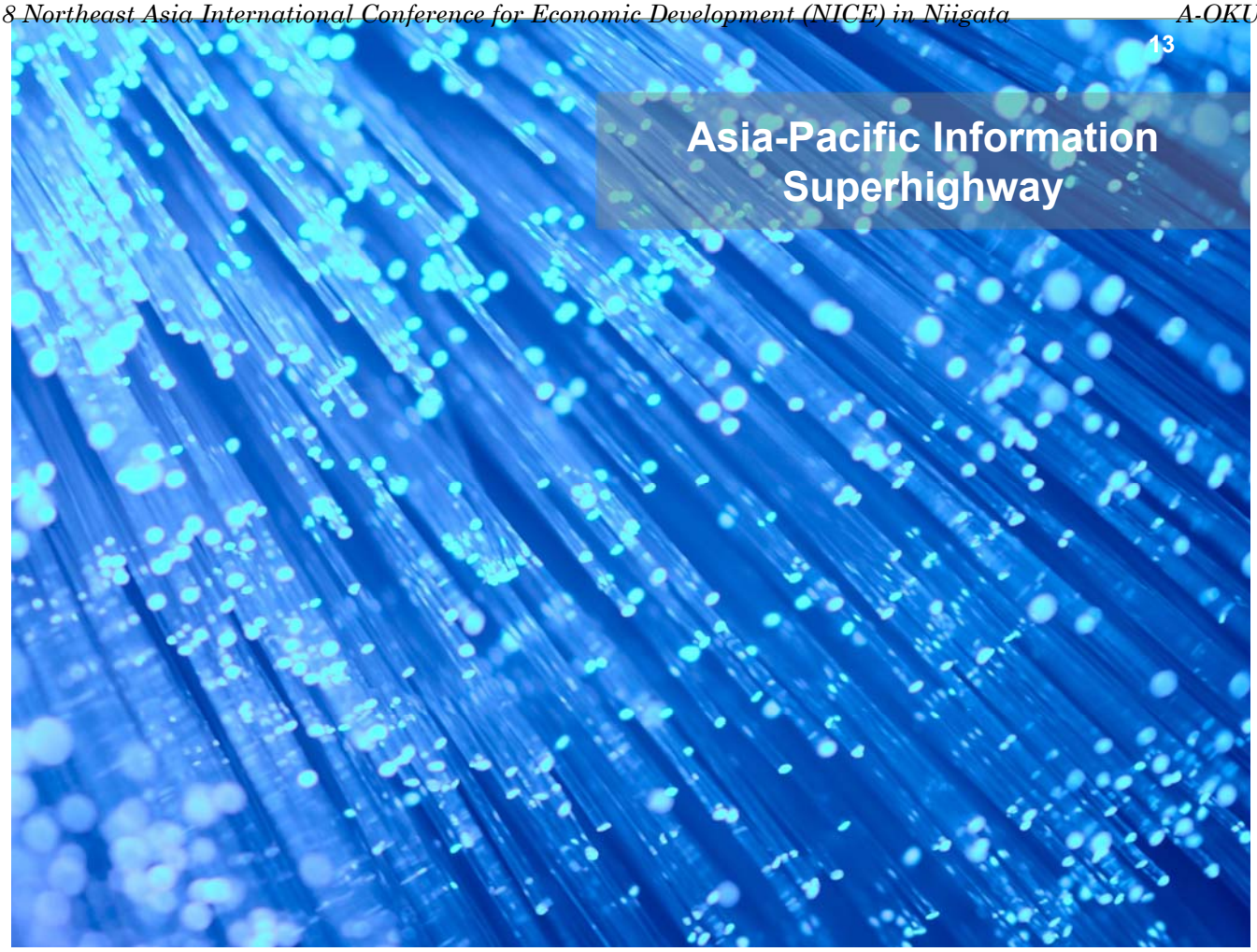


Data source: ITU. (2016). World Telecommunication/ICT Indicators database. Available from: http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx

Mobile Broadband Penetration Rates (per 100) 12



Data source: ITU. (2016). World Telecommunication/ICT Indicators database. Available from: http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx



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ASIA-PACIFIC INFORMATION SUPERHIGHWAY

亚太信息高速公路

АЗИАТСКО-ТИХООКЕАНСКАЯ ИНФОРМАЦИОННАЯ СУПЕРМАГИСТРАЛЬ

L'AUTOROUTE ASIE-PACIFIQUE DE L'INFORMATION

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The Asia-Pacific Information Superhighway initiative aims to increase the availability and affordability of broadband Internet across Asia and the Pacific, by strengthening the underlying Internet infrastructure in the region.

- Promote terrestrial and submarine fibre-optic connectivity
- Provide a regional intergovernmental platform focusing on the missing fibre-optic links between ESCAP countries
- ESCAP resolution 73/6 = mandate

IMPROVING REGIONAL BROADBAND CONNECTIVITY THROUGH THE ASIA-PACIFIC INFORMATION SUPERHIGHWAY

Four Pillars of AP-IS

- Physical network design, development, management at regional level
- Intergovernmental negotiation
- Improving regulations based on open access

CONNECTIVITY

TRAFFIC / NETWORK MANAGEMENT

- Ensuring efficient and effective Internet traffic and network management at regional, sub-regional and national levels

SUSTAINABLE DEVELOPMENT GOALS

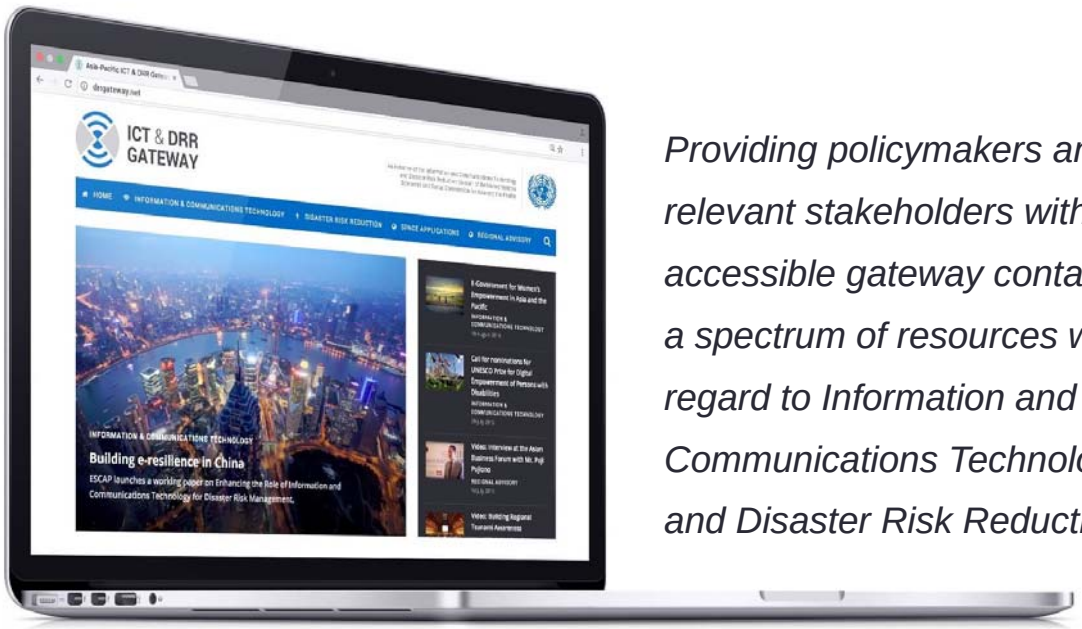
E-RESILIENCE

- Resilient ICT networks
- Support to disaster management systems
- Ensuring last-mile disaster communication

BROADBAND FOR ALL

- Bridging digital divides
- Promoting affordable access to underserved areas
- Policy and technical support to Governments

Asia-Pacific ICT & DRR Gateway



Providing policymakers and relevant stakeholders with an accessible gateway containing a spectrum of resources with regard to Information and Communications Technology and Disaster Risk Reduction

Navigate to the ICT & DRR Gateway

Access the Gateway on

www.drrgateway.net

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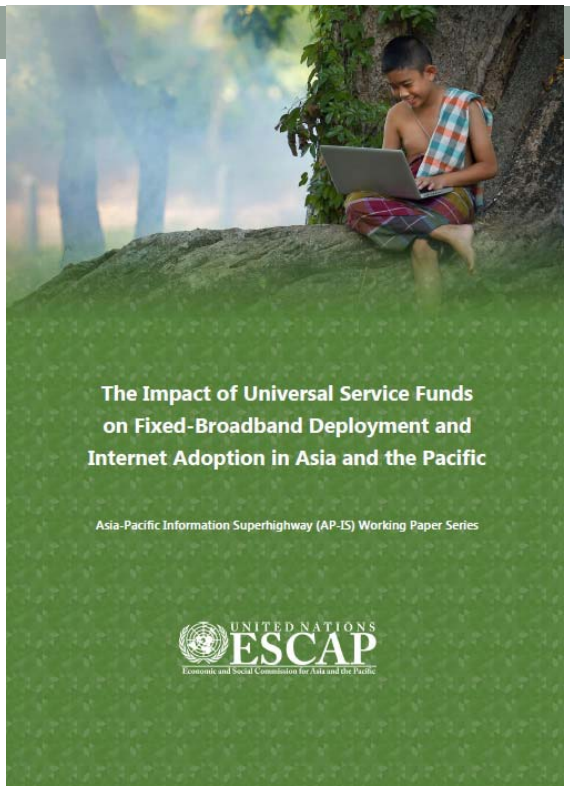

Thank you!

Email: escap-ids@un.org

Sources: ESCAP (2017) Impact of Universal Service Funds on Fixed-Broadband Deployment and Internet Adoption in Asia and the Pacific

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