

Digital inclusion and accessibility, and communications technologies

Background of ESCAP and Digital inclusion

ESCAP

The Economic and Social Commission for Asia and the Pacific (ESCAP) is a regional commission within the United Nations Economic and Social Council (ECOSOC). ESCAP was originally founded as the Economic Commission for Asia and the Far East and tasked with managing reconstruction in Asia in the aftermath of World War II.¹ In addition to the members within its regional footprint of Asia and the Pacific, extra-regional powers, such as the United States, United Kingdom, France, and the Netherlands, are members owing to their historical ties or economic interests with existing members.² From its onset, ESCAP was dedicated to economic development of Asia. Progressively, the



mandate for ESCAP broadened to include the social aspects of economic development, such as addressing inclusion and digital access, and ESCAP began to welcome new members in the Pacific.³ Beyond its initial utility in reconstructing the region, ESCAP scored earlier developmental victories, including the development of the Mekong Committee to manage water rights and access in the Mekong Basin and the Asian Highway Network.⁴ These active projects highlight how ESCAP can have a role beyond technical assistance, helping to bring often-feuding and rival governments together in the name of economic and social development. As some countries within

ESCAP began to industrialize, the organization worked with member countries to make their development more stable, more efficient, and more connected with fellow countries and developed countries in the global north.

ESCAP's focus really began to shift from economics to social development during the 1990s. The rapidly industrializing nations in East and Southeast Asia, Thailand, South Korea, and Indonesia, became victims of the 1997 financial crisis, despite their relatively high levels of industrialization.⁵ This economic crisis coupled with a democratic opening throughout East and Southeast Asia helped push ESCAP to begin to address the social pillar of development, focusing on gender equality, accessibility for those with disabilities, and urbanization. Information and communication technologies (ICTs) joined this agenda, with ESCAP and its member nations recognizing the role it could play not only in enhancing economic development, but also making development more environmentally and socially sustainable.

¹ "ESCAP History." *ESCAP*. <https://www.unescap.org/about/history>.

² "Member States." *ESCAP*. <https://www.unescap.org/about/member-states>.

³ "ESCAP History." *ESCAP*

⁴ "Asian Highway." *ESCAP*. <https://www.unescap.org/our-work/transport/asian-highway>.

⁵ "Asian Financial Crisis." *Federal Reserve*. https://www.federalreservehistory.org/essays/asian_financial_crisis.

What are ICTs?

ICTs are used to describe methods of sending or processing communication through technology.⁶ The use of a mobile phone to make a call or send a text message, or the use of a computer to send and receive emails, shop online, and watch YouTube videos are examples of ICTs. Beyond the physical technology, such as a phone or computer, the networks that the physical technology uses are also included in ICT. In this way, the internet and wireless networks are ICTs.⁷ As technology evolved over the second half of the 1900s, ICTs have become vital for economic growth in many nations, not to mention the role they have played in social development as well. A 10% increase in access to broadband (the internet) in a developing country is linked to a 1.4% increase in economic growth.⁸ In the United States, the number of jobs in the technology sector is expected to increase by 22% from 2013 to 2020.⁹ Not only do ICTs make existing jobs easier and more efficient, but they also offer previously unknown economic opportunities.

Digital Inclusion

Yet despite the importance of ICTs as an economic sector and their ability to make communication seamless across the globe, access to ICTs (and the internet in particular) has not been evenly distributed both between countries and across populations within countries. The National Digital Inclusion Alliance defines digital inclusion as having 5 elements:

- 1) *affordable, robust broadband internet service;*
- 2) *internet-enabled devices that meet the needs of the user;*
- 3) *access to digital literacy training;*
- 4) *quality technical support;*
- and 5) *applications and online content designed to enable and encourage self-sufficiency, participation and collaboration.*¹⁰

Yet this definition of digital inclusion is not the only possible definition. It is important to recognize that as technology develops and different forms or ways of communicating are created, so too must the elements of digital inclusion.

For ESCAP, digital inclusion is crucial to not only promote development and economic growth, but also social growth as well. Improvements in technology and the diffusion of these technologies across the greater Asia-Pacific region can help improve education by making it possible for remote areas to have access to teachers and more information. It can also help improve preparations and responses to natural disasters. For ESCAP, improving digital inclusion can spur economic growth and lead to improve social outcomes, such as greater life expectancy, increased educational outcomes, and better data collection for social agencies. ICTs are predicted to continue to permeate throughout society more in the coming years. To ensure that benefits are spread equitably, all discussions of ICTs must include digital inclusion and accessibility.

⁶ "What is Information and Communication Technology (ICT)." *IGI Global*. <https://www.igi-global.com/dictionary/information-and-communication-technology-ict/14316>.

⁷ "ICT." *TechTerms*. <https://techterms.com/definition/ict>.

⁸ "Five ways technology can help the economy." *World Economic Forum*. <https://www.weforum.org/agenda/2013/04/five-ways-technology-can-help-the-economy/>.

⁹ *Ibid.*

¹⁰ "Digital Inclusion" *NDIA*. <https://www.digitalinclusion.org/definitions/>.

Present Uses of ICTs

For much of the globe, ICTs are a fundamental part of daily life. There are over 2 billion internet users, and of those, over half of internet users access the internet once a day.¹¹ While many adopters of ICTs are young people, it permeates all levels of society and the economy today. But access to ICTs is not spread evenly, with the price of broadband in some countries costing more than half the monthly income.¹² In 2017 broadband subscription per month varied from \$5.37 in Iran to \$961 per month in Burkina Faso, \$597 per month in Papua New Guinea, and \$231 per month in Laos.¹³ In areas where broadband is more expensive, it can be difficult to encourage people to adopt ICTs.

Within ESCAP, 75% of broadband subscriptions are in East and North-East Asia (i.e. China, South Korea, Japan), while the Middle East, Central Asia, South East Asia and the Pacific only account for 25% of all broadband subscriptions in ESCAP.¹⁴ While broadband access and reliance has increased in East and Northeast Asia, it has not improved in the other areas of ESCAP. This difference in broadband development happens despite the fact that the demand for the internet is expected to increase 53% in Myanmar and 44% in Indonesia between 2016 and 2020.¹⁵

Disaster risk reduction

Improved ICTs have a role to play in reducing the risks posed by natural and manmade disasters. The Asia-Pacific region is the most disaster-prone region in the world. An individual living in this region is 6 times more likely to experience a disaster than an individual living in Latin America and the Caribbean.¹⁶ In 2013, more than 57 million people were affected by natural disasters and the region saw \$128 billion in damages.¹⁷ The greater connectivity that a reliable and affordable ICT network provides could allow for earlier warnings and disaster detection as well as improved communication when a disaster does strike. Already, ESCAP nations have worked with donors to invest in ESCAP's Trust Fund for Tsunami, Disaster and Climate Preparedness in the Indian Ocean and Southeast Asian Countries, and the development of a satellite network to detect the early warning signs of droughts in the region.¹⁸ While ICTs cannot completely eliminate the spectre of natural disasters, their early warning capabilities and the improvements that ICTs provide to disaster management efforts help to mitigate the worst effects of natural disasters. However, the Asia-Pacific remains the most digitally divided region of the world, so unless investments are made to ICT networks throughout the regions, the benefits to disaster risk reduction will not be equitably spread.

Education

¹¹ "Fact Sheet: Information and Communication Technology." *United Nations*. https://social.un.org/youthyear/docs/TYY_Fact_Sheet_ICT_Final.pdf.

¹² Ibid.

¹³ "The Most and Least Expensive Countries for Broadband." *Forbes*. <https://www.forbes.com/sites/niallmccarthy/2017/11/22/the-most-and-least-expensive-countries-for-broadband-infographic/#7b681f2723ef>.

¹⁴ "State of ICT in Asia and the Pacific 2016: Uncovering the Widening Broadband Divide." *ESCAP*. <https://www.unescap.org/resources/state-ict-asia-and-pacific-2016-uncovering-widening-broadband-divide>.

¹⁵ "Broadband Connectivity in South East Asia." *ESCAP*.

<https://www.unescap.org/sites/default/files/Broadband%20Connectivity%20in%20South%20East%20Asia%20rev.pdf>.

¹⁶ "ICT and Disaster Risk Reduction." *ESCAP*. <https://www.unescap.org/our-work/ict-disaster-risk-reduction>.

¹⁷ Ibid.

¹⁸ "ESCAP Trust Fund for Tsunami Disaster and Climate Preparedness." *ESCAP*. <https://www.unescap.org/disaster-preparedness-fund>.

ICTs also have a role to play in improving education throughout the Asia-Pacific region. For students in rural areas, a reliable ICT network helps connect them to other students, new sources of information, and potentially more teachers. In Myanmar, a United Nations Educational, Scientific and Cultural Organization (UNESCO) funded project instructed 155 teachers in rural schools to incorporate ICT into the classroom and their teacher training.¹⁹ These efforts will help rural teachers improve the quality of the education that they offer by connecting them to more resources. Such a program was only possible due to reforms made to the Myanmar ICT network that reduced the cost of SIM cards in mobile phones. Such reforms are key for making ICTs more accessible to the average citizens.

Improving Access

In order to improve access to ICT, ESCAP must work with both private companies and national governments. Within ESCAP, efforts cannot just focus on the largest countries. While China has made great strides in developing its ICT network and helping to reduce inequalities in access internally, ESCAP must also focus on reducing inequalities between countries. At the end of the day, just as it is important to include those with disabilities, total digital inclusion must be worked towards as well.

ICT, Data, and Privacy

Despite the positive benefits of ICT in economic and social development, ICT is not a panacea for all problems and introduces some important questions that must be considered. To make ICT more effective, more efficient, more cost effective and more accessible, data collection is important. Without this data, it is difficult for governments, private companies and intergovernmental organizations like ESCAP to formulate coherent policies and to develop better ICT networks. These data collection efforts can even go beyond improving ICT networks, and have applications in other areas, such as public health. ESCAP has posited that better ICT networks would allow for rural disease outbreaks to be better tracked and dealt with as experts could more quickly locate an outbreak, identify its vectors, and begin to posit solutions.²⁰ Normally, efforts to tackle diseases that start in rural areas do not begin until they spread to more populated areas.

However, even data collection efforts for and by ICT are not equal between developed and developing nations. Launched in 2004, the Partnership on Measuring ICT for Development is an initiative to improve the amount and quality of ICT data in developing countries.²¹ The Partnership does not collect data, but holds training sessions for national government statistical offices on how to record and measure ICT data. These trainings help these individuals make connections with other governments and learn best practices. However, while efforts like the partnership are important, the collection of ICT data is meaningless without continued investments to improve ICT networks.

¹⁹ “Transforming Myanmar rural schools with ICT: One Teacher at a Time’-UNESCO.” *United Nations*.

<https://www.un.org/youthenvoy/2017/03/transforming-myanmar-rural-schools-ict-one-teacher-time/>.

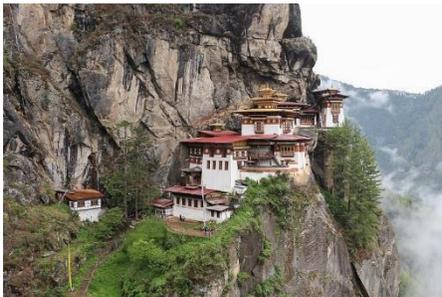
²⁰ “ICT Indicators.” *ESCAP*. <https://www.unescap.org/our-work/ict-disaster-risk-reduction/ict-indicators/about>.

²¹ “Partnership on Measuring ICT for Development.” *ITU*. <https://www.itu.int/en/ITU-D/Statistics/Pages/intlcoop/partnership/default.aspx>.

Data collection efforts toe a fine line between helping improve ICT access and becoming intrusive in the private lives of citizens. As ICT has become more widespread and internet access increasingly more accessible, the United Nations General Assembly has found it important to reaffirm the right to privacy by passing Resolution 68/167.²² This resolution not only reaffirms the right to privacy enshrined in Article 12 of the Universal Declaration of Human Rights and in Article 17 of the International Covenant on Civil and Political Rights, but also calls upon states to protect the right to privacy online.²³

Yet despite such affirmations of the importance of privacy, ICT and data collection are being used to develop a so-called “social credit” system in China. Under this system, the Chinese government would collect personal data as well as personal actions, such as whether someone jaywalks or litters, and compile a score.²⁴ This score would give an individual the ability to live in a nicer area or go certain places if it was high, or limit them to live in less nice areas if the score was low. Some allege it could even be used to keep individuals from getting jobs. While the system has not been deployed nationwide, in its test runs it has already been used to keep individuals with low scores from being allowed to buy train and plane tickets.²⁵ Proponents of the social credit system believe that it operates similar to a credit score and allows a government the ability to better service its population because it knows more about their actions, wants and needs. However, many opponents contend that such data collection practices are a gross invasion of privacy and can easily be used by the government to punish its opponents.²⁶ The social credit system utilizes China’s well-developed ICT system and networks and takes ICT data collection to the next level. While such a system is not possible for many members of ESCAP, owing to their limited ICT networks, such a social credit system could be possible in the near future. In this sense, the ESCAP would do well to

ponder whether data collection on the scale proposed by the social credit system is a moral or ethical use of ICT.



Case Study: Bhutan

Bhutan is a largely rural nation with rough terrain that existed in isolation with no postal service and few telephones into the 1960s.²⁷ As an undeveloped and landlocked country, ICTs can help pave the way to greater economic growth and connect citizens to one another, the Bhutanese government, and sources across the globe.²⁸ While the government has made important investments into ICTs, several roadblocks persist to improve digital

²² “Resolution 68/167: The Right to Privacy in the Digital Age.” *United Nations*. <https://undocs.org/A/RES/68/167>.

²³ *Ibid*.

²⁴ “China’s Social Credit System: A Mark of Progress or a Threat to Privacy.” *PIIE*.

<https://www.pie.com/system/files/documents/pb18-14.pdf>.

²⁵ “China has started ranking citizens with a creepy ‘social credit’ system- here’s what you can do wrong, and the embarrassing, demeaning ways they can punish you.” *Business Insider*. <https://bit.ly/2ny5RBY>.

²⁶ “Spend ‘frivolously’ and be penalized under China’s new social credit system.” *Vox*. <https://www.vox.com/the-goods/2018/11/2/18057450/china-social-credit-score-spend-frivolously-video-games>.

²⁷ “About Bhutan.” *UNDP*. <http://www.bt.undp.org/content/bhutan/en/home/countryinfo.html>.

²⁸ “Benefits and challenges of ICTs for Bhutan.” *ITU News*. <https://news.itu.int/benefits-and-challenges-of-icts-for-bhutan-video/>.

accessibility. Bhutan's mountainous terrain makes it difficult to run fiber optic cable networks (FOCs), which serve to carry internet access. In particular, natural disasters, forest fires, landslides, and animal attacks continually hamper the network.²⁹ An added problem is that the existing network lacks the many connections needed to create a resilient system that is able to maintain communication even when some lines are severed, as happens in a landslide. Even when lines are laid, it can become difficult to repair them as FOCs and electrical lines often do not follow the paths of the roads. A robust ICT system in Bhutan could connect its rural population to better schools and medical care, help better prepare disparate regions of the country for impending disasters, and spur economic growth. To achieve this, Bhutan's Department of Information Technology and Telecom (DITT) established a telecom division to coordinate with ESCAP and work with private companies to facilitate an expansion of the FOC network. By making this network denser and the connections more numerous, the Bhutanese government can reduce the effects that a landslide or disaster will have on the entire broadband system because other connections will be able to pick up the traffic.

Questions to Consider

- How can the digital divide be reduced within a country?
- How can the digital divide be bridged between countries?
- To what extent can improvements in ICT help improve education and disaster response?
- To what degree can or should privacy be respected in the digital age?

²⁹ "ICT Co-Deployment with the Electricity Infrastructure: The Case of Bhutan." *ESCAP*.
<https://www.unescap.org/sites/default/files/ICT%20Co-Deployment%20with%20the%20Electricity%20Infrastructure%2C%20The%20Case%20of%20Bhutan.pdf>.