South Asia Digital Mapping

Table of Contents

Purpose of this Document

To support the UNICEF Regional Office for South Asia's integration of digital tools, technologies, and best practices into Social and Behaviour Change (SBC) programming, this Digital Mapping outlines the existing digital interests, needs and challenges across the South Asia region. This document outlines the regional context, media, digital habits and preferences, emerging trends and recommendations on leveraging the existing opportunities gathered through secondary research.

This document can inform digital SBC programme design, development, and implementation at regional and country-level based on the available insights and data from recent years.

Context

South Asia consists of eight countries, which include Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.

The region has a **total population of 1.9B**[i] and makes up 24.89% of the world's total population.

48.8% of South Asia's population is female.[ii]
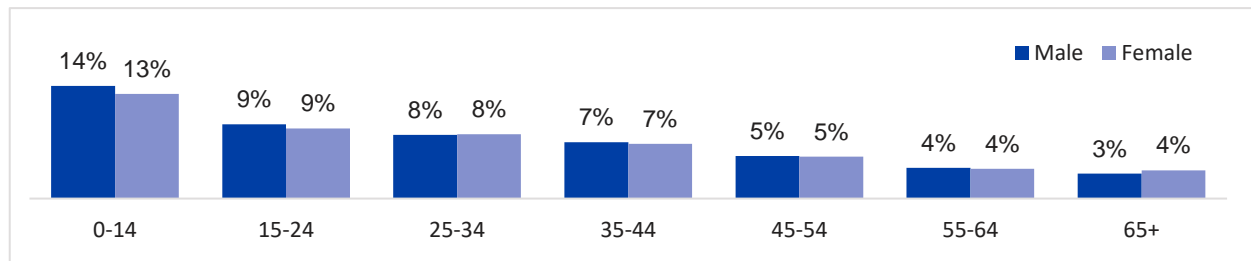
The average life expectancy is 70 years.[iii]

The average age is 27.6 years.[iv]

35% of the population is urban.[v]

The largest population group is 15-19 years of age in South Asia[vi], with 45% of the total population over the age of 15 employed (2021).[vii]

	Male	Female
0-14	14%	13%
15-24	9%	9%
25-34	8%	8%
35-44	7%	7%
45-54	5%	5%
55-64	4%	4%
65+	3%	4%

Population Age Breakdown (2022)

Digital Connectivity

Countries in the South Asia region recognise the important role those digital technologies play in promoting inclusion, improving public service delivery, creating jobs, and stimulating the economy. Digitisation can also stimulate innovative country approaches to the delivery of services, as was seen in many South Asian countries that leveraged digital technologies during the pandemic, especially in the health, education and social protection sectors.[viii]

Digital agenda strategies are generally centralised, endorsed by the highest levels of government and have gained traction in most countries. The overall digitalisation of government services has progressed steadily, with Sri Lanka and India performing the best and Bhutan making the most significant improvements relative to other countries.[ix]

However, the full potential of digitalisation in South Asia remains untapped. In most countries, only about a third of the population subscribes to mobile internet services, except in Maldives (57%) and Sri Lanka (50%).[x] The levels of connectivity for adults aged 18 and above have improved from 44% to 63% in South Asia, but more than a third were still unconnected in South Asia.[xi]

The coverage gap has now narrowed in South Asia to 4% (80m), but the usage gap remains at 52% (990m)[xii], which has decreased from 2021 where it was at 61%[xiii], but progress is slow. GSMA noted a slowdown in mobile internet adoption in South Asia compared to 2021 (90 million started

using mobile internet) while in 2022, only 60 million people were using mobile internet. High device costs, lack of digital skills and literacy, economic crises etc were just some factors that may have hindered this. It is also noted by GSMA that India (along with Sub-Saharan Africa) 'will account for around half of new mobile subscribers globally over the 2022–2030 period'.[xiv]

Improvements in network quality were also noted in South Asia, with download and upload speeds increasing by 30% and 25%, respectively.[xv]

Digital Divide

📖 Digital literacy is a common barrier to digital adoption

Digital literacy in the South Asia region varies across countries, but generally, there is a growing trend towards increased digital adoption and usage.

- Some countries in the region, such as India and Sri Lanka, have made significant progress in digital literacy, with initiatives like the Digital India program and the National Digital Literacy Mission in India[xvi], and the Smart Sri Lanka program in Sri Lanka[xvii]. These programs aim to provide basic digital literacy skills to all citizens, especially in rural and remote areas.
- However, other countries in the region, such as Nepal, Bangladesh, and Pakistan, still have a relatively low level of digital literacy.[xviii] Factors such as limited internet access, low levels of education, and language barriers contribute to the lower levels of digital literacy in these countries.
- There are also challenges related to gender inequality in digital literacy, as women in the region have lower levels of access to digital technology and education than men. Efforts are being made to address these issues, with initiatives such as the Women's Digital League in Pakistan[xix] and the Girls in Tech initiative in Nepal[xx], which aim to empower women with digital skills and increase their participation in the digital economy.

While progress is being made in the region, there is still a long way to go in achieving equitable digital literacy for all.

⚙️ Lack of digital capacity building

The lack of digital capacity building in South Asia is a major challenge in the region. Despite efforts to promote digital literacy, there is still a significant gap between the skills and knowledge needed for the digital economy and the skills and knowledge that people in the region currently possess.

- One of the main reasons for the lack of digital capacity building is the lack of investment in education and training programs.[xxi] Many countries in the region have limited resources for education and training, which makes it difficult to develop and implement effective digital capacity-building programs. In addition, the region faces significant challenges related to poverty and inequality, which limit access to education and training opportunities.[xxii]
- Another issue is the lack of infrastructure and resources to support digital capacity building. Many rural and remote areas in the region do not have access to reliable internet and other digital resources, which makes it difficult for people in these areas to access digital education and training programs.[xxiii]

To address these challenges, there is a need for increased investment in digital capacity-building programs in the region, targeting all the stakeholders, including investment in education and training, infrastructure, and resources. This can be done through partnerships between governments, private sector organisations, and non-profit organisations. Such partnerships can help leverage resources and expertise to develop and implement effective digital capacity-building programs accessible to all people in the region, regardless of their location or socio-economic status.

Gender gaps in access to and usage of digital technology, in particular, mobile devices and the internet

The gender divide is especially pronounced in South Asian countries, where women are 36% less likely to use the Internet than men.[xxiv]

- In South Asia, the mobile internet gender gap had narrowed significantly, from 67% in 2017 to 36% in 2020, but widened to 41% in 2021 (due to continued increased adoption among men but no notable increase among women, particularly in India where men's mobile internet use increased from 45% to 51% while women's remained flat at 30%). GSMA State of Mobile Internet Connectivity Report 2023 noted that in 2022, there were no 'significant' changes in the gap where there have been 'notable' changes before.[xxv] Gender gap in mobile internet use in South Asia stands at 41% in 2022 (same as in 2021).
- There is also an increase noted in the smartphone gender gap.[xxvi] Gender and cultural norms are also limiting the uptake of digital payments, particularly among women. There are many other factors as well which contribute to women and girls' ongoing lack of access to digital technology and usage, such as cross-cutting barriers, social norms, poor or lack of infrastructures, lack of safeguarding mechanisms, discrimination, and the economic and social consequences of the recent pandemic.[xxvii]
- The most significant barrier to girls' and women's use of phones, and technology in general, is the lack of agency due to restrictive social norms. For example, in India and Bangladesh, male family members, particularly brothers and fathers, are girls' primary source of a phone (device). As such, girls often lack the consistent access and support required to understand the full potential of mobiles (devices) and the internet, and so, they are less likely to use mobile internet and develop digital literacy skills.[xxviii]
- GSMA's State of Mobile Internet Connectivity 2023 report found that there is a 'significant gap in affordability between men and women for mobile data', especially in the South Asia (and Middle East & North Africa), due to 'larger gender gaps in wages and employment'. It found that 'on average, the cost of an entry-level, internet-enabled handset in LMICs is 24% of monthly income for women, compared to 13% for men.'[xxix]
- It is worth noting that if the gender gap in mobile ownership and usage is reduced, it could generate a revenue increase anywhere from 14% to 44% for the mobile industry in countries such as India, Bangladesh, and Pakistan.[xxx]

Rural-urban gaps in digital usage are decreasing

In 2022, the rural-urban gap in South Asia is at 30%, which is what it used to be in 2019 (having increased in 2021).[xxxi] Rural communities in South Asia are adopting mobile internet at a much faster rate than urban communities.[xxxii] However, low adoption across the most populous countries in the region (Bangladesh, India, and Pakistan) - as well as limited adoption by low-income groups and women - continues to persist.[xxxiii]

Mobile connectivity and usage discrepancies

According to GSMA State of Mobile Internet Connectivity report, 31% are connected with a smartphone and 12% are connected without smartphone (12%) in South Asia. 4% have a smartphone but are not connected, 12% are using another type of phone but are not connected and 36% have no device.[xxxiv]

- The levels of connectivity for adults aged 18 and above have improved from 44% to 63% in South Asia, but more than a third were still unconnected in South Asia.[xxxv]
- 12% of the South Asia population (12%) are using mobile services but are not connected to the mobile internet and have a basic or feature phone.[xxxvi]
- The quality of mobile internet service has greatly advanced since 2015 and presently extends to 95% of the population. Nonetheless, according to the 2021 report on the status of mobile internet connectivity, even though a mobile broadband network is available to them, there are still 1.1 billion individuals in South Asia who are not utilising mobile internet. This discrepancy in usage is the largest worldwide, standing at 61%.[xxxvii]
- Furthermore, and important to note, the ICT infrastructure to access the internet and computers is low in the region (availability of electricity for example is a big barrier to the use of digital technologies).[xxxviii]
- Moreover, even though the region has the highest percentage (61%) of people living within the range of a telecommunications network, they are not using the internet. It was noted that the low levels of adoption in populous countries (Pakistan, India and Bangladesh) and limited adoption by low-income groups and women is a driver behind this.[xxxix]

Data unaffordability

South Asia is noted as a region where 5 GB affordability is less than 2% of average monthly income but when considering the average income of the bottom 40% the 5 GB can cost more than 2% of monthly income for the poorest population segments.[xl]

- Across all South Asian countries, the cost of a 5GB broadband package is unaffordable for the bottom 40% of the population, with the average cost particularly high in Afghanistan and Pakistan.[xli] However, it is necessary to note that the price of 1.5 GB of mobile broadband data in the region is relatively more affordable than fixed broadband.[xlii] The affordability of 1 GB has significantly improved (50%) in South Asia in 2022.[xliii]
- Furthermore, according to the UN Roadmap for Digital Cooperation, installing traditional broadband connections is costly. While it is noted that wireless technology can support the further spread of broadband coverage, 'connectivity providers' do not have the incentive to do so, given the lower purchasing power in low- and middle-income countries (LMICs).[xliv]

Lack of public trust in technology

Establishing public trust with digital technologies in South Asia can be challenging due to a range of factors.

- Misinformation and disinformation, particularly through social media platforms, are widespread, which can lead to mistrust. Online safety is also a major concern, particularly for vulnerable groups such as women, girls, children, and minorities, who are often targets of cyberbullying, harassment, and exploitation, which further contributes to the digital divide.[xlv]

- Additionally, there are issues around data privacy and security. The lack of proper regulations and enforcement mechanisms in the region often leads to breaches of personal data, leading to further mistrust in the system. The lack of digital literacy and awareness also compounds online safety and privacy issues.

These challenges can be even more pronounced in the context of Social and Behaviour Change (SBC). SBC work often involves sensitive topics such as health, gender, and social norms, which require high trust and confidentiality. Misinformation and disinformation can derail SBC work, and online safety concerns and exploitation can prevent vulnerable groups from participating.

Challenges

The affordability of devices and data hinders digital usage.

For an average person living in South Asia, buying a smartphone could cost them about half of their monthly income[xlvi], with the cheapest internet enabled mobile device costing 25% of monthly GDP per capita.[xlvii] Data costs on the other hand reduced significantly in 2020 as a result of the COVID-19 pandemic, with 1GB costing on average 0.6% of the monthly Gross Domestic Product (GDP) per capita.[xlviii] However, international bandwidth is still more expensive in landlocked countries like Nepal.[xlix]

Inefficient digital transformation of governments' core functions and services.

The digitalisation of governments in South Asia is slowly progressing, with political support. However, more robust improvements in integration, data protection and cybersecurity, and increasing digital access for marginalised and vulnerable communities must be made.[l] In the region, only Sri Lanka (85th) and India (100th) scored position in the top 100 of the UN E-Government Development Survey of 2020.[li]

Immature online services hinder the development of the digital ecosystem.

Across South Asia, digital financial services (DFS) are still lagging compared to other regions.[lii] According to South Asia's Digital Opportunity report by the World Bank Group, most countries in South Asia are in the 'early stages of DFS maturity' (*4 stages overall to being fully digital*). Bhutan, Pakistan, Maldives, Afghanistan and Nepal are at stage 1 with basic access to transaction accounts, while Bangladesh and Sri Lanka are at stage 2 with more 'intensive usage of transaction account for digital payments' while India is at stage 3 'moving beyond to other DFS (such as insurance, credit etc)'. The infrastructure, payment systems, gender and cultural norms, trust, and digital literacy are just a few barriers to the uptake and improvement of DFS.

Digital financial services (and digital entrepreneurship) exponentially help increase access to services for underserved populations and achieve financial inclusion.[liii]

Lack of data protection measures results in a lack of trust in using digital platforms.

Countries in South Asia are at different stages of developing a trusted digital environment, and they often lack data protection measures on par with emerging global best practices.[liv] Furthermore, most countries allow and facilitate data sharing and data use without establishing safeguards for data transactions.[lv]

Lack of Public trust in technology

While technology is often perceived to be a neutral source, it can discriminate, marginalise, and be prejudiced against certain groups of people. The exclusion of these certain groups contributes to their lack of familiarity, comfort, and awareness when using technology, thus the prevalent digital divide in South Asia.[lvi] Furthermore, concerns about safeguarding private information is contributing to people being suspicious and hesitant to use digital technologies.[lvii]

Emerging Trends and Opportunities

Social media is digitally boosting the lives of a large young population.

South Asia has one of the world's largest populations of young people, representing most of the mobile internet users in their countries.[lviii] Although social media penetration is still relatively low in the region, there was still a 48% increase of social media users in India, during 2019/20.[lix] This trend provides an opportunity to utilise social media as a gateway for people to go digital.

A large population of unbanked and underbanked persons is pushing companies to develop digital financial service offerings.

The introduction and uptake of mobile phones and internet access have created opportunities for institutions to reach the traditionally unbanked and underbanked. It can also provide support for these communities to integrate digitally.[lx]

Increasing mobile and internet penetration has increased e-commerce and digital financial services.

The development of digital payment systems has made e-commerce more accessible, with its convenience and reduced time demand. The affordability and accessibility situation of data in the region also makes digital users more likely to participate in e-commerce.[lxi] Additionally, digital financial services (DFS) have provided families and organisations with more affordable and convenient ways of sending and receiving money. While Fintech start-ups (digital entrepreneurship) have rapidly emerged across South Asia, factors such as lack of funding, talent, and unfavourable market environments have hindered progress.[lxii]

Development of digital infrastructure and supportive strategies.

Many countries in South Asia have introduced supportive policies towards driving the development of their digital infrastructure. A few examples are the Digital India Programme, The Digital Pakistan Policy of 2018 and 2021, The 2019 Digital Nepal Framework and Bhutan's Digital Drukyul initiative (approved in 2019).

Artificial intelligence

Artificial intelligence (AI) has the potential to help governments and the humanitarian sector start *anticipating* crises instead of just *reacting*.[lxiii] In South Asia, AI is an emerging market with countries starting to project how much it will contribute to their economy and its impact in key sectors such as healthcare, agriculture, education, etc, and adopting laws/policies around it as

questions about 'data privacy, mass surveillance and the infringement of fundamental rights' comes into question.[lxiv]

Virtual Reality (especially for young children)

Virtual reality (VR) can be used to create immersive experiences that help people understand and connect with certain causes. VR also has the potential to change how children see and interact with the world.[lxv] In the South Asian context, virtual reality still has a long way to go with the development of children-friendly content, affordability, and accessibility, especially in rural and hard-to reach areas.

Digital Public Goods

Digital public goods are essential in unlocking the full potential of digital technologies and data to achieve Sustainable Development Goals, particularly for low- and middle-income countries.[lxvi] Digital public goods are defined as "open-source software, open data, open AI models, open standards and open content."[lxvii] Information online should be readily available and accessible to all, especially for the most vulnerable and marginalised, to achieve the shared vision for a more equitable world.

To note: ***Digital Public Goods Alliance*** is a multi-stakeholder (UNICEF is a co-founder) initiative to accelerate the attainment of Sustainable Development Goals in low- and middle-income countries by facilitating the discovery, development, use of, and investment in digital public goods.[lxviii] The Digital Public Goods Alliance also has a DPG registry which hosts all recognised digital public goods.[lxix]

Refer to Annex 2 for Digital Public Goods (DPG) case studies.

Annexes

Annex 1 – Inspiration to be Digital: Case Studies from South Asia

Afghanistan

- During COVID-19, the Ministry of Higher Education made digitized educational content available to students through the Higher Education Learning Management System (HELMS), hosted through Amazon Web Services.[lxx] In addition, the Government developed educational content in collaboration with six leading universities on the global ed-tech platform EdX, known as AfghanX. AfghanX is supported by the Central e-Learning Committee of the Ministry of Higher Education, which provides academic and administrative support to higher education institutions.[lxxi]

Bangladesh

- The Government of Bangladesh established 5,000 Union Digital Centres (UDCs) across the country, making digital services more accessible.[lxxii] Hundreds of services have also been simplified, particularly through the efforts of the Access to Information (a2i) programme.[lxxiii]

- Preventing child marriage: The Certification Before Marriage Registration to Stop Child Marriage Project has developed an Unstructured Supplementary Service Data (USSD)-based application that allows marriage registrars to cross-check the age of individuals seeking marriage against birth registration records, as well as allows the community to report cases of suspected child marriage by Short Messaging Service (SMS). The 2017 pilot of this application identified 3,750 underage individuals among 50,000 requests.[lxxiv]

- In 2020, the Bangladesh Directorate General Health Services (DGHS) initiated a national digital health strategy to improve the accessibility and quality of services.[lxxv] It scaled up its e-TB Manager, a web-based patient management tool, to promote more effective and efficient patent care, and to help programmes manage medicines and cases.[lxxvi]

Bhutan

- Ten-Drel is a locally developed platform that is a joint initiative of the National Council of Bhutan (NCB) and UNDP.[lxxvii] This platform will serve a space for vibrant public discourse, debate, and discussion. The goal is to place citizens' voices at the centre of public decision-making, critical for building trust between the citizens and the government.

- Ten-Drel is a locally developed platform that is a joint initiative of the National Council of Bhutan (NCB) and UNDP. The goal of this platform is to place citizens' voices at the centre of public decision-making, critical for building greater trust between citizens and the government.[lxxviii]

India

- To connect with rural farmers, ITC (India Tobacco Company) created e-choupals (meaning 'village meeting place'). These were internet kiosks operated by an ITC facilitator. The kiosks

enabled farmers to access useful information including government schemes, crop prices, and weather data, and also sell their produce via ITC hubs to obtain a higher market price than selling via a middleman. The initiative has run in more than 40,000 villages and has 4 million farmer participants.[lxxix]

- To streamline registration, appointments, management, and certification of COVID-19 vaccinations, the Ministry of Health and Family Welfare rolled out the Covid Vaccine Intelligence Network (CoWIN) in January 2021. CoWIN has been integrated with Aadhaar and allows other identification to be provided for registration, which reduces data entry at vaccination centres and allows provision of paper certificates at the vaccination centres. By October 2021, India had crossed 1 billion vaccinations managed on CoWIN.[lxxx]

Maldives

- The World Bank showcased several Maldivian homegrown digital start-ups at a roundtable in late 2021. One of which was [Hologo](#), a digital education start-up which combines augmented reality, virtual reality and immersive experiences for teachers and students to provide them with immersive learning experiences.[lxxxi]

Nepal

- Integrated Tax System, which facilitates registration for various taxation services, online payments, and interoperability with other taxation and financial management systems, 100 per cent of value-added tax (VAT) returns have been filed online through this system, easing the process for taxpayers and authorities, while also increasing overall revenue.[lxxxii]

Pakistan

- The Ehsaas Emergency Cash program was launched in April 2020 to reduce the economic burden on 12 million poor families caused by the pandemic. 4.5 million existing beneficiaries of the Benazir Income Support Program (BISP) received a top-up to their usual payments, and the Government used a USSD registration process, integrated with the national ID system and the National Socio-Economy Registry (NSER), to cover an additional 7.5 million families. The rapid and successful rollout of Ehsaas was enabled by having the national ID system and NSER database in place.[lxxxiii]

Sri Lanka

- The "e-Grama Niladhari" program is an e-Governance initiative implemented by the government of Sri Lanka, which aims to improve the delivery of government services to the rural population.[lxxxiv] The program involves the deployment of "e-Grama Niladhari" officers, who are trained village-level officials, equipped with tablets and other digital devices.[lxxxv] These officers are responsible for providing various government services, such as issuing certificates and permits and accepting payments, to villagers through digital channels. This helps to reduce the need for villagers to travel long distances to access government services and also improves the transparency and efficiency of service delivery. The program was launched in 2016 and has since been expanded to cover all villages in the country.[lxxxvi] It has been successful in increasing access to government services for the rural population and has also helped to improve the transparency and efficiency of service delivery.

Annex 2 – Digital Public Goods (DPGs) case studies

Pathfinder, StartUp Lab

UNICEF's Ghana office is a Pathfinder and runs the StartUp Lab, which assists sustainable entrepreneurs to develop their products and business models. The lab also serves as an incubator for open-source startups and educates those considering it. The objective is to prepare DPGs from the StartUp Lab to apply for UNICEF's Venture Fund investment. The Country Office evaluates the StartUp Lab's solutions through its programmatic sections and collaborates with national institutional partners to incorporate open-source work into broader policy solutions.

UNICEF employs various tools, including the StartUp Lab, Venture Fund, and Innovation Hubs, to support innovation at different stages. In Ghana, the UNICEF Country Office used this system to uncover and advance two DPGs: Bisa App and EduNOSS, as well as DPG nominee Project Konko. For more information visit this site.

UNICEF Philippines

UNICEF Philippines started their DPGs Pathfinding Pilot in early 2021 with two objectives. Firstly, to discover how existing technical country capacity can be advantageous to DPGs and improving Technology for Development (T4D) that are relevant to UNICEF and the government's programmes. And secondly, developing a tool that would allow the sharing of knowledge and capacity among sectors. For more information visit this site.

UNICEF Innovation Funds

UNICEF Innovation funds exclusively invest in open-source technology solutions from new and emerging companies. Through its investments, UNICEF is strengthening communities, increasing the number of DPGs, and having an impact on children. For more information visit this site.

Safe YOU: Virtual Safe Space for Women

Safe YOU was launched in Northern Iraq (Kurdistan) in partnership with UNFPA Iraq and UNFPA Armenia in 2021. With the help of UNICEF Innovation, Safe YOU was recognised as a Digital Public Good (DPG), a digital tool aimed at achieving sustainable development goal number 5 (Gender Equality) as set by the United Nations Secretary General's 2020 Roadmap for Digital Cooperation. Safe YOU aims to be a key resource for evidence-based policy-making through our sophisticated AI data analysis system. This will lead to the prediction & prevention of Violence Against Women & Girls. For more information, visit the site here.

Annex 3 – UNICEF Digital Platforms

U-Report is a messaging tool that enables young people to interact with and raise their voices on issues that are important to them. It is operated by local government, organizations, and young people who record and gather information, tips, and opinions from mobile device users on a range of issues. Based on the data and insights gathered by U-`reporters, the results are shared with the relevant communities and stakeholders. For more information on U-Report, visit this site.

Access UReport South Asia here: https://southasia.ureport.in/

RapidPro collects data via short message service (SMS) and other communication channels (e.g. voice; social media channels, such as Facebook Messenger, Telegram, and WhatsApp) to enable real-time data collection and mass communication with target end-users, including beneficiaries and frontline workers. The technology allows users to design, pilot, and scale direct mobile outreach services without the help of a software developer in both normal development contexts and humanitarian emergencies.
For more information on RapidPro, visit this site.

Internet of Good Things (IoGT) aims to build people's and communities' knowledge by closing the digital divide. For more information on IoGT, visit this site.

Access South Asia IoGT here: https://sa.goodinternet.org/en/

All Children Learning is a regionally focused platform designed to strengthen assessment capacity and learning. The platform offers four different guidance (government, emergencies, development, and teaching) to improve the users' assessment capacity and learning. For more information on All Children Learning, visit this site.

AGORA is a platform that provides learning opportunities to UNICEF's staff, partners, and supporters. The learning opportunities range from specific thematic areas to strategies to languages to career support. For more information on AGORA, visit this site.

INFORM provides UNICEF and partners with a turnkey solution for field-based data collection, management and visualization. Inform supports UNICEF's strategic outcomes and strengthens our position as the global leader in data for children.

For more information: visit this site.

Endnotes

Definitions to Note:

- **Fixed Broadband Internet**: High-speed connectivity for public use of at least 256 Kbit/s or more in one or both directions (downloading and uploading). It includes cable modem Internet connections, DSL Internet connections of at least 256 Kbit/s or higher, fibre and other fixed broadband technology connections (such as satellite broadband Internet, Ethernet LANs, fixed-wireless access, Wireless Local Area Network, WiMAX, etc.).
- **Mobile Broadband**: Mobile broadband technology allows for a wireless wide area network (WWAN). In simple terms, it provides wireless high-speed Internet access to portable devices by way of radio towers.[lxxxvii]
- **Gross Domestic Product (GDP) per Capita**: is the sum of gross value added by all resident producers in the economy plus any product taxes (fewer subsidies) not included in the valuation of output, divided by midyear population.[lxxxviii]
- **Unbanked**: people with no bank account[lxxxix]
- **Underbanked**: people with insufficient access to banking[xc]

---

[i] https://data.worldbank.org/indicator/SP.POP.TOTL?locations=8S

[ii] https://data.worldbank.org/indicator/SP.POP.TOTL.FE.ZS?locations=8S

[iii] https://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=8S

[iv] https://www.worldometers.info/world-population/southern-asia-population/

[v] https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=8S

[vi] https://www.populationpyramid.net/southern-asia/2022/

[vii] https://data.worldbank.org/indicator/SL.EMP.TOTL.SP.ZS?locations=8S

[viii] https://openknowledge.worldbank.org/server/api/core/bitstreams/832c1305-815b-5300-bd01-bb8906707831/content

[ix] https://openknowledge.worldbank.org/bitstream/handle/10986/37230/P172300097cd82032089610283e77293d89.pdf?sequence=7&isAllowed=y

[x] https://openknowledge.worldbank.org/bitstream/handle/10986/37230/P172300097cd82032089610283e77293d89.pdf?sequence=7&isAllowed=y

[xi] https://www.gsma.com/r/wp-content/uploads/2023/10/The-State-of-Mobile-Internet-Connectivity-Report-2023.pdf?utm_source=website&utm_medium=button&utm_campaign=somic23

[xii] https://www.gsma.com/r/wp-content/uploads/2023/10/The-State-of-Mobile-Internet-Connectivity-Report-2023.pdf?utm_source=website&utm_medium=button&utm_campaign=somic23

[xiii] https://www.gsma.com/mobilefordevelopment/blog/the-state-of-mobile-internet-connectivity-in-south-asia/

[xiv] https://www.gsma.com/mobileeconomy/wp-content/uploads/2023/03/270223-The-Mobile-Economy-2023.pdf

[xv] https://www.gsma.com/r/wp-content/uploads/2023/10/The-State-of-Mobile-Internet-Connectivity-Report-2023.pdf?utm_source=website&utm_medium=button&utm_campaign=somic23

[xvi] https://nielit.gov.in/ajmer/content/national-digital-literacy-mission

[xvii] https://www.icta.lk/digital-srilanka/

[xviii] https://openknowledge.worldbank.org/server/api/core/bitstreams/4044c18e-d6ba-50aa-8e3f-efade3ca5ab1/content

[xix] https://womensdigitalleague.com/

[xx] https://nepal.girlsintech.org/about/

[xxi] https://openknowledge.worldbank.org/server/api/core/bitstreams/4044c18e-d6ba-50aa-8e3f-efade3ca5ab1/content

[xxii] https://www.globalpartnership.org/where-we-work/south-asia/education-south-asia

[xxiii] https://www.worldbank.org/en/topic/digitaldevelopment/brief/digital-divide-in-south-asia

[xxiv] https://www.itu.int/hub/2022/05/digital-gender-divide-asia-unicef-rosa/

[xxv] https://www.gsma.com/r/wp-content/uploads/2023/10/The-State-of-Mobile-Internet-Connectivity-Report-2023.pdf?utm_source=website&utm_medium=button&utm_campaign=somic23

[xxvi] https://www.gsma.com/r/wp-content/uploads/2022/06/The-Mobile-Gender-Gap-Report-2022.pdf?utm_source=website&utm_medium=download-button&utm_campaign=gender-gap-2022%20

xxvii https://www.gsma.com/mobilefordevelopment/blog/the-state-of-mobile-internet-connectivity-in-south-asia/
xxviii https://www.unicef.org/rosa/media/4201/file/UNICEF%20South%20Asia%20Gender%20Counts%20Report.pdf
xxix https://www.gsma.com/r/wp-content/uploads/2023/10/The-State-of-Mobile-Internet-Connectivity-Report-2023.pdf?utm_source=website&utm_medium=button&utm_campaign=somic23
xxx https://www.gsma.com/r/wp-content/uploads/2022/06/The-Mobile-Gender-Gap-Report-2022.pdf?utm_source=website&utm_medium=download-button&utm_campaign=gender-gap-2022
xxxi https://www.gsma.com/r/wp-content/uploads/2023/10/The-State-of-Mobile-Internet-Connectivity-Report-2023.pdf?utm_source=website&utm_medium=button&utm_campaign=somic23
xxxii https://www.gsma.com/mobilefordevelopment/blog/the-state-of-mobile-internet-connectivity-in-south-asia/
xxxiii

https://openknowledge.worldbank.org/bitstream/handle/10986/37230/P172300097cd82032089610283e77293d89.pdf?sequence=7&isAllowed=y
xxxiv https://www.gsma.com/r/wp-content/uploads/2023/10/The-State-of-Mobile-Internet-Connectivity-Report-2023.pdf?utm_source=website&utm_medium=button&utm_campaign=somic23
xxxv https://www.gsma.com/r/wp-content/uploads/2023/10/The-State-of-Mobile-Internet-Connectivity-Report-2023.pdf?utm_source=website&utm_medium=button&utm_campaign=somic23
xxxvi https://www.gsma.com/r/wp-content/uploads/2023/10/The-State-of-Mobile-Internet-Connectivity-Report-2023.pdf?utm_source=website&utm_medium=button&utm_campaign=somic23
xxxvii https://www.gsma.com/mobilefordevelopment/blog/the-state-of-mobile-internet-connectivity-in-south-asia/
xxxviii https://openknowledge.worldbank.org/server/api/core/bitstreams/4044c18e-d6ba-50aa-8e3f-efade3ca5ab1/content
xxxix https://openknowledge.worldbank.org/server/api/core/bitstreams/4044c18e-d6ba-50aa-8e3f-efade3ca5ab1/content
xl https://www.gsma.com/r/wp-content/uploads/2023/10/The-State-of-Mobile-Internet-Connectivity-Report-2023.pdf?utm_source=website&utm_medium=button&utm_campaign=somic23
xli

https://openknowledge.worldbank.org/bitstream/handle/10986/37230/P172300097cd82032089610283e77293d89.pdf?sequence=7&isAllowed=y
xlii

https://openknowledge.worldbank.org/bitstream/handle/10986/37230/P172300097cd82032089610283e77293d89.pdf?sequence=7&isAllowed=y
xliii https://www.gsma.com/r/wp-content/uploads/2023/10/The-State-of-Mobile-Internet-Connectivity-Report-2023.pdf?utm_source=website&utm_medium=button&utm_campaign=somic23
xliv https://documents-dds-ny.un.org/doc/UNDOC/GEN/N20/102/51/PDF/N2010251.pdf?OpenElement
xlv https://openknowledge.worldbank.org/bitstream/handle/10986/36156/9781464817199.pdf
xlvi https://a4ai.org/research/device-pricing-2021/
xlvii https://www.gsma.com/mobilefordevelopment/blog/the-state-of-mobile-internet-connectivity-in-south-asia/
xlviii https://www.gsma.com/mobilefordevelopment/blog/the-state-of-mobile-internet-connectivity-in-south-asia/
xlix https://www.worldbank.org/en/topic/digitaldevelopment/publication/south-asia-s-digital-opportunity-accelerating-growth-transforming-lives
l https://www.worldbank.org/en/topic/digitaldevelopment/publication/south-asia-s-digital-opportunity-accelerating-growth-transforming-lives
li https://openknowledge.worldbank.org/server/api/core/bitstreams/4044c18e-d6ba-50aa-8e3f-efade3ca5ab1/content
lii https://www.worldbank.org/en/topic/digitaldevelopment/publication/south-asia-s-digital-opportunity-accelerating-growth-transforming-lives
liii https://www.worldbank.org/en/topic/digitaldevelopment/publication/south-asia-s-digital-opportunity-accelerating-growth-transforming-lives
liv https://openknowledge.worldbank.org/server/api/core/bitstreams/778a3dc7-9da1-5722-a128-50b6b2aa38d7/content
lv https://openknowledge.worldbank.org/server/api/core/bitstreams/778a3dc7-9da1-5722-a128-50b6b2aa38d7/content
lvi https://openknowledge.worldbank.org/bitstream/handle/10986/36156/9781464817199.pdf
lvii https://openknowledge.worldbank.org/bitstream/handle/10986/36156/9781464817199.pdf
lviii https://www2.deloitte.com/content/dam/Deloitte/cn/Documents/technology-media-telecommunications/deloitte-cn-tmt-inclusion-en-200924.pdf
lix https://www2.deloitte.com/content/dam/Deloitte/cn/Documents/technology-media-telecommunications/deloitte-cn-tmt-inclusion-en-200924.pdf

lx https://www2.deloitte.com/content/dam/Deloitte/cn/Documents/technology-media-telecommunications/deloitte-cn-tmt-inclusion-en-200924.pdf
lxi https://www2.deloitte.com/content/dam/Deloitte/cn/Documents/technology-media-telecommunications/deloitte-cn-tmt-inclusion-en-200924.pdf
lxii
https://openknowledge.worldbank.org/bitstream/handle/10986/37230/P172300097cd82032089610283e77293d89.pdf?sequence=7&isAllowed=y

lxiii Beduschi, A., "Harnessing the potential of artificial intelligence for humanitarian action: Opportunities and risks", International Review of the Red Cross, Vol 104 (919), 2022, https://international-review.icrc.org/sites/default/files/reviews-pdf/2022-06/harnessing-the-potential-of-artificial-intelligence-for-humanitarian-action-919.pdf

lxiv ISAS and Konrad Adenauer Stiftung, "REGULATING ARTIFICIAL INTELLIGENCE IN SOUTH ASIA: PROJECTIONS FOR THE FUTURE", https://www.isas.nus.edu.sg/wp-content/uploads/2020/03/ISAS-KAS-AI-Special-Report.pdf
lxv UNICEF, "Augmented Realoity/Virtual Reality for Good", https://www.unicef.org/innovation/XR

lxvi https://www.un.org/en/content/digital-cooperationroadmap/assets/pdf/Roadmap_for_Digital_Cooperation_EN.pdf
lxvii https://www.unicef.org/innovation/stories/unicefs-open-source-approach-innovation
lxviii https://digitalpublicgoods.net/who-we-are/
lxix https://digitalpublicgoods.net/registry/
lxx https://link.springer.com/article/10.1007/s10639-021-10517-z
lxxi https://www.edx.org/school/afghanx
lxxii https://a2i.gov.bd/wp-content/uploads/2022/09/a2i-English-Brochure-2016-1.pdf
lxxiii https://a2i.gov.bd/wp-content/uploads/2022/09/a2i-English-Brochure-2016-1.pdf
lxxiv http://crvs.gov.bd/assets/pdf/Keynote-paper-5.1_Mustafizur_Rahman.pdf
lxxv https://www.mtapsprogram.org/news-blog/scaling-up-a-digital-tool-to-end-tb-in-bangladesh/
lxxvi https://www.mtapsprogram.org/news-blog/scaling-up-a-digital-tool-to-end-tb-in-bangladesh/
lxxvii https://www.undp.org/bhutan/press-releases/ten-drel-online-platform-enhance-citizen-engagement-decision-making
lxxviii https://www.undp.org/bhutan/press-releases/ten-drel-online-platform-enhance-citizen-engagement-decision-making
lxxix https://www.youthkiawaaz.com/2011/08/itc-e-choupal-empowering-rural-india-research/
lxxx https://www.exemplars.health/emerging-topics/epidemic-preparedness-and-response/digital-health-tools/cowin-in-india
lxxxi https://www.worldbank.org/en/news/feature/2022/02/08/realising-a-digital-future-for-maldives
lxxxii https://www.undp.org/nepal/blog/not-so-taxing-online-tax-system-decade-later
lxxxiii https://thedocs.worldbank.org/en/doc/760541593464535534-0090022020/original/WorldBankG2PxCOVID19PakistanBrief.pdf
lxxxiv https://www.pubad.gov.lk/web/images/circulars/2021/E/1636090368-23-2021-e.pdf
lxxxv https://www.icta.lk/news/tablets-for-all-grama-niladharies/
lxxxvi
http://www.cabinetoffice.gov.lk/cab/index.php?option=com_content&view=article&id=16&Itemid=49&lang=en&dID=11009
lxxxvii https://www.lenovo.com/us/en/faqs/pc-life-faqs/what-is-mobile-broadband/?orgRef=https%253A%252F%252Fwww.google.com%252F
lxxxviii https://databank.worldbank.org/metadataglossary/statistical-capacity-indicators/series/5.51.01.10.gdp#:~:text=GDP%20per%20capita%20is%20the,divided%20by%20mid%2Dyear%20population.
lxxxix https://www2.deloitte.com/content/dam/Deloitte/cn/Documents/technology-media-telecommunications/deloitte-cn-tmt-inclusion-en-200924.pdf

xc https://www2.deloitte.com/content/dam/Deloitte/cn/Documents/technology-media-telecommunications/deloitte-cn-tmt-inclusion-en-200924.pdf