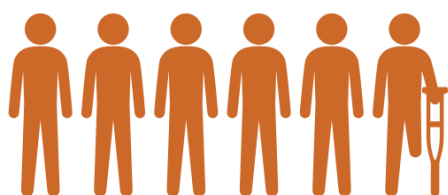




*Building on the human rights perspective and business case for digital accessibility presented in the [Internet Society Policy Brief on Accessibility](#),<sup>1</sup> this issues paper focuses on the challenges and opportunities for improving persons' with disabilities access to the Internet in the Asia-Pacific region. Please refer to the policy brief for an introduction to the topic.*

## A. The Issues

**1. One in six people in the Asia-Pacific region lives with disability, and this is likely to increase.<sup>2</sup>**



**650** million  
women, men and  
children

This number is likely to increase as a result of population ageing, climate-related disasters, chronic health conditions, road traffic injuries and poor working conditions, among other factors.

Priority issues of the Asia-Pacific that are being addressed using information and communication technologies (ICTs) need to be disability-inclusive. For instance:

**Asia-Pacific is the world's most disaster prone region.<sup>3</sup>** Persons with disabilities are 2-4 times more likely to be killed in disasters in the Asia-Pacific region.<sup>4</sup> The disproportionate risk faced by persons with disabilities in disaster situations is a result of the embedded inequalities of accessibility in preparedness planning, particularly in the dissemination of early warning and other information that are not disability-inclusive.

**There is a pandemic of violence against women and girls with disabilities.** Available data suggests that women with disabilities are at least 1.5 times more likely to be physically and sexually abused than women without disabilities—although the actual figure may be up to ten times more likely.

In Australia, for example, it has been estimated that 70 per cent of women with disabilities are survivors of violent sexual assaults. Amongst Australian women with learning disabilities, as many as 90 per cent have experienced sexual abuse—more than two-thirds of whom were first abused as children.<sup>5</sup>

The Internet is increasingly being used to prevent violence against women and girls—through phone apps, urban mapping, online training, virtual support networks, and other tools and platforms that should be disability-inclusive.

<sup>1</sup> Internet Society, "Internet Accessibility - Internet Use by Persons with Disabilities: Moving Forward," November 2012, <http://www.internetsociety.org/doc/internet-accessibility-internet-use-persons-disabilities-moving-forward>.

<sup>2</sup> ESCAP, "Disability in Asia and the Pacific: The Facts," <http://www.unescap.org/sites/default/files/Disability%20The%20Facts.pdf>.

<sup>3</sup> See Issues Paper on Disaster Risk Reduction at <http://internetsociety.org/ridd/sites/internetsociety.org.afpif-2016/files/uploads/RIDD-Issues-Package-Final.pdf>.

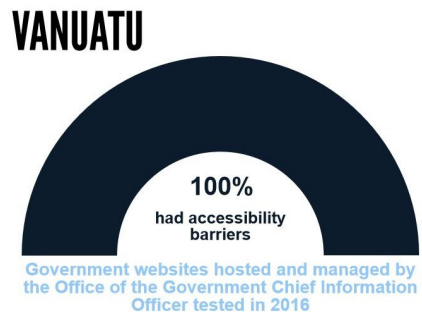
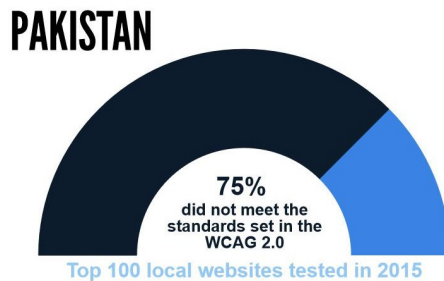
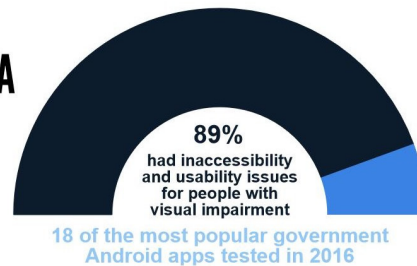
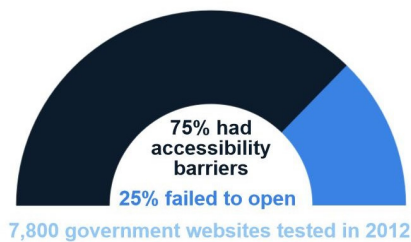
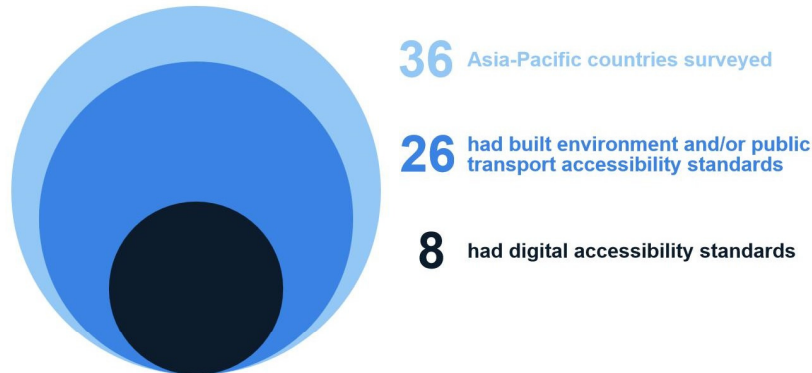
<sup>4</sup> ESCAP, "Disability in Asia and the Pacific: The Facts," <http://www.unescap.org/sites/default/files/Disability%20The%20Facts.pdf>.

<sup>5</sup> Ibid.

## 2. But, multiple barriers are preventing persons with disabilities from accessing and using the Internet.

Person with disabilities often face barriers that restrict them from participating in society on an equal basis, including the access to and use of the Internet. As information and services related to education, employment, healthcare, banking and commerce are moving to online platforms, it is more important than ever to ensure that these online information and services are accessible to persons with disabilities.

Greater percentage of persons with disabilities live in developing countries. As a group (whether in developed or developing countries) they have low incomes. Access to the Internet may be cost prohibitive.



Sources: World Health Organization and World Bank, *World Report on Disability* (2011), [http://www.who.int/disabilities/world\\_report/2011/en/](http://www.who.int/disabilities/world_report/2011/en/); Centre for Internet and Society and Hans Foundation, "Accessibility of Government Websites in India: A Report," 26 September 2012, Available from <http://cis-india.org/accessibility/accessibility-of-govt-websites.pdf>; Nirmita Narasimhan, "We tested 18 government apps, and most are not fully accessible to the disabled," *Factor Daily*, 31 August 2016, <http://factordaily.com/tested-18-government-apps-citizens-found-accessibility-issues-disabled/>; Muhammad Shabbir, "An Issue Paper on the State and Potential of Web Accessibility for Persons with Disabilities in Pakistan," Internet Society and BytesForAll Pakistan, 2015; and Government of Vanuatu, "Right to Information Web Accessibility Guidelines for Web Developers and Content Managers," September 2016, [https://ogcio.gov.vu/images/RTI\\_Vanuatu\\_Accessibility\\_Guidelines\\_MF.pdf](https://ogcio.gov.vu/images/RTI_Vanuatu_Accessibility_Guidelines_MF.pdf).

## 3. The accessibility of mobile devices and apps are critical for the Asia-Pacific region, as the emerging economies of the Asia-Pacific are leapfrogging to mobile-first connectivity, with many first-time users going online via mobile devices.

## B. The Opportunities

### 1. 84% of Asia-Pacific countries have committed to empower individuals with disabilities.

The **Convention on the Rights of Persons with Disabilities (CRPD)** is a disability-specific human rights treaty that contains a specific article on accessibility (Article 9), mandating governments to take appropriate measures to ensure accessibility in the physical environment, transportation, information and communications, including ICTs. It further specifies that governments should take appropriate measures to promote access to new ICTs, including the Internet. In the Asia-Pacific region, 42 of 50 member countries (84%) of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) have ratified the CRPD.

In response to Article 9 of the CRPD, governments have developed policies, legislations and guidelines to ensure digital accessibility. In some countries, the focus is on the accessibility of websites (e.g., New Zealand), and in other countries the coverage is broader and includes other ICTs, such as mobile applications (e.g., Japan and the Republic of Korea). In many countries, compliance are expected from public sector organizations only, but in India and the Republic of Korea, private sector organizations are also expected to ensure that their products and services are accessible to persons with disabilities. Below is a summary in selected countries.<sup>6</sup>

<b>Australia</b>	Disability Discrimination Act, Advisory Notes on World Wide Web Access, created in 2002 and updated in 2010, contain guidelines for web accessibility. Australian government departments and agencies are required to adopt the WCAG.
<b>India</b>	Rights of Persons with Disabilities Act 2016 mandates the public and private sectors' conformance to accessibility standards, including ICT accessibility standards. <sup>7</sup> National Policy on Universal Electronic Accessibility 2013 focuses specifically on ensuring digital accessibility for persons with disabilities. <sup>8</sup> The 2009 Guidelines for Indian Government Websites, based on the WCAG, provides a set of standards that all official government websites need to comply with. <sup>9</sup>
<b>Japan</b>	JIS X 8341 is the ICT accessibility guidelines for older persons and persons with disabilities developed in 2004 with several updates. The JIS X 8341-3 was updated in 2010 and is compliant with WCAG 2.0. These guidelines are mandatory for national and local government agencies, but voluntary for private companies.
<b>Republic of Korea</b>	Anti-Discrimination and Remedy for Disabled Persons Act 2007 includes ICT accessibility obligations for both the public and private sectors. National Informatization Act 2009 covers ICT access and usage for persons with disabilities and older persons. Mobile Application Accessibility Guidelines 2012 (updated in 2015) is the world's first national-level standardization for the accessibility of mobile applications. <sup>10</sup>
<b>New Zealand</b>	The Government Web Standards 2.0 developed in 2009 have been superseded by the Web Accessibility Standard and the Web Usability Standard in 2013 that the public sector needs to comply with, but not the private sector. The standards apply to both publicly available web pages and internally facing web pages for employees. <sup>11</sup>

<sup>6</sup> Centre for Internet & Society and the Global Initiative for Inclusive Information and Communication Technologies, *Web Accessibility Policy Making: An International Perspective* (2012), <http://cis-india.org/accessibility/web-accessibility-policy-making-an-international-perspective>.

<sup>7</sup> Nirmita Narasimhan, "Digital accessibility in the Rights of Persons with Disabilities Act 2016," *Centre for Internet & Society*, <http://cis-india.org/accessibility/blog/digital-accessibility-in-the-rights-of-persons-with-disabilities-act-2016>.

<sup>8</sup> Ministry of Communications & Information Technology, Government of India, "National Policy on Universal Electronic Accessibility," October 2013, [http://www.ncert.nic.in/announcements/notices/pdf\\_files/Nationalpolicyonuniversal.pdf](http://www.ncert.nic.in/announcements/notices/pdf_files/Nationalpolicyonuniversal.pdf).

<sup>9</sup> Guidelines for Indian Government Websites, <http://web.guidelines.gov.in/>.

<sup>10</sup> ESCAP, *Accessibility for All: Good practices of accessibility in Asia and the Pacific to promote disability-inclusive development* (Bangkok, 2016), <http://www.unescap.org/resources/accessibility-all-good-practices-accessibility-asia-and-pacific-promote-disability>.

<sup>11</sup> New Zealand Government Web Toolkit, "About the Web Accessibility Standard," <https://webtoolkit.govt.nz/guidance/about-the-standards/about-the-web-accessibility-standard/>.

<b>Pakistan</b>	Draft National IT Policy 2016 includes Component 8: Persons with Disabilities <sup>12</sup>
<b>Philippines</b>	The Philippine Web Accessibility Group is mandated by the National Council on Disability Affairs, the Department of ICT, and the Department of Interior and Local Government to promote full compliance of all government websites.
<b>Sri Lanka</b>	The ICT Agency has developed "Web Standards for Developing Government Website of Sri Lanka," which includes addressing accessibility issues. This document needs to be further improved, and developed into a comprehensive set of standards and guidelines. <sup>13</sup>
<b>Thailand</b>	The Persons with Disabilities' Empowerment Act B.E. 2550 (2007), Provision 20 states the right of persons with disabilities to access and utilize public services and facilities, including ICTs. The Second National ICT Master Plan 2009-2013 includes specific targets to assist persons with disabilities, especially within the framework of universal service provisions. The Ministry of ICT developed the "Thai Web Content Accessibility Guidelines 2010" based on the WCAG 2.0. <sup>14</sup>
<b>Vanuatu</b>	Right to Information Web Accessibility Guidelines for Web Developers and Content Managers, developed in September 2016, is based on the WCAG 2.0. <sup>15</sup>
<b>Viet Nam</b>	Law on Persons with Disabilities 2010 includes Article 43: Information technology and communication <sup>16</sup>

**Yet, the *World Disability Report* states that progress in achieving digital accessibility has been slow despite legislation.<sup>17</sup>**

## 2. Good practices to consider to accelerate digital accessibility.

### Combine top-down and bottom-up legislative approaches

Top-down legislative approaches impose direct obligations on those producing ICT products and services to ensure accessibility, and bottom-up approaches include non-discrimination legislation that explicitly cover the accessibility of ICTs and protect the rights of users, including persons with disabilities.

The Republic of Korea combines both approaches with the 2009 National Informatization Act and the 2007 Korea Disability Discrimination Act. Evidence from a study in Europe shows that countries with strong legislation and follow-up mechanisms tend to achieve higher levels of ICT access.<sup>18</sup>

### Incentives, awareness and support are needed to boost the low enforcement and implementation of digital accessibility

For example, Viet Nam offers tax exemption and reduction, concessional loans and other support for the research, manufacture and production of products and services that enable persons with

<sup>12</sup> Ministry of Information Technology, National IT Policy 2016, Draft, December 2016, [http://moit.gov.pk/policies/National\\_IT\\_Policy\\_2016.pdf](http://moit.gov.pk/policies/National_IT_Policy_2016.pdf).

<sup>13</sup> ICT Agency, "Web Standards for Developing Government Website of Sri Lanka," January 2013, <http://docplayer.net/6169103-Web-standards-for-developing-government-website-of-sri-lanka.html>.

<sup>14</sup> Sawang Srisom, "Web Accessibility: ASEAN and Thailand Practices," presentation made at the ASEAN-ITU Seminar on ICT Accessibility and Assistive Technology for Equity in Society, in Bangkok, Thailand, on 25-26 August 2014.

<sup>15</sup> Government of Vanuatu, "Right to Information Web Accessibility Guidelines for Web Developers and Content Managers," September 2016, [https://ogcio.gov.vu/images/RTI\\_Vanuatu\\_Accessibility\\_Guidelines\\_MF.pdf](https://ogcio.gov.vu/images/RTI_Vanuatu_Accessibility_Guidelines_MF.pdf).

<sup>16</sup> Socialist Republic of Viet Nam Law on Persons with Disabilities, 17 June 2010, [http://www.moj.gov.vn/vbqp/en/lists/vn%20bn%20php%20lut/view\\_detail.aspx?itemid=10482](http://www.moj.gov.vn/vbqp/en/lists/vn%20bn%20php%20lut/view_detail.aspx?itemid=10482).

<sup>17</sup> World Health Organization and World Bank, *World Report on Disability* (2011),

[http://www.who.int/disabilities/world\\_report/2011/en/](http://www.who.int/disabilities/world_report/2011/en/).

<sup>18</sup> Ibid.

disabilities to access ICTs. Viet Nam also does not impose import taxes on assistive devices for persons with disabilities.

In Hong Kong, the Office of the Government Chief Information Officer (OGCIO) runs a campaign to promote awareness and wider adoption of accessibility design in public and private websites and mobile applications. The campaign includes, among other initiatives:<sup>19</sup>

- Free assessment and consultation on web accessibility;
- Recognition scheme to award public and private organizations for adopting accessibility design in their website and mobile applications;
- Awareness raising workshops for public and private organizations;
- Technical workshops for developers; and
- Incorporation of web accessibility into the ICT curriculum, and other initiatives.

At the end of the third round of awareness raising workshops in April 2015, the number of websites made accessible increased by more than three times that of the first round.<sup>20</sup> The OGCIO also has a funding scheme since 2012 to provide support for non-profit organizations to develop mobile apps for special need groups such as persons with disabilities, elderly and children with special educational needs. A total of 17 mobile apps have been developed.<sup>21</sup>

### **All players in the Internet ecosystem must consider accessibility**

Producers, including device manufacturers, network and application developers, and content developers, need to commit to the principles of universal design.<sup>22</sup> Service providers, including governments, banks, educational institutes and employers need to ensure that the products they procure and use do not present access barriers to employees or customers with disabilities.

The Republic of Korea's National Informatization Act mandates national government agencies, providers of ICT services, designers and manufacturers of ICT products, and organizations procuring ICT products to guarantee accessibility.<sup>23</sup>

### **Consult and actively involve persons with disabilities**

Persons with disabilities often have unique insights about their disability and their situation. In formulating and implementing policies, laws and services, people with disabilities should be consulted and actively involved, to better understand their needs and how ICTs can meet those needs.

In Pakistan, a multi-stakeholder Working Group on ICT Accessibility<sup>24</sup> was established after a workshop co-organized by Internet Society and BytesforAll. The Working Group comprises of persons with disabilities, organization working on disability issues, government organizations, businesses and developers that have worked together to incorporate a component on persons with disabilities in the draft National IT Policy 2016, and run a series of awareness workshops for university students and mobile app developers throughout the country. Many of the resource persons for the workshops were persons with disabilities. Further, the theme for the 2016 Pakistan Mobile App Awards, led by the Pakistan Telecommunications Authority, was focused on addressing the needs of PWDs.<sup>25</sup> In the process of developing the mobile apps, a person with disability was assigned to work with each applicant to give quality feedback.

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<sup>19</sup> OGCIO, "Web Accessibility Campaign," [http://www.ogcio.gov.hk/en/community/web\\_accessibility/campaign/index.htm](http://www.ogcio.gov.hk/en/community/web_accessibility/campaign/index.htm).

<sup>20</sup> ESCAP, *Accessibility for All: Good practices of accessibility in Asia and the Pacific to promote disability-inclusive development* (Bangkok, 2016), <http://www.unescap.org/resources/accessibility-all-good-practices-accessibility-asia-and-pacific-promote-disability>.

<sup>21</sup> OGCIO, "Digital Inclusion Mobile Apps," [http://www.ogcio.gov.hk/en/community/develop\\_mobile\\_apps/](http://www.ogcio.gov.hk/en/community/develop_mobile_apps/).

<sup>22</sup> Accessibility and universal design features generally benefit all users. Yet, persons with disabilities will not fully benefit if mobile devices are accessible but the mobile apps are not, or if the e-reader is accessible but the e-books are not.

<sup>23</sup> Republic of Korea Framework Act on National Informatization – Article 32: Guaranteeing Access to and Use of Information by Persons with Disabilities, Aged persons, etc., <http://unpan1.un.org/intradoc/groups/public/documents/UN-DPADM/UNPAN042828.pdf>.

<sup>24</sup> View a video about the Working Group on ICT Accessibility in Pakistan at <https://isoc.box.com/s/5yfd0366vy8zpun92if1t6o382vgrpu>.

<sup>25</sup> Pakistan Mobile App Awards, <http://mobileawards.pta.gov.pk/>. View a video about the winners of the awards at <https://isoc.box.com/s/h8fktk0qagph5r21d5ltqanhg682ez3a>.

## **Create a sustainable financing framework, and leverage the national research and innovation agendas to push for accessibility**

This will enable innovations in disability-inclusive development, and in upscaling accessibility products and services. An example is the use of Universal Service Funds (USFs)<sup>26</sup> to support digital accessibility.

In Thailand, the TAB2READ initiative utilizes the USF to produce and disseminate online content through phones, web browser and mobile applications. There are currently 2,000 e-books in its repository.<sup>27</sup>

In Bangladesh, the Prime Minister Office's Service Innovation Fund offers grants to initiatives that promote social and economic development. Currently, about 10% of the projects are related to digital accessibility. Additionally, a Disability Innovation Lab has been established under this scheme to support the creation, testing and commercialization of disability-inclusive products and services.<sup>28</sup>

## **Provide targeted training for persons with disabilities**

In order for persons with disabilities to participate meaningfully in ICT policymaking, and in the design, implementation and monitoring of interventions, they need to understand how current and emerging technologies can help them participate in the economy and society. They also need to be aware of their rights, including their right to online privacy so that their use of the Internet should not lead to their discrimination, denied access to services and employment, and harassment and violence.

The group of disabled users is diverse—ranging from those with visual, hearing, speech, mobility, cognitive and psychosocial disabilities. It is important to ensure that solutions for one type of disability does not exclude persons with another type of disability.

## **C. Alignment with the SDGs**

The SDGs refer specifically to PWDs in targets within five goals focused on education (SDG4), employment (SDG8), reduced inequalities (SDG10), sustainable cities (SDG11), and partnership (SDG17), and make implicit reference to disability and accessibility in a further six of the goals. Within the targets, Member States are tasked to make educational facilities accessible, to improve on accessibility of built cities, public spaces and public transportation, and to enhance access to ICTs.

## **D. Questions to Think About**

- How can policy enable future innovations that by default incorporates accessibility, especially among the wide-ranging issues of the Asia-Pacific region (e.g., disaster risk reduction, violence against women and girls, financial inclusion)?
- What are the specific measures to ensure that digital accessibility interventions are gender sensitive?
- What are the implications of digital accessibility on the privacy rights of persons with disabilities? What are the good practices for promoting equality and preventing discrimination?
- What are the accessibility and universal design solutions that are appropriate for low-income settings?
- There are accessibility standards for websites and mobile applications. What about for emerging technologies related to the Internet of Things and Artificial Intelligence?

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<sup>26</sup> As part of the Universal Service Obligation, a percentage of the annual gross revenue from telecommunications providers contributes to the USF to support various projects focused on availability, accessibility and affordability of services in the country.

<sup>27</sup> World Health Organization and World Bank, *World Report on Disability* (2011), [http://www.who.int/disabilities/world\\_report/2011/en/](http://www.who.int/disabilities/world_report/2011/en/).

<sup>28</sup> A2I Prime Minister's Office Bangladesh, "Exhibition and Discussion Forum on 14 Disability related Innovations held," <http://a2i.pmo.gov.bd/exhibition-and-discussion-forum-on-14-disability-related-innovations-held/>; and A2I Prime Minister's Office Bangladesh, "Disability Innovation Lab," <http://a2i.pmo.gov.bd/innovation-lab/lab/disability/>.