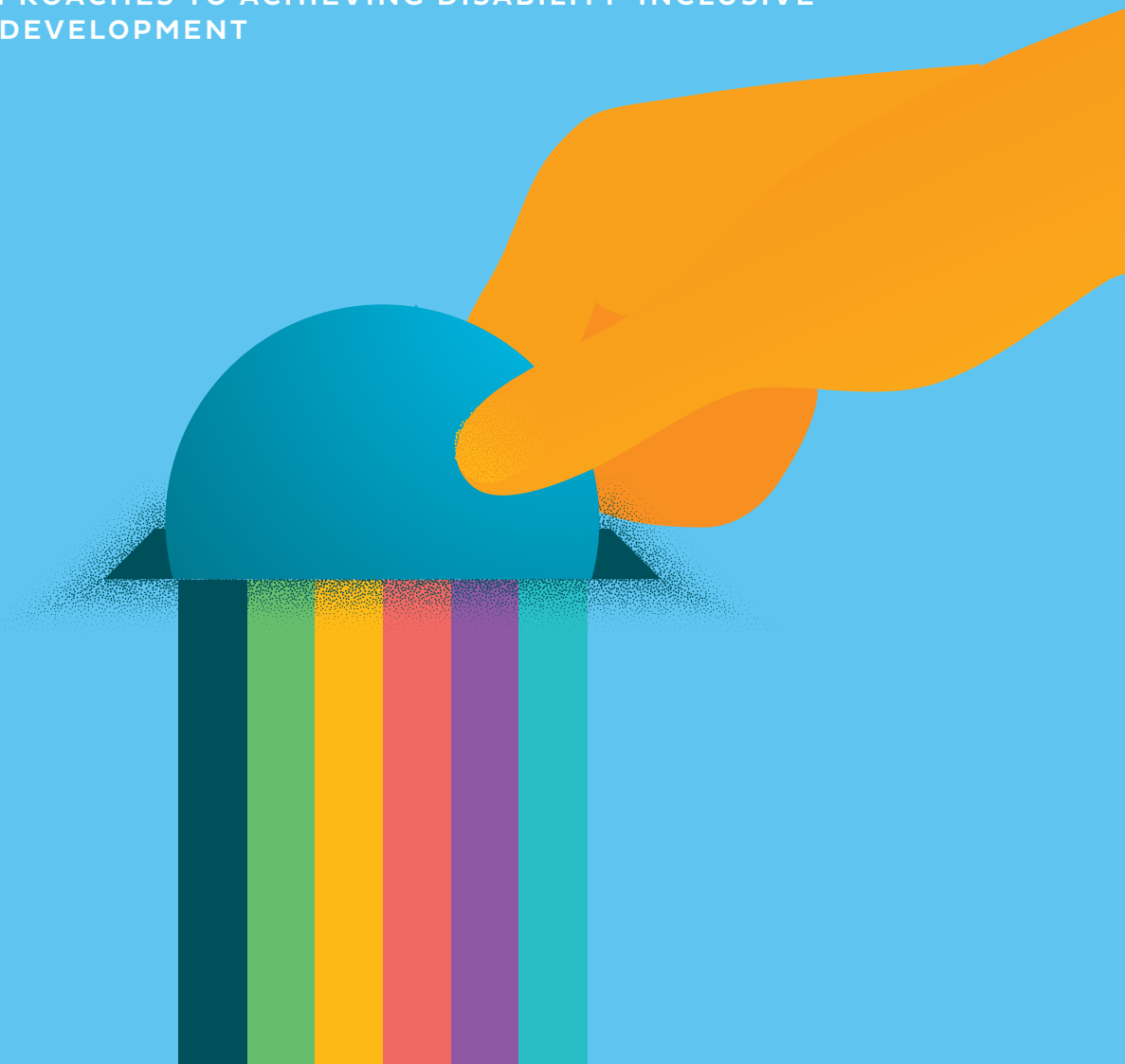DISABILITY AT A GLANCE 2019

Investing in Accessibility in Asia and the Pacific

STRATEGIC APPROACHES TO ACHIEVING DISABILITY-INCLUSIVE SUSTAINABLE DEVELOPMENT

The Economic and Social Commission for Asia and the Pacific (ESCAP) serves as the United Nations' regional hub promoting cooperation among countries to achieve inclusive and sustainable development. The largest regional intergovernmental platform with 53 Member States and 9 associate members, ESCAP has emerged as a strong regional think-tank offering countries sound analytical products that shed insight into the evolving economic, social and environmental dynamics of the region. The Commission's strategic focus is to deliver on the 2030 Agenda for Sustainable Development, which it does by reinforcing and deepening regional cooperation and integration to advance connectivity, financial cooperation and market integration. ESCAP's research and analysis coupled with its policy advisory services, capacity building and technical assistance to governments aims to support countries' sustainable and inclusive development ambitions.

Disability at a Glance 2019: Investing in Accessibility in Asia and the Pacific — Strategic Approaches to Achieving Disability-inclusive Sustainable Development

Disclaimer

DISABILITY AT A GLANCE 2019

Investing in Accessibility in Asia and the Pacific

STRATEGIC APPROACHES TO ACHIEVING DISABILITY-INCLUSIVE SUSTAINABLE DEVELOPMENT

ACKNOWLEDGEMENTS

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ACRONYMS

AUD   Australian dollars

CAD   Canadian dollars

CRPD   Convention on the Rights of Persons with Disabilities

DET   Disability Equality Training

DPO   Disabled People's Organizations

ESCAP   Economic and Social Commission for Asia and the Pacific

EU   European Union

GATE   Global Cooperation on Assistive Technology

ICF   International Classification of Functioning

ICT   Information and communications technology

INR   Indian rupees

ISO   International Organization for Standardization

JPY   Japanese yen

KRW   Korean won

NDIS   National Disability Insurance Scheme Act (2013)

NGO   Non-governmental organization

SDG(s)   Sustainable Development Goal(s)

USD   United States dollars

VRS   Video Relay Service

WHO   World Health Organization

W3C   World Wide Web Consortium

WASLI   World Association of Sign Language Interpreters

WFD   World Federation of the Deaf

Chapter 1
Introduction
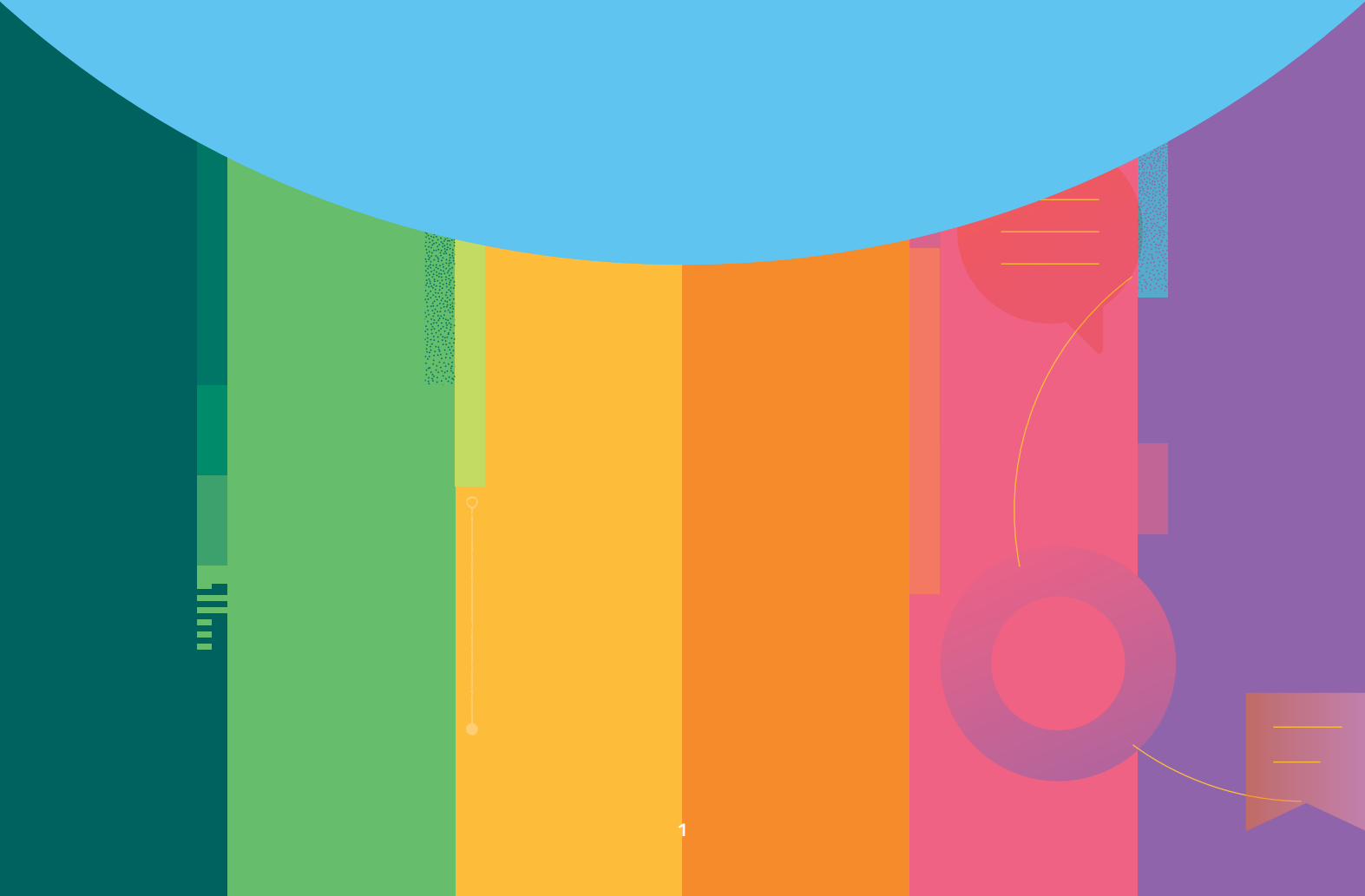
"TOGETHER, WE CAN RAISE AWARENESS AND REMOVE BARRIERS. TOGETHER, WITH PERSONS WITH DISABILITIES AS AGENTS OF CHANGE, WE CAN BUILD AN INCLUSIVE, ACCESSIBLE AND SUSTAINABLE WORLD"[1]

ANTÓNIO GUTERRES, SECRETARY-GENERAL OF THE UNITED NATIONS

1.1 DISABILITY AND THE IMPORTANCE OF INVESTING IN ACCESSIBILITY

Persons with disabilities, who comprise an estimated 15 per cent of the global population, are one of the largest minority groups in the world.[2,3] In Asia and the Pacific, this translates to an estimated 690 million people, including those with physical disabilities, those who are blind or experience low vision, deaf or hard-of-hearing, and those with learning disabilities, cognitive/developmental disabilities, psychosocial disabilities, deafblind, and those with multiple disabilities. This figure is expected to increase over the coming decades, owing to population ageing, longer life expectancy, and an increasing number of injuries resulting from situational and natural disasters, among other factors.[4]

Persons with disabilities face numerous barriers that restrict their full and effective participation in society on an equal basis with others and are among those at highest risk of being left behind in the development process. This risk is particularly pertinent given rising inequality across the world, which has a disproportionate impact on persons with disabilities. For instance, the increase of income inequality puts persons with disabilities – who already are less likely to be employed compared with their peers without disabilities – in a particularly vulnerable position.[5] Furthermore, the rising inequality with regard to access to basic services such as education opportunities often results in persons with disabilities falling behind, as evidenced by their relatively low rates of completing secondary education, gaining full time employment and securing a decent income compared to those without disabilities.[6]

The inadequacy and lack of accessible built environments, accessible information and communication, including information and communications technology (ICT), and accessible services are fundamental barriers that widen this inequality. 'Accessibility', in simple terms, is the breaking down of the barriers across these sectors that prevent persons with disabilities — and the broader population — from participating in society on an equal basis with others.

To illustrate the fundamental importance of accessibility for reducing inequality for persons with disabilities, it is necessary only to look at daily life. With recognition of the diversity that exists among persons with disabilities and the various barriers they face, activities often taken for granted such as entering or exiting a residential building, crossing a street, a school, or an office building, are common barriers to access of employment and education opportunities. Uneven pavements, steps and unclear signage between a residence and transportation hubs have the same detrimental impact on participation, and this is assuming that public transportation itself is equipped to support persons with diverse disabilities

1   United Nations News, 2019.
2   World Health Organization (WHO), 2011.
3   United Nations Development Programme (UNDP), 2018.
4   WHO, 2011.
5   International Labour Organization (ILO) and Organization for Economic Co-operation and Development (OECD), 2018.
6   United Nations Economic and Social Commission for Asia and Pacific (ESCAP), 2019a.

and requirements. Considering public toilet facilities, shops, banks and automated teller machines, voting booths, recreational venues and other typical places for societal gathering and participation, the potential for persons with disabilities and those with specific accessibility requirements to conduct daily life on an equal basis with others can be a challenge, let alone achieving educational and career goals. These are just a few examples of barriers to participation which will be explored in more detail in this report.

To break down these barriers, a number of global, regional and national efforts have been taken. The United Nations Convention on the Rights of Persons with Disabilities (CRPD), which was adopted in 2006 and entered into force in 2008, is a landmark document for ensuring the rights of persons with disabilities are upheld, and one of the most prominent and catalyzing means of promoting accessibility at the global level.[7] The CRPD recognizes in its preamble "the importance of accessibility to the physical, social, economic and cultural environment, to health and education and to information and communication, in enabling persons with disabilities to fully enjoy all human rights and fundamental freedom".[8] The Conference of States Parties to the CRPD said that "accessibility is a precondition for persons with disabilities to live independently and achieve full and equal participation in society".[9] Article 9 of the CRPD specifically focuses on accessibility, noting that "States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas".[10]

In addition, the Incheon Strategy to 'Make the Right Real' for Persons with Disabilities in Asia and the Pacific, 2013–2022, together with the accompanying Beijing Declaration and Action Plan to Accelerate the Implementation of the Incheon Strategy, provide a robust regional framework for advancing cross-sectoral disability-inclusive development.[11] The ten Incheon Strategy goals and accompanying targets and indicators set benchmarks for progress for governments, civil society actors and international organizations alike. Rooted in the CRPD, accessibility is both an underpinning principle of the frameworks, as well as a specific area of focus through Goal 3 of the Incheon Strategy and specific reference in five of the action points set out in the Beijing Declaration and Action Plan.

Regional progress also requires support in national and global fora, and as such successes in the Incheon Strategy and Beijing Declaration and Action Plan are closely intertwined with national and global development efforts. The Incheon Strategy has spurred governments across Asia and the Pacific to take steps to invest in accessibility and promote disability-inclusive development, as demonstrated through the findings of the ESCAP midpoint review of the third and current Asian and Pacific Decade of Persons with Disabilities, 2013-2022, conducted in 2017.[12] Furthermore, global agreements such as the Sendai Framework for Disaster Risk Reduction 2015–2030,[13] and the Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired or Otherwise Print Disabled,[14] similarly provide a mandate and guidance for investing in accessibility.

Most prominently, all stakeholders have been actively engaged at the global level through the 2030 Agenda for Sustainable Development. The 2030 Agenda and

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7   Convention on the Rights of Persons with Disabilities, New York, 13 December 2006.
8   United Nations General Assembly, 2006. A/RES/61/106, Preamble v.
9   United Nations Convention on the Rights of Persons with Disabilities (CRPD), 2017. CRPD/CSP/2017/4, para 4.
10 United Nations General Assembly, 2006. A/RES/61/106, Article 9, para 1.
11 United Nations ESCAP, 2018.
12 United Nations ESCAP, 2017c., E/ESCAP/APDDP(4)/1
13 United Nations General Assembly, 2015. A/RES/69/283.
14 World Intellectual Property Organization, 2013.

its 17 inter-related Sustainable Development Goals (SDGs) adopted in 2015 by 193 United Nations Member States, pledge to leave no one behind. This pledge asserts and commits that the "dignity of the individual is fundamental and that the Agenda's Goals and targets should be met for all nations and people and for all segments of society", including persons with disabilities.[15] Five of the Sustainable Development Goals contain targets that make direct reference to persons with disabilities, and seek to make educational facilities accessible, to improve accessibility of built cities, public spaces and public transportation, and to enhance access to ICT. Furthermore, another six of the goals make implicit reference to disability and accessibility.[16]

1.2 CHALLENGES AND OPPORTUNITIES TO INVEST IN ACCESSIBILITY

Although national, regional and global frameworks are in place to promote disability inclusion, there remain numerous challenges and opportunities to investing in accessibility in Asia and the Pacific. A strength of the region is that governments, representative organizations of persons with disabilities, private sector and other civil society organizations are aware of the importance of accessibility, generally through knowledge of the CRPD. However, an ESCAP survey conducted for the midpoint review of the Asian and Pacific Decade of Persons with Disabilities, 2013-2022, and recent accessibility expert discussions indicate that common understandings of accessibility are too often limited to envisioning physical interventions, such as installation of a ramp to facilitate access for wheelchair users. While this is an important dimension of accessibility, it is only a small part of the wider scope of barriers that need to be broken down.

By extension, approaches to promote accessibility are often falsely assigned and confined to select actors and service providers – namely those focused on disability matters – which severely hampers achieving objectives of building accessible environments. For instance, accessibility-related policy measures and activities may be assigned the jurisdiction of government ministries providing social welfare services, whereas successful endeavours to build accessible environments require a whole-of-house approach. Furthermore, it is important that governments recognize the instrumental role that each of their branches play in promoting accessibility. It is the role of the legislative branch to discuss, adopt, and amend laws, and nullify those which do not harmonize with the spirit and the content of the CRPD. The executive branch implements these laws and develops programmes and initiatives with sustained budget to put them into practice. Finally, the judicial branch provides interpretations of the laws, and passes judgement on legal cases to ensure that the right to access is upheld.

The need for multi-stakeholder approaches to investing in accessibility mirror the same requirements for cross-pillar approaches to sustainable development in the context of the 2030 Agenda. In addition to the references that the 2030 Agenda makes to disability and accessibility,[17] achieving the SDGs and ensuring that no one is left behind requires increased investment in accessibility. There is an inextricable link between investing in accessibility and achieving sustainable development that is inclusive of both persons with disabilities and the broader population, yet too often accessibility is inadequately included in sustainable development efforts.

One of the underlying challenges is that many policy and lawmakers, development practitioners, advocates and other stakeholders are not adequately equipped with technical knowledge and capacity to effectively mainstream accessibility in their work.

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15   United Nations Department of Economic and Social Affairs (UN DESA), 2016.
16   United Nations ESCAP, 2017b. E/ESCAP/APDDP(4)/INF/1.
17   United Nations ESCAP, 2017b. E/ESCAP/APDDP(4)/INF/1.

This is understandable, as the concepts of disability and accessibility are dynamic, and rapid technological developments across society mean that new and innovative approaches to accessibility are continually emerging. Such technological developments and innovations have had positive impacts on breaking down barriers to participation, but these too run risks of further exclusion of persons with disabilities. The Fourth Industrial Revolution is a driving force in digitalizing society to enhance efficiency and effectiveness of economic and social activities, however it has the potential to further the divide between those who can and cannot use and access such technologies. For persons with disabilities, if any digital products and services are not accessible, again, they experience a lost opportunity for participation in society.

Another underlying reason for the lack of inclusion of accessibility in development efforts is that outside of the disability community there remains an insufficient level of awareness and understanding of the broader and more comprehensive conceptualizations of accessibility vis-à-vis its value for all of society. In this regard, this report aims to bridge the gap in the understanding of accessibility by presenting and demonstrating the conceptual and practical approaches of investing in accessibility as it applies both to persons with disabilities, as well as the broader population.

With this context in mind, this report will illustrate the need for increased investment in accessibility to build an inclusive Asia and Pacific for all. Financial investment is an important part of this however money alone will not break down the barriers to participation that hundreds of millions of people in the region continue to face. Rather, enhancing accessibility requires innovative forms of investment, including through gaining high-level commitment and institutional buy-in; establishing strong legal frameworks on accessibility; building human resources, namely capacity and understanding of accessibility in different dimensions of society; developing technical knowledge and solutions to fill gaps and bridge inequalities that persist in private and public life; and encouraging partnerships between governments, organizations, policymakers,

organizations of persons with disabilities, the private sector and other stakeholders. Through this investment approach, governments can foster inclusive societies in which innovation from the diversity that exists within its populations can contribute to social and economic benefits, and most importantly in which all of society can participate and enjoy equality of opportunity.

Against this backdrop, this report will do the following:

1 Lay out foundational concepts and terminologies related to disability and accessibility;

2 Provide an understanding of the key areas in which to invest in order to promote accessibility;

3 Examine the drivers for governments and other stakeholders to invest in accessibility and the added social and economic value that these investments can yield;

4 Analyse the status of disability-inclusive development and accessibility investment across Asia and the Pacific, looking at regional and national trends;

5 Present case studies and good practices of investing in accessibility that demonstrate different approaches that can be undertaken to break down barriers in both legal and programmatic and project contexts;

6 Provide recommendations to policymakers for enhancing effectiveness of investment in and implementation of accessibility promotion efforts.

As accessibility covers a wide range of areas, this report cannot cover all relevant issues. For example, it does not address artificial intelligence in the context of accessibility, or assistive devices in depth. Covering all accessibility needs of persons with diverse disabilities also goes beyond the scope of this report. Nonetheless, it will provide readers with a foundational understanding of the key concepts and measures that are necessary to effectively invest in and promote accessibility in different contexts.

FIGURE 1.A.
VISUALIZATION OF HOW INVESTMENT BUILDS AN ACCESSIBLE SOCIETY

MONEY

AWARENESS RAISING

KNOWLEDGE

LAWS WITH TEETH

INSTITUTIONAL BUY-IN

PEOPLE

PARTNERSHIP

| Private sector | Men and women with disabilities | Multiple ministries (i.e., ICT, infrastructure, disaster risk reduction, social development) |
| Media | Accessibility experts | | | Central government and local government |

INCLUSIVE SOCIETY

Economic benefits

Participation

Equality/ equity

Inclusion

Innovation

Chapter 2
Understanding accessibility

'ACCESSIBILITY IS A PRECONDITION FOR PERSONS WITH DISABILITIES TO LIVE INDEPENDENTLY AND PARTICIPATE FULLY AND EQUALLY IN SOCIETY. WITHOUT ACCESS TO THE PHYSICAL ENVIRONMENT, TO TRANSPORTATION, TO INFORMATION AND COMMUNICATION, INCLUDING INFORMATION AND COMMUNICATIONS TECHNOLOGIES AND SYSTEMS, AND TO OTHER FACILITIES AND SERVICES OPEN OR PROVIDED TO THE PUBLIC, PERSONS WITH DISABILITIES WOULD NOT HAVE EQUAL OPPORTUNITIES FOR PARTICIPATION IN THEIR RESPECTIVE SOCIETIES.'

– COMMITTEE ON THE RIGHTS OF PERSONS WITH DISABILITIES, CONVENTION OF THE RIGHTS OF PERSONS WITH DISABILITIES GENERAL COMMENT NO. 2 (2014)

The concept of accessibility addresses the fact that everyone, and in particular persons with disabilities, require certain features in their living environment to prevent or remove barriers. These could be barriers to mobility, such as steps; or barriers to communication, if sight, hearing or comprehension is a challenge, to name just a few examples. In this regard, the 'accessibility' of something describes the level of access enjoyed by a broad range of people with differing characteristics.

'Access' differs from 'availability' and 'affordability' and focuses on ability of something to be experienced. Moreover, its scope is not confined to entering and exiting a physical environment or being able to retrieve information. Rather, access refers to the complete and seamless interaction with an environment, good or service, on an equal basis with others. For example, accessible toilet facilities must allow for all users, including those with disabilities to use amenities without difficulties – door, lock, toilet, sink, hand dryer included. Concerning online information, web pages and other media that are accessible must not only be easily retrieved, but also provide all users, including those with disabilities, with the option to edit, communicate and fully interact with the resources.

Making something accessible requires breaking down the barriers that can prevent certain people from experiencing it on an equal basis with others. This covers various dimensions, including access to the built environment, or physical surroundings such as buildings, parks and transportation; to information and communication, including information and communication technologies, including media, literature, and entertainment, among others; and to services, which refers to the interaction with various types of support on a daily basis.

This chapter will define these key concepts and terminologies and provide a foundation for understanding the various dimensions of breaking down barriers necessary to effectively invest in accessibility for persons with disabilities and for all. Before exploring the various dimensions of accessibility, it is important to first understand certain conventional, legal and operational concepts and terminologies, namely, disability and participation of persons with disabilities.

2.1 THE EVOLVING CONCEPT OF DISABILITY

Historically, the common understanding of disability was that of a medical approach, focusing on medical diagnosis and attributes of an individual that affect a person, such as the inability to walk or breathe independently, and regarding treatment of these medical conditions as the ultimate objective. However, the social model of disability, which emerged as an

antithesis of the medical model, is based on a distinction between the terms impairment and disability. In this model, the term impairment refers to the attributes of an individual, while the term disability refers to the restrictions on participation posed by inadequate and unequal attention and accommodation from society to the needs of individuals with impairments.[18]

The 2001 International Classification of Functioning, Disability and Health (ICF) recognized "moving beyond simply understanding disability as a direct consequence of a health condition or impairment". According to the ICF, an impairment is defined as "problems in body function or structure such as a significant deviation or loss".[19] When the surrounding environment does not meet the needs of the individual given their impairment, a barrier is formed that limits the capacity of the individual in that situation.[20]

It is important to note that while the social model of disability accentuated the urgent need to break down institutional, legal, physical, informational and attitudinal barriers to participation, its binary juxtaposition between impairment and societal barriers to participation has more recently prompted more complex conceptualizations of disability. Currently, the bio-psycho-social model of disability builds upon the social model while asserting that disabilities are often due to illness or injury, the importance of the impact of biological, emotional and environmental issues on health, well-being, and function in society as well as personal experiences must not be neglected.[21]

FIGURE 2.A.
ICF DIAGRAM ON DISABILITY
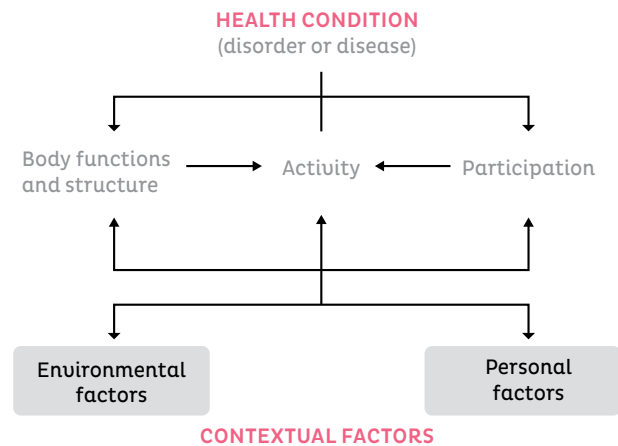
SOURCE: WHO, 2001.

The CRPD provides a definition-like description in Article 1 on persons with disabilities as "those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others."[22] This highlights a key aspect of understanding the social model of disability, which focuses on effective and meaningful participation of persons with disabilities. As conveyed by the UN Human Rights Council, effective and meaningful participation is a fundamental component of representation and a precursor for individuals to act as agents of change.[23]

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18   Scope Organization.
19   WHO, 2001.
20   United Nations ESCAP, 2016.
21   WHO, 2002.
22   United Nations General Assembly, 2006. A/RES/61/106, Article 1.
23   United Nations Human Rights Council, 2016. A/HRC/31/62, para 13.

FIGURE 2.B.
DISABILITY PREVALENCE IN ASIA AND THE PACIFIC, BY COUNTRY OR AREA

Country or Area	Prevalence (%)
New Zealand	24.0
Georgia	18.3
Australia	18.3
Solomon Islands	14.0
Fiji	13.7
Papua New Guinea	13.4
Vanuatu	12.0
Marshall Islands	11.7
Micronesia (Federated States of)	11.0
Maldives	10.9
Bangladesh	9.1
Sri Lanka	8.7
Indonesia	8.6
Russian Federation	8.6
Democratic People's Republic of Korea	8.2
Hong Kong, China	8.1
Guam	7.9
Viet Nam	7.8
Tonga	7.6
Turkey	6.9
Armenia	6.6
American Samoa	6.5
China	6.3
Japan	6.2
Northern Mariana Islands	5.5
Nauru	5.1
Republic of Korea	4.8
Azerbaijan	4.8
Niue	4.7
Myanmar	4.6
Kiribati	4.1
Mongolia	4.1
Cambodia	3.4
Bhutan	3.4
Timor-Leste	3.2
Afghanistan	3.2
Kazakhstan	3.0
Singapore	3.0
Lao People's Democratic Republic	2.8
Thailand	2.6
New Caledonia	2.5
Pakistan	2.5
Palau	2.3
French Polynesia	2.2
India	2.2
Samoa	2.2
Tajikistan	2.1
Kyrgyzstan	2.0
Nepal	1.9
Tuvalu	1.9
Cook Islands	1.7
Macao, China	1.7
Philippines	1.6
Malaysia	1.4
Iran (Islamic Republic of)	1.4
Uzbekistan	1.3
Brunei Darussalam	1.1

PREVALENCE OF DISABILITY (%)

0   5   10   15   20   25

SOURCE: UNITED NATIONS ESCAP DATA.

2.2 BENEFICIARIES OF INVESTING IN ACCESSIBILITY

The evolving conceptual approaches to understanding disability are reflected in the varying definitions used in different contexts, and subsequently the varying implications when it comes to counting and supporting persons with disabilities. Figure 2.B demonstrates the variance of prevalence of disability, caused by a combination of differing definitions and means of data collection. In Asia and the Pacific, the prevalence ranges from 1.1 per cent in Brunei Darussalam to 24 per cent in New Zealand.

The statistical variance regarding disability prevalence in the region raises a question: who benefits from investments in accessibility? Firstly, persons with disabilities are the obvious beneficiaries, as they continue to face barriers to participation in all aspects of society compared to their peers without disabilities. However, as demonstrated through the varying prevalence rates of disabilities from countries across the region, it is likely that many persons with disabilities are not being counted, and by extension their needs for accessible environments may not be met. In this regard, the returns on investing in accessibility for persons with disabilities likely go far beyond the number of persons with disabilities officially counted in national surveys and census data.

Examples of this are evident in the varying definitions of disability used by countries when calculating prevalence. For instance, in a 2013 survey conducted by the Government of New Zealand disability was defined as any self-perceived limitation in activity resulting from a long-term condition or health problem lasting or expected to last six months or more and not completely eliminated by an assistive device. The resulting disability prevalence was 24 per cent.[24] In India, the 2011 census identified those with disabilities in terms of their experience of different levels of sight;

hearing; speech; mobility; and mental illness; among other areas. The prevalence presented in this case was 2.21 per cent.[25]

Secondly, and with recognition of the underlying principles of accessibility, investing in accessible environments will benefit and support the needs of a much wider segment of the population than conventionally considered – in fact, fully accessible environments benefit the entirety of the population by creating an equal basis for participation.

While differing legal definitions of disability between countries and cultures can pose challenges to measuring prevalence, taking a broader view of the barriers faced by persons with disabilities and the wider population on a daily basis can be helpful in building a more accessible world. As depicted in Figure 2.C it is often persons with visible disabilities such as amputation, blindness or deafness who tend to be the focus of the public consciousness when considering disability. As described above, these disabilities result from the interaction of their impairments with barriers in the environment. While these are long-term impairments, people who may face difficulties for a certain period of time, such as in touching, seeing, hearing, and speaking due to shorter-term impairments, for example, a broken bone, or an infection that limits sight or hearing, will often find similar barriers to access.

Going a step further, people experience needs for accessibility on a momentary basis in which one's surrounding environment limits their functionality. For instance, pregnant women and new parents with a baby in a stroller might have difficulties in moving up and down stairs, or in and out of settings in which a significant gap exists between two surfaces, such as buildings or transport. Other user groups, such as persons with heavy luggage, would also benefit from the integration of smooth and flat surfaces.

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24   Government of New Zealand, Ministry of Health, 2013.
25   Government of India, Ministry of Statistics and Programme Implementation, 2016.

FIGURE 2.C.
UNDERSTANDING WIDER NEEDS FOR ACCESSIBILITY

PERMANENT	TEMPORARY	SITUATIONAL

Touch

One arm	Arm injury	New parent

See

Blind	Cataract	Distracted driver

Hear

Deaf	Ear infection	Bartender

Speak

Non-verbal	Laryngitis	Heavy accent
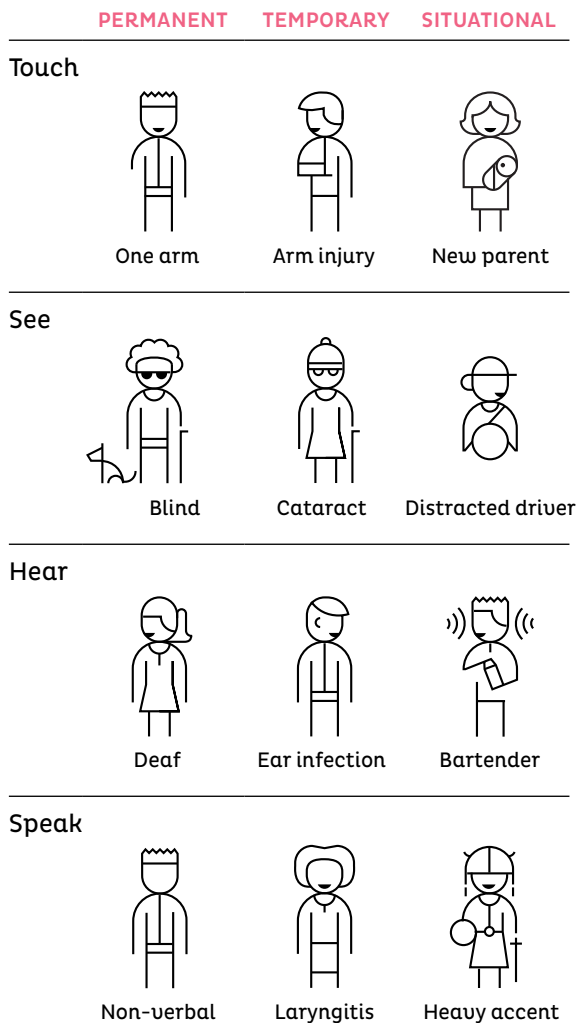
SOURCE: ADAPTED FROM THE PERSONA SPECTRUM WITHIN MICROSOFT'S INCLUSIVE DESIGN TOOLKIT MANUAL, MICROSOFT, 2016.

Furthermore, a waiter and customer in an extremely noisy restaurant might face difficulty in understanding each other's spoken language. However, if visual representation of language, such as signage or captioning on a screen are available, the situational barriers disappear. Figure 2.D shows a parking permit placard allowing persons with disabilities, older persons and pregnant women to use pre-designated parking space, exemplifying shared accessible service needs by those groups of people, alongside the more traditional symbol for accessibility that depicts a wheelchair user.

FIGURE 2.D.
PARKING PLACARD IN JAPAN AND INTERNATIONAL SYMBOL OF ACCESS

SOURCE: SAGA PREFECTURE, JAPAN.[26] SEE ALSO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009.

It is clear that disability is not static, but rather a dynamic concept that is far reaching. Furthermore, the need for accessibility can also depend on the situation. This broader view of multiple difficulties experienced both by persons with and without disabilities is helpful for looking at how accessibility measures can break down environmental barriers, as it demonstrates how

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26   The sign states: Parking permit for persons with disabilities; Saga Prefecture; Those other than the one who obtained the permit are not allowed to use it.

investment in accessibility contributes to the common good for all of society. Nonetheless, it is important to also acknowledge the attitudinal barriers and discrimination experienced by persons with disabilities that are not faced by their peers without disabilities, and undertake measures to ensure that persons with disabilities remain at the forefront of efforts to invest in accessibility.

2.3 DIMENSIONS AND PRINCIPLES OF ACCESSIBILITY

Accessibility consists of multiple inter-connected dimensions that together contribute to building a fully accessible and inclusive world, all of which should be considered when looking to invest in accessibility. These dimensions are interconnected and inextricable, however for the purpose of understanding, it can be helpful to break these down to explore their specific characteristics and examples.

The most commonly considered dimensions of accessibility is that of the built environment. The International Symbol of Access (see Figure 2.D) gives an impression that accessibility is for wheelchair users only, however in reality it represents accessibility more broadly. The built environment includes areas in both public and private spheres that facilitate physical access to different spaces and make everyday life easier and richer for all members of society. It encompasses elements such as ramps, lifts and tactile paths on pavements, floor materials, wayfinding tools in and around residences, offices, police stations, hospitals, courts, banks, shops, public toilets, parks, schools, polling stations, museums, and libraries, to name just a few examples.[27]

Related closely to accessibility of the built environment is accessibility of transportation, which facilitates mobility of people between different built environments. This dimension of accessibility includes vehicles such as cars, buses, trains and planes; and transportation stops and hubs such as bus stops, taxi stands, train stations, parking areas and airports. Furthermore, it addresses passenger information and announcements on signs, screens, and over loudspeakers, which in particular has strong intersections with information, communication and technology accessibility.

Information and communication, including ICT, have become an increasingly important and prominent dimension of accessibility as technologies develop. Film, television and radio are traditional media examples of these dimensions, while mobile phones, computers and tablets represent some newer iterations. The advent of the internet has spurred vast potential for harnessing technology for communications, which have likewise facilitated a number of new accessibility tools that go hand in hand, such as screen readers that facilitate text to speech for deaf or hard-of-hearing persons. In addition to these high-tech examples, it is, however, equally important to recognize low-tech forms of communication, including speech and written materials (books and newspapers), which can be made accessible through means such as producing Easy to Read or Braille versions.

The fourth dimension of accessibility is services, which incorporates elements from each of the other dimensions, but is focused on human interaction and the ability to undertake daily tasks and errands and access opportunities for personal growth and development. Figure 2.E provides an overview of examples of different dimensions of accessibility.

One commonly held misperception is that accessibility of the built environment is for persons with physical disabilities, whereas accessibility of ICT and services are for persons with other disabilities. As outlined above, all dimensions of accessibility benefit persons with diverse disabilities. For instance, good lighting

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27   United Nations ESCAP, 2016.

FIGURE 2.E.
INTER-CONNECTED DIMENSIONS OF ACCESSIBILITY

BUILT ENVIRONMENT

Public spaces
Lighting
Offices
Signage
Toilets
Flooring
School campuses
Building materials
Furniture
Wayfinding

TRANSPORTATION

Airplanes and airports
Private vehicles
Buses and bus stops
Parking facilities
Trains and stations
Pedestrian crossings and pavements
Taxis and taxi stands
Transit announcements
Diverse means of transportation

INFORMATION AND COMMUNICATION

Websites
TV- based contents
Internet-based contents
Movies
Mobile phones
E-books
Computers
Documents
Printing machines
Mobile applications

SERVICES

Navigation systems
Human vresources
Customer service
Tourism
Security
Maintenance
Financial and banking services
Health
Culinary services
Teaching and learning
Emergencies

SOURCE: UNITED NATIONS ESCAP DESIGN, ADAPTED FROM DIAGRAM DEVELOPED BY GREG ALCHIN AS PART OF THE ESCAP ACCESSIBILITY ASSESSMENT (INTERNAL DOCUMENT).

supports those who are partially sighted along with older persons. Easy to understand materials and graphic representations support persons with intellectual disabilities and persons who are deaf or hard-of-hearing. Communication services support wheelchair users checking in at the airport, and other communication assistance will assist persons with autism navigate moving around different places.

Parallel to the broad coverage of these dimensions of accessibility, an equally broad scope of society bears responsibility for making these parts of the world accessible. That is to say that it requires cross-sectoral and multi-stakeholder cooperation to build accessible environments that allow all persons to participate in political, social and cultural life on an equal basis.

2.3.1 Universal Design

Ideally, *all* facilities, services, products and information available in society should be able to be accessed and used by the broadest range of users including persons with disabilities, older persons, and any other persons who have functional limitations in mobility, acquiring information, understanding people and communication. In a fully and truly inclusive and ideal

society, all persons with disabilities should experience no barriers or sense any specialized "accessibility" features.

From a practical perspective, investment in breaking down barriers across the built environment, transportation, information and communication, and services can take place before, during or after an environment is constructed. However, given the collective responsibility for accessibility and the need for coordinated and cooperative approaches, planning is required from the outset of activities in order to leverage resources. It is for this reason that Universal Design is a key dimension of accessibility.

Universal Design is a design approach supporting this thinking and is often interchangeably used with terms such as design for all and inclusive design. This design approach distinguishes itself from a separatist approach illustrated in Figure 2.F, in which a ramp was set up with an intent only to help wheelchair users to get in and out of a building. This ramp might be technically accessible for their movement, but quite demanding with winding slopes consuming more time and energy for wheelchair users. Possibly, designers were thinking that a ramp would be used only by wheelchair users infrequently. If a Universal Design approach were applied, a smoother way in and out of the building would be created allowing many other people in addition to wheelchair users to use it at ease.[28] The importance of Universal Design lies in the user experience, with an emphasis on access and use of facilities, goods, information and services with such ease that accessible features are not noticeable. Furthermore, dignity and safety of persons with disabilities should be always ensured in investing in accessibility.

FIGURE 2.F.
VISUALIZATION OF AN ACCESSIBLE BUT NOT UNIVERSAL DESIGN–BASED ENVIRONMENT

SOURCE: JIM HARRISON, CORK CENTRE FOR ARCHITECTURAL EDUCATION.

There are numerous examples of risks when not employing principles of Universal Design. For instance, late investment in accessibility – referred to as retrofitting – leads to a likelihood of increased cost compared to employing Universal Design principles in the planning stages.[29] Nonetheless, evidence demonstrates that in many instances the returns offset this cost.[30]

Furthermore, although accessibility upgrades are demonstrated to benefit the majority of society beyond only the estimated 15 per cent of the population classified as 'persons with disabilities', often in order to justify the additional expense of retrofitting, the need must be demonstrated through assessing the proportion of the population and how they will benefit from the provision of accessibility features – a challenging endeavour in which the case for universality of accessibility is left out.

28   Rossetti, R., 2006.
29   Wentz, B., P.T. Jaeger and J. Lazar, 2011.
30   United Nations DESA, 2015a.

BOX 1.
EXAMPLE OF BENEFITS OF UNIVERSAL DESIGN

Consider a situation: A crowd of people regularly attend an outdoor music festival event but only some of them have waterproof coats, most are unprotected against the rain.

The organizers generously decide that they can make the unprotected people more comfortable by providing each of them an umbrella. The unprotected people are now dry and more comfortable however, the others are now less able to see the stage clearly because the umbrellas get in the way.

Then one intelligent member of the management says "Why don't we build one big marquee over everyone? Then everyone will be kept out of the rain and sun and will also be able to see the event. It will be cheaper in the long run, too."

SOURCE: JIM HARRISON, CORK CENTRE FOR ARCHITECTURAL EDUCATION.

Finally, retrofitting runs the risk of a 'pick and choose' approach, which can often result in important accessibility provisions easily being taken out in cases where budgets are tight. Box 1 illustrates an example of how accessibility without Universal Design principles can serve as a detriment to participation on an equal basis.

If society is designed based on Universal Design, fewer people will face barriers to participation. However, that does not deny that there will always remain specific accessibility requirements for certain groups and individuals. For example, Braille enables those who are blind and those with visual disabilities to understand written information alongside the printed text that those without visual disabilities would read. As technology and innovation improve, a means of communication other than Braille that allows persons with and without sight to understand on an equal basis would become an example of Universal Design. The prevalence of built-in screen readers in modern devices and software which facilitate text to speech conversion is an example of Universal Design in practice.

2.3.2 Reasonable accommodation

When accessibility through Universal Design still does not satisfy the requirements to break down barriers faced by persons with disabilities, on a case-by-case basis, reasonable accommodation serves as a solution. Reasonable accommodation is a legal term which refers to the provision of support, often through accessible goods or services, to individuals with disabilities to facilitate their access and to ensure their participation on an equal basis to persons without disabilities.

As a legal concept, reasonable accommodation involves two primary actors: duty bearers and rights holders. Provision of reasonable accommodation is requested by the rights holder (the individual in need of support, often a person with disabilities) through a formal request to the relevant authority, and the duty bearer (often an employer, business owner, or institution responsible for the environment in question) is legally obliged to provide the requested accommodations unless doing so would impose a disproportionate or undue burden upon the duty bearer. Reasonable accommodation is a right recognized by the CRPD, and failure to provide reasonable accommodation constitutes disability-based discrimination.

An example of a reasonable accommodation request in the workplace could be that of a deaf or hard-of-hearing employee requesting his or her employer to provide a sign language interpreter to support communication while at work.

Reasonable accommodation is focused on an individual rather than a broader section of the population. In an ideal society, there would not be many requests for reasonable accommodations, as environments would already be Universal Design based, and accessible. However, maintaining a system for requesting and providing reasonable accommodation is imperative in ensuring that all individuals have the support necessary for their effective and meaningful participation in society. In this regard, reasonable accommodation can be seen as a bridging measure to facilitate participation while accessibility through Universal Design investments are underway.

Take for instance a person with autism working in a company. She or he might request a mentor or support person who can support their effective communication and understanding with colleagues, create pictorial and visual timetables for work, and outline structured time use for working and breaks.[31]

2.3.3 Seamless connectivity

Seamless connectivity, allows persons with disabilities to move between environments, both physical and virtual, without barriers.[32] Seamless connectivity can be thought of as the combination of multiple accessible parts fitting into a singular accessible whole.[33] Without seamless connectivity, improvement of accessibility at one spot might not be impactful. For example, an accessible toilet facility on the third floor of a building might not be usable if persons with physical disabilities cannot reach there due to the lack of an elevator in the building.

In the virtual world, seamless connectivity could refer to an accessible mobile phone used to visit a website that was accessibly designed, through which someone can access real-time text to speech interpretation. Without seamless connectivity, individual pieces are not accessible by design, as the barriers between them inhibit the user from completing a task.[34]

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31   National Disability Authority, 2015.
32   United Nations ESCAP, 2016.
33   Ibid.
34   Ibid.

2.3.4 Effective and meaningful participation

The concept of effective and meaningful participation comprises the two terms established in international agreements: full and effective participation; and meaningful participation. Full and effective participation can be broadly understood as participation in all aspects of society on an equal basis with others.[35] The concept of 'full and effective participation of persons with disabilities' sits alongside 'accessibility' as one of the core principles of the CRPD. It is a cross-cutting issue that is "present in the Article on children with disabilities (art. 7), and in the Article that prescribes prerequisites for enabling participation such as those on accessibility (art. 9)."[36] In line with this, 'meaningful participation' refers to the direct involvement of individuals in decisions that affect them.[37]

Effective and meaningful participation of persons with disabilities can be understood as the outcome of successful implementation of accessibility, Universal Design and seamless connectivity, in which participation in all areas of society is on an equal basis with others. In addition to being an outcome, effective and meaningful participation is also a process-oriented term, which refers to the involvement of persons with disabilities in the design, implementation, and monitoring of investing in accessibility. As noted by the UN Human Rights Council, participation "allows individuals to play a central role in their own development, as well as in the development of their communities."[38] In practice, this means going beyond tokenistic engagement such as inviting persons with disabilities for one consultation for abstract discussion. Whether in development of legal frameworks, drafting of blueprints for a building, or designing accessibility service provision mechanisms, persons with disabilities need to be effectively and meaningfully participating throughout the entire process to ensure impactful results that empower the participation of others.

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35   United Nations General Assembly, 2006. A/RES/61/106, Preamble para e.
36   United Nations Human Rights Council, 2016. A/HRC/31/62, para 15.
37   WHO.
38   United Nations Human Rights Council, 2016. A/HRC/31/62, para 13.

Chapter 3

Key areas for investment to enhance accessibility

'IT IS UNACCEPTABLE TO USE PUBLIC FUNDS TO CREATE OR PERPETUATE THE INEQUALITY THAT INEVITABLY RESULTS FROM INACCESSIBLE SERVICES AND FACILITIES'

– COMMITTEE ON THE RIGHTS OF PERSONS WITH DISABILITIES, CONVENTION OF THE RIGHTS OF PERSONS WITH DISABILITIES GENERAL COMMENT NO. 2 (2014)

Policymakers and other relevant stakeholders must apply conceptual understandings of disability, effective and meaningful participation, and accessibility and its dimensions into their work to manifest change and impact with regard to creating fully inclusive societies. Take, for instance, the example of persons with disabilities in the workforce. The disability created by the interaction of an individual's impairments with the barriers of access in the workplace is a contributing factor to the lower rate of employment of persons with disabilities compared to the general population.[39] This means that the right to meaningful participation of persons with disabilities is denied in the context of employment.

In order to break down barriers and ensure that persons with disabilities are able to participate in the workforce, governments and employers must work together to ensure that legal protections of the rights of persons with disabilities are in place, that places of work are accessible to the widest array of diversity of persons with disabilities and the general population, and that provision of support such as reasonable accommodation is available upon request.

To translate these elements from theory into practice, this chapter outlines the approaches necessary for investing in the creation of a policy environment that facilitates action and progress in investing in accessibility. Namely, through setting up a strong legal basis for investing in accessibility; through establishing stringent standards of accessibility; through ensuring that procurement of all goods and services prioritizes accessibility as a core criterion; and through enhancing the meaningful impact of accessibility investments through audits.

A crucial and cross-cutting element of all of these approaches is the involvement of persons with disabilities, who should be consulted from the onset of the development and throughout the implementation and follow-up of all efforts in this regard.

3.1 INVESTING IN A LEGAL BASIS FOR ACCESSIBILITY

The Committee on the Rights of Persons with Disabilities notes in its General Comment No. 2 on Accessibility that the right of access to any place or service intended for use by the general public, such as transport, hotels, restaurants, cafes, theatres and parks (art. 5 (f)), is guaranteed by the International Convention on the Elimination of All Forms of Racial Discrimination. Although racial discrimination and discrimination on the basis of disability have different manifestations and effects, both of these are a result of prejudice, and the barriers in the built environment, transport, ICT and services faced by persons with disabilities are also rooted in cultural and social norms. In this regard, breaking down such barriers should be under the full control of society.[40]

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39   United Nations ESCAP, 2017a.
40   United Nations CRPD, 2014. CRPD/C/GC/2, para 3.

Various ministries, departments and policymakers make efforts to invest in accessibility, however one of the major barriers for governments to promoting and creating accessible environments is a lack of legal basis to support such endeavours. Recognition of the right to access and prioritization of the principles of accessibility, Universal Design and reasonable accommodation in legal frameworks empowers all stakeholders to take action to break down barriers to access. Different national contexts warrant different approaches to legally enshrining accessibility, though these can be broadly classified as either anti-discrimination focused, or programme focused.

An anti-discrimination approach frames the lack of accessibility as disability-based discrimination and prohibits it through anti-discrimination law. The law first establishes that the lack of accessibility is a form of denial of rights of persons with disabilities. This could be contained within the law itself, or in regulation that delineates what constitutes discriminatory practices. The world's first disability-specific anti-discrimination law on disability, the Americans with Disabilities Act[41] prohibits disability-based discrimination in the area of employment, public services and accommodations, and requests public entities or private entities (duty bearers) to either take actions to ensure accessibility or to be responsible if accessibility is not ensured. According to the law, for example, if a person with disabilities cannot use public transportation, failure by a public entity to submit and implement the plan of accessibility improvement of public transportation, and furthermore failure to provide reasonable accommodation itself, constitutes disability-based discrimination. An example of this in practice is when a deaf person in California claimed that an office of local government denied their request of sign language interpretation, and thereby violated their right to reasonable accommodation.[42] A court decided in favour of the plaintiff and ordered the office to pay

a fine, to provide sign language interpretation, and furthermore provide training on the Act within the office.

Anti-discrimination law need not be disability or accessibility-specified; anti-discrimination law covering various dimensions of discrimination that specifically define barriers to access as a form of discrimination can be effective in providing a legal backing for policymakers and other stakeholders to invest in accessibility.

A strength of this approach is that persons with disabilities have a legal basis for agency to claim their rights in cases whereby accessibility is lacking. If recognized as a form of discrimination, not only does the rights holder benefit, but so too does the organization, and arguably even society as a whole, as the duty bearer's accountability for accessibility becomes public knowledge. At the same time, a potential drawback of this approach is that a rights holder also holds the burden of proof through finding violations in anti-discrimination law in order to claim rights. Furthermore, there is also potential for the rights of the rights holder to not be met if the duty bearer can demonstrate that reasonable accommodation requests constitute an undue burden or rights claimers cannot prove the existence of discriminatory practices concerning accessibility.

The other approach to establishing a legal basis for accessibility is through a programmatic focus that does not use disability-based discrimination, but rather asks responsible entities – be it government or the private sector, as delineated in the law – to implement certain actions. Such a law could mandate that a public space be constructed in a fully accessible manner in line with international or national standards if a certain number of individuals are expected to use the space on a daily basis, or if the budget for the project exceeds a certain amount. For instance, Japan has the Barrier-free Act[43]

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41   Americans With Disabilities Act., 1990.
42   United States Department of Justice, Civil Rights Division.
43   Government of Japan, Ministry of Land, Infrastructure, Transport and Tourism, 2008.

which requires public transport operators and select public facilities and spaces to comply with Barrier-Free Standards. It provides a deadline and ratio for delivery and required results to improve accessibility.

One strength of the programmatic approach is that a plan with a dedicated budget and clear commitments of responsible entities will be implemented. On the other hand, a potential shortcoming is that this approach relies on government decision regarding the dimensions and extent of accessibility implementation, and persons with disabilities do not have a basis on which to claim their rights. For example, if accessible toilet facilities were set up with this approach without proper involvement of persons with disabilities, the amenities may not meet the requirements of diverse populations, such as grab bars at unsuitable heights, rendering the facilities unusable, let alone persons with disabilities not having legal entitlement to claim the wrong implementation.

These approaches are not at odds with each other; rather they often work concurrently to deliver the best results. Governments which have laws that apply both anti-discrimination and programmatic approaches benefit as the strengths of both are reinforced while shortcomings are compensated.

In addition to approaches of legal basis, the enforcement of law can also differ. Penalty-based approaches and incentive-based approaches are two examples. In a penalty-based approach, responsible entities may face negative financial and reputational repercussions if they do not comply with the requirements set out by the law. In contrast, an incentive-based approach rewards duty bearers for compliance, including through certification, public recognition, and subsidies. A combination of punitive and incentive-based enforcement measures can act together to ensure stronger awareness, interest and compliance with accessibility components of legislation.

Laws can be specific to accessibility issues, or accessibility could be a part of a comprehensive law on disability, or entirely different areas, such as procurement or human resource management. It is ideal that a government have an array of laws which employ both anti-discrimination and programmatic approaches, as consistent conceptual understanding of accessibility and application of tools such as accessibility standards applied across laws can ensure more effective implementation of accessibility.

3.2 INVESTING IN ADOPTING AND IMPLEMENTING ACCESSIBILITY STANDARDS

With a robust legal basis for accessibility in place, translating the principles of accessibility into tangible actions requires clear requirements, criteria, and technical standards. Collectively, these requirements, specifications and standards act comprehensively to build an accessible environment, product or service, to ensure it meets the requirements of use for the widest array of users possible, including for persons with disabilities. For example, many governments have a requirement that content on their websites needs to be accessible and inclusive for all users, mandated through policy or legislation. This requirement is specified through detailed criteria that make this a reality, such as by incorporating inclusive and plain language or speech to text functions that may accommodate users from different backgrounds, often through policy guidance documents. The implementation of these specifications is conducted in line with established national or international technical standards for accessible websites.

Accessibility standards underpin the quality of outcomes of implementing the requirements and criteria set out for accessible environments, products and services. The International Organization for Standardization (ISO) is an internationally recognized standard setting body that has published more

than 30 technical standards that specifically target accessibility.[44] In addition to standards, ISO technical standard guidelines assist standards developers to address accessibility requirements when writing standards, providing recommendations and technical standards that focus on products, services and the built environment.[45]

For example, ISO technical standard 21542:2011 'Building Construction' specifies a range of requirements and recommendations that "relate to the constructional aspects of access to buildings, to circulation within buildings, to egress from buildings in the normal course of events and evacuation in the event of an emergency".[46] Whereas, ISO technical standard 7001:2007 'Graphical Symbols', provides detailed recommendations on public information symbols that may be used in situations whereby written text messages may be a barrier to understanding.[47] This can be useful not only for persons with disabilities, however also for children, older persons or tourists who do not speak the local language. In addition, ISO technical standard 14785:2014 'Tourist Information Offices' "establishes minimum quality requirements for services provided by tourist information offices" such as accessibility of the entrance to the building and parking accessibility, along with accessibility of the information that tourist offices provide and distribute.[48]

A particularly prominent example of ISO standards is the World Wide Web Consortium's (W3C) Web Content Accessibility Guidelines version 2.0 (WCAG 2.0), which in 2012 were published as an ISO and International Electrotechnical Commission (IEC) standard: ISO/

IEC 40500:2012: "Information technology -- W3C Web Content Accessibility Guidelines (WCAG) 2.0".[49] WCAG 2.0 provides four key principles of accessibility:

- Perceivable — Available through sight, hearing, or touch;

- Operable — Compatible with keyboard or mouse;

- Understandable — User-friendly, easy to comprehend; and

- Robust — Works across browsers, assistive technologies, mobile devices, old devices/browsers, etc. Follows standards.[50]

Underpinning each principle are clear and concise success criteria as well as guidance on how to satisfy those criteria. The criteria are also classified by one of three levels of conformance: A, AA, and AAA.[51] In essence, the higher the level the greater the accessibility.[52]

ISO certification can be a useful tool to determine compliance and to add credibility to an organization or government. In the case of organizations, certification is undertaken by independent, external certification bodies who provide "written assurance (a certificate) that products, services and processes conform to acceptable international ISO standards".[53] In some countries, ISO standards may be incorporated into legislation, and are therefore mandatory, while in other countries ISO standards may be voluntary. In some cases, country regulators "refer to ISO standards as an example of good practice".[54] For example, "a

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44   See Annex for list of ISO standards on accessibility.
45   International Organization for Standardization (ISO) (c).
46   ISO, 2011.
47   ISO, 2007.
48   ISO, 2019.
49   Harrison, J. and G. Alchin, 2017.
50   Ibid.
51   Ibid.
52   Ibid.
53   ISO (a).
54   Saez, C., 2012.

building regulation might say you must comply with local regulations and one way of complying with that is to comply with the ISO standard."[55]

In both cases, integrating ISO accessible technical standards into laws, policies and programming at all levels of government and/or organization will assist in creating an inclusive society for all while making life easier for persons with disabilities. WCAG 2.0, for instance, has been steadily adopted by various governments around the world as the accessibility standard for their own websites,[56] and in some countries, under anti-discrimination legislation it is a legal requirement for government ICT to meet at a minimum WCAG 2.0 Level A criteria.[57] In Canada, for instance, by January 1, 2021 "all public websites and web content must meet WCAG 2.0 Level AA criteria".[58] Similarly, the United Nations Web Accessibility Guidelines seek to ensure that all organization websites comply with WCAG standards.[59]

3.3 INVESTING IN A DISABILITY-INCLUSIVE PROCUREMENT APPROACH

A legal and/or policy basis for disability-inclusive procurement, underpinned by accessibility standards, has the potential to empower governments and other stakeholders to procure goods and services that are accessible through Universal Design, which "can serve as an effective leverage to promote Universal Design-based society with the involvement of both public and private sectors".[60]

Procurement is the process by which a customer, or procurer, (e.g. government, organization, or individual) purchases goods or services from an external supplier, selected for that specific purchase. Disability-inclusive procurement is a two-pronged approach to procurement. The first prong focuses on ensuring that vendors themselves are disability-inclusive, including having persons with disabilities in leadership roles or as employees of the vendor. The second prong, which this section will focus on, addresses the accessibility of the procured goods or services and can be summarized as incorporation of accessibility standards and/or Universal Design principles into the call for tenders and as an assessment criteria.

Successful disability-inclusive procurement requires the procurers to have in place a strong legal/policy basis for investing in accessibility. Procurers with a mandate for accessibility can effectively procure accessible goods and services through a multi-step process. The procurer must first identify the specific accessibility dimensions it is seeking to invest in and define the requirements and technical standards relevant for the goods and services necessary to build an accessible environment. As the effectiveness of procurement policies hinges on the quality of accessibility standards used, it is crucial to ensure that the criteria and underpinning standards used are rooted in principles of Universal Design in compliance with international standards such as those of ISO. Suppliers submitting bids would then demonstrate the accessibility of their goods and services through compliance with technical standards, functional performance statements, and/or product accessibility templates.[61]

The evaluation of supplier bids is often based on a balance of quality and price. Ensuring that accessibility is one of the core criteria of deeming goods and services to be of quality is an effective means to ensure that the bid evaluation process takes into account

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55   Ibid.
56   Ibid.
57   Enamorado, S., 2017.
58   Ibid.
59   United Nations Department of Global Communications.
60   United Nations ESCAP, 2019c.
61   United Nations ESCAP, 2019c.

FIGURE 3.A.
PROCESS OF DISABILITY-INCLUSIVE PROCUREMENT FOCUSING ON ACCESSIBILITY

MANDATE	TERMS OF REFERENCE	CALLS FOR TENDERS	REVIEW OF BIDS
Establish a mandate for accessible procurement	Identify specific areas of need for accessibility	Define specific requirements and technical standards to be followed	Assess bids based on demonstrated compliance with needs, requirements and standards
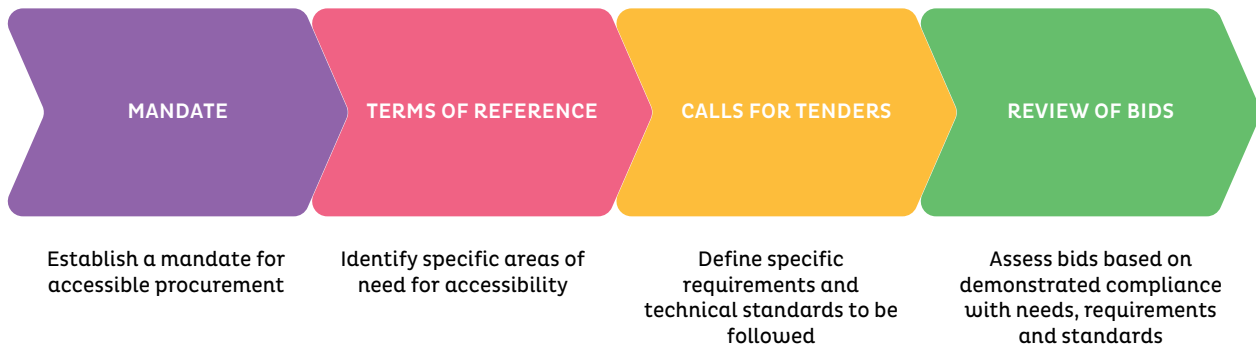
SOURCE: UNITED NATIONS ESCAP DESIGN, BASED ON INFORMATION FROM ESCAP, 2019C.

accessibility considerations. The EU Parliament and Council's Directive 2014/24/EU on public procurement exemplifies this in its Article 67, which comprises in its contract award criteria the consideration of "quality, including technical merit, aesthetic and functional characteristics, accessibility, design for all users, social, environmental and innovative characteristics and trading and its conditions".[62]

A notable example of standard-based disability-inclusive procurement in the region is in Australia. In 2016, the Australian Minister for Finance announced that Australia would adopt the EU standard for the procurement of accessible ICT (EN 301 549:2016), making it the first country outside of Europe to adopt this emerging international standard and thus ensuring that ICT goods and services that Australia purchases are accessible for all employees.[63] The Government of Australia adopted the standard within national law and is known as the 'Accessibility Requirements Suitable for Public Procurement of ICT Products and Services' (AS EN 301 549:2016). The standard was incorporated as part of Australia's 'Procurement Framework' within the Commonwealth Procurement Rules, which requires all tender responses and contracts for procurement by all non-corporate Commonwealth entities to comply with the standard.[64] The Australian Network on Disability states that the adoption of the new EU standard will "pave the way for the standard to be embedded into public and private sector procurement requirements, leading to improved outcomes for employees and customers with disability".[65] Box 2 provides details on the standards.

Recalling how incorporation of accessibility through Universal Design at the initial stage of product and service design can limit further costs which may arise from modifying inaccessible goods or services at a later date, disability-inclusive procurement policies and practices can help procurers save costs up front. Moreover, the effective implementation of such procurement policies and practices may support the creation of an upward spiral of market-driven spread of accessible goods and services. Establishing an incentive for suppliers to increase production of accessible goods and services can lead to a ripple effect of a broader range of accessible goods and services becoming available to consumers with

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62 EUR-Lex, Access to European Union Law, 2014.
63 Australian Government, Department of Finance, 2019.
64 Ibid, rule 2.2.
65 Australian Network on Disability, 2016.

BOX 2.
ACCESSIBILITY REQUIREMENTS SUITABLE FOR PUBLIC PROCUREMENT OF ICT PRODUCTS AND SERVICES (AS EN 301 549:2016)

Objectives and scope: Assist federal departments and agencies in the development and procurement of accessible ICT goods and services.

Responsible ministries: Joint initiative by Standards Australia and the Department of Finance.

Monitoring system: Commonwealth Procurement Rules require all tender responses and contracts to comply with the Australian ICT procurement standard, where applicable, and annual reports submitted by government departments and agencies detail compliance with the Commonwealth Procurement Rules. Any instances of non-compliance with the Rules must be reported. Non-compliance may result in criminal, civil or administrative action against government officials.

SOURCE: AUSTRALIAN GOVERNMENT, DEPARTMENT OF FINANCE, 2019, RULES 2.3, 2.13 AND 10.10. FOR ADDITIONAL INFORMATION ON THE AUSTRALIAN GOVERNMENT'S ADOPTION OF EU ACCESSIBLE ICT STANDARDS, SEE MEDIA ACCESS AUSTRALIA, 2015.

diverse needs. Increased availability breeds healthy competition in increased affordability and potential for increased quality of Universal Design-based products and services.[66]

Numerous regional and global agreements set out disability-inclusive procurement as a priority for governments and other stakeholders. The CRPD's call for States Parties to eliminate obstacles and barriers to accessibility is supported by the CRPD Committee General Comment No. 2 on Accessibility which outlines important details on how States Parties can address the issue of accessibility. As a form of affirmative action, the Committee states that governments should incorporate accessibility requirements within public procurement and establish accessibility standards and legislation.[67]

The Beijing Declaration, including the Action Plan to Accelerate the Implementation of the Incheon Strategy (Beijing Declaration) supports the Incheon Strategy by recommending member States to develop, adopt and implement technical standards based on Universal Design and in line with international standards, and adopt a procurement policy to ensure that all government devices, goods, services and software are in line with accessibility standards. The Action Plan also encourages member States to promote the adoption of procurement policies in the private sector.[68]

The Association of Southeast Asian Nations (ASEAN) Enabling Masterplan 2025: Mainstreaming the Rights of Persons with Disabilities pushes for regional reforms towards "fully implementing the CRPD at the national level, to eliminate discrimination, remove barriers, and ensure accessibility". It recommends member States to promote products made by persons with disabilities to wider markets to increase demand for these products, including through national procurement policies and regulations, and knowledge enhancement of persons with disabilities on legislation including procurement policies.[69]

3.4 INVESTING IN DEVELOPMENT AND EMPLOYMENT OF ACCESS AUDITS

While accessibility standards are useful for providing technical guidance and in some cases legal incentive to invest in accessibility, and disability-inclusive procurement law/policy and process support building

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66   United Nations ESCAP, 2019c.
67   United Nations CRPD, 2014. CRPD/C/GC/2.
68   United Nations ESCAP, 2018.
69   Association of Southeast Asian Nations (ASEAN), 2018.

an accessible environment, ensuring the effectiveness of accessibility provisions for the end users requires assessment that leverages their expertise in defining the supports they need to participate in society.

This assessment is often conducted through an access audit, which evaluates how well goods and services or the environment on the whole are compliant with relevant accessibility standards, codes and/or legislation, and most importantly are usable and effective for persons with disabilities. An access audit generally involves one or more of the following activities: reviewing plans; a user consultation audit which gathers information from users of goods, services or the built environment in a systematic way; a check-list audit; and a walk-through approach to assess continuity of access.

Access audits are an important tool for ensuring seamless connectivity, which as described in Chapter 2, refers to the movement between environments, both physical and virtual, without barriers. While disability-inclusive procurement and accessibility standards can ensure that specific spaces, products and services meet the needs of users, employing access audits that assess the use from beginning to end ensures that the journey between spaces and the transfer or hand-off between different products and services is also accessible.

As stated in Goal 3 of the Incheon Strategy, "access audits are an important means of ensuring accessibility and must cover all stages of the process of planning, design, construction, maintenance and monitoring and evaluation"[70] and defines both targets and indicators for tracking progress. A crucial precursor to this is building the capacity of both policymakers and civil society actors to conduct access audits. In this regard, Goal 3 recommends "training programmes on

Universal Design for policymakers, building inspectors and contractors, and integrating accessibility through Universal Design into higher education curricula related to architecture, urban planning, transport, civil engineering and other relevant academic branches".[71] It should also be noted that civil society involvement in conducting accessibility audits, guidelines and conducting advocacy work to promote Universal Design can be helpful in enhancing mechanisms for tracking progress of accessibility.

Designing and planning a successful access audit requires a determination of which types of access audits are best suited for the evaluation format and objectives.[72] Some examples of purpose and objectives of an audit include:

a   Checking compliance with mandatory accessibility standards, codes and/or legislation;

b   Making recommendations for modification and improvement to the building;

c   Revising standards where these are unworkable or deficient;

d   Developing an access handbook for building management;

e   Providing feedback (e.g., post occupancy evaluation) for design teams, etc; and

f   Providing useful information on accessible public spaces and buildings (e.g., for tourist guides or maps).

The check-list access audit rates elements against a standard list of parts of the building and its approaches in sections: parking, entry, horizontal circulation, etc.[73] There are many templates for check-list access audits, each adjusted to the specific environmental

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70   United Nations ESCAP, 2018. Incheon Strategy Goal 3.
71   United Nations ESCAP, 2018. Beijing Action Plan, Action point 12.c.iii.
72   Harrison, J., 2014.
73   Ibid.

FIGURE 3.B.
BEFORE AND AFTER AN ACCESS AUDIT OF THE UN COMPOUND IN BANGKOK

BEFORE

AFTER

SOURCE: HARRISON, J. AND G. ALCHIN, 2017.

context. A check-list access audit should be adapted to highlight the most relevant aspects to evaluate, and the expected outcomes.[74]

An important consideration is that access audits are not a "tick-the-box" exercise to ensuring accessibility. There is a risk that a poorly planned access audit focuses too narrowly, such as solely on the accessibility of a building lift, while forgetting to ensure that accessibility of other aspects of the travel journey are ensured, such as an accessible footpath or entrance to the building. In this regard, application of the principle of seamless connectivity is imperative in the access audit process to avoid the box-ticking trap, and to ensure accessibility throughout the entirety of the environment.

[74] Ibid.

Chapter 4

Drivers for and added value of investing in accessibility

As discussed in the previous chapter, promoting accessibility is a foundational element of ensuring the participation of persons with disabilities. In the context of development in particular, this is of increasing focus. Meaningful participation of persons with disabilities is highlighted in the implementation of the 2030 Agenda for Sustainable Development, which mandates efforts to ensure that persons with disabilities are engaged as active participants in the peaceful and sustainable development of their futures.[75,76]

Just as the 2030 Agenda for Sustainable Development focuses on the integrated and indivisible nature of pillars of development, investing in accessibility requires a similar approach that leverages the connections of various dimensions of society and participation it touches upon. Such an approach recognizes the drivers of disability and the drivers of barriers faced by the broader population. In this sense, breaking down these barriers to build an accessible world goes well beyond serving only persons with disabilities. Rather, by investing in creating environments, goods and services that meet the needs of everyone, participation on an equal basis in society becomes the norm for all.

This chapter highlights some key drivers that emphasize the need for investing in accessibility, including shifting demographic factors globally and in Asia and the Pacific. It also outlines some of the potential economic benefits of investing in accessibility, along with examples of positive returns on investment that cut across the social, economic and environmental pillars of sustainable development.

4.1 DEMOGRAPHIC FACTORS DRIVING THE NEED FOR INVESTING IN ACCESSIBILITY

As the CRPD defines, disability results from the two-way interaction between individuals with a health condition and the surrounding environments, including attitudes toward disability, which may hinder or facilitate full and effective participation in society.[77] This implies that a wide range of demographic and socio-economic factors influence health conditions of people and affect the associated outcomes of disability. These factors comprise population ageing, chronic diseases, environmental factors, road crashes, disasters and conflicts.

4.1.1 Population ageing

Asia and the Pacific has nearly 60 per cent of the world population. Among the 4.6 billion people living in the region in 2019, more than 400 million are aged 65 and over.[78] Similarly, as in other parts of the world, every country in Asia and the Pacific is experiencing substantial growth in the number and proportion of older persons in their population, as a result of falling fertility rates and increasing life expectancy.

Between now and 2030, the number of persons aged 65 and over is expected to increase by 50 per cent, totalling 605 million people and representing 12 per cent of the total population in the region. Between the period 2015 to 2030, the proportion of older persons will change dramatically in all five subregions. While East and North-East Asia takes the lead, subregional differentials will range from 18.1 per cent to 8.2 per cent (see Figure 4.A).

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75 United Nations Development Programme (UNDP), 2016.
76 United Nations General Assembly, 2016. A/71/214, para 63.
77 United Nations General Assembly, 2006. A/RES/61/106.
78 Note: The age threshold for older persons differs across countries and areas. In this regard, references to data on older persons in this report will specify the age threshold used.

FIGURE 4.A.
GROWTH IN PERSONS AGED 65 AND OVER IN ASIA AND THE PACIFIC BY SUBREGION, 1950–2030
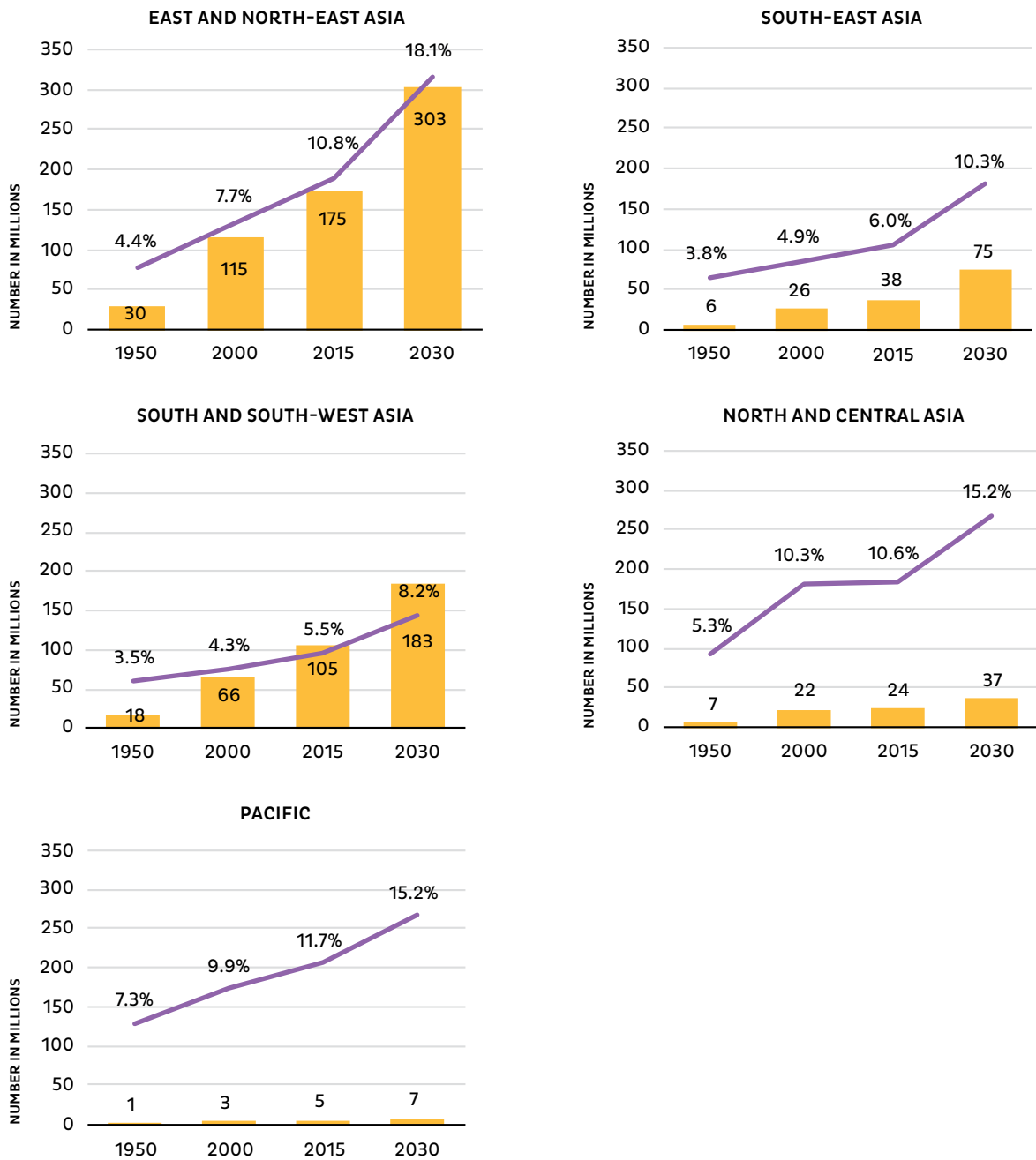
SOURCE: UNITED NATIONS ESCAP DESIGN, BASED ON DATA FROM UNITED NATIONS DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS (DESA), 2019.

The pace of population ageing is increasing much faster than has been the case in the past years. This transition from "ageing" to "aged", from "aged" to "hyper-aged" societies takes multiple forms in Asia and the Pacific.[79] For example, while Australia and New Zealand had more than 65 years to adapt to a change from 7 to 14 per cent in the proportion of the population that was older than 65 years, countries such as Brunei Darussalam, Maldives and Viet Nam will have only 10 to 15 years to make the same adaptation. Likewise, the time period for the same cohort to move from 14 to 21 per cent of the total population varies to a large extent, ranging from 5 years (Singapore) to 40 years (Kazakhstan). This means that the adaptation that some countries need to go through will have to be undertaken much more quickly than was often the case in others.

Figure 4.B. demonstrates the expected time period for increases of the proportion of the population aged 65 years and over to reach defined benchmarks. The years on the left of the bars indicate the onset of an ageing society (7 per cent of the population); the years in the middle of the bars indicate the onset of an aged society (14 per cent of the population); the years on the right of the bars indicate the onset of an hyper-aged society (21 per cent of the population).

Population ageing is poised to become one of the most significant social transformations of the twenty-first century, with implications for nearly all sectors of society, including the demand for goods and services, such as housing, transportation and social protection.[80]

FIGURE 4.B.
EXPECTED TIME PERIOD FOR INCREASE OF THE PROPORTION OF PERSONS AGED 65 AND OVER IN ASIAN AND PACIFIC COUNTRIES AND AREAS

SOURCE: ESCAP DESIGN, BASED ON DATA FROM UNITED NATIONS DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS (DESA), 2019.
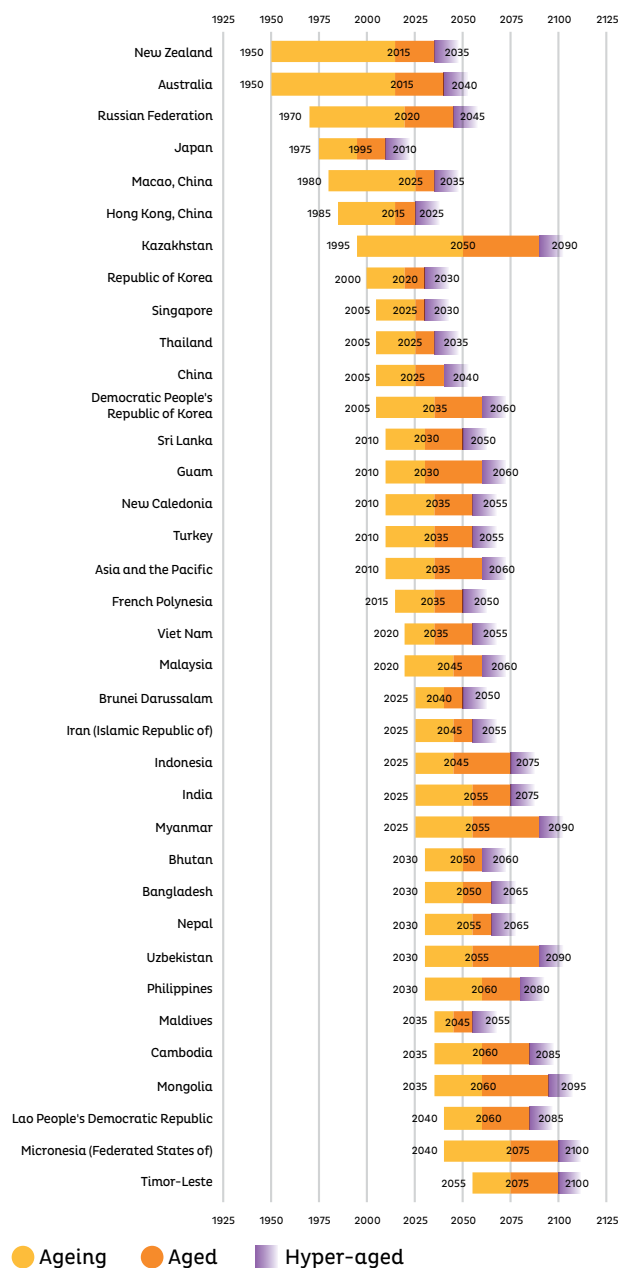
79 If the proportion of persons aged 65 and over exceeds 7 per cent of the total population, the society is called an "ageing" society. If the proportion surpasses 14 per cent or 21 per cent, it is called an "aged" or "hyper-aged" society.
80 Suzman, R., J.R. Beard, T. Boerma and S. Chatterji, 2015.

4.1.2 Impact of ageing on disability

As older persons tend to face higher risk of experiencing physical and mental conditions, ageing will have a major impact on the prevalence of disability.[81] With increasing age, numerous underlying physiological changes occur, and the risk of chronic disease rises. The major burdens of disability and death arise from age-related losses in hearing, seeing and moving, and noncommunicable diseases, including heart disease, stroke, chronic respiratory disorders, cancer and dementia.[82] Age-related disabilities include sight impairment and blindness, and deafness and hearing loss, musculoskeletal diseases and mental disorders. Alzheimer's disease, characterized by progressive mental deterioration, is the most common form of dementia in older persons across the world. Globally, the number of persons with dementia in 2013 was estimated at 44 million, rising to 76 million in 2030 and 135 million in 2050. In the Asia-Pacific region, the number of persons with dementia is estimated to increase from 23 million in 2015 to 71 million by the year 2050.[83]

According to UN estimates, more than 46 per cent of older persons — those aged 60 years and over —have disabilities and more than 250 million older persons experience moderate to severe disability. Looking ahead, the global trends in ageing populations and the higher risk of disability in older persons are likely to lead to further increases in the population affected by disability.[84] The case of Australia shows that older persons are disproportionately represented among populations of persons with disabilities, and their share has constantly increased in the past few years as a combined effect of higher disability prevalence at older ages and population ageing (see Figure 4.C). In coming decades, the share of older persons with disabilities will experience an upward trend to make up

more than two-thirds of all persons with disabilities by 2100 (see Figure 4.D). During the same projected years, the population of persons with disabilities is expected to increase by over 80 per cent as compared to 2015.

This phenomenon warrants the Australian Government to proactively address the needs of older persons as well as their disability concerns. See Figures 4.C and 4.D.

4.1.3 Injuries as a leading cause of disability

Along with ageing which has a significant impact on future disability trends, it is also known that a significant proportion of disabilities are caused by injuries. With increases in mobility of population and development of land transport networks, road traffic accidents cause deaths or injuries, often resulting in long-term disabilities. Other situations of risk include acts of violence such as child abuse, youth violence or intimate partner violence, along with war and conflict. Available estimates from some countries suggest that up to one quarter of disabilities may result from injuries and violence. Examples of injury-related impairments include physical and/or cognitive limitations due to neurotrauma; paralysis due to spinal cord trauma; partial or complete amputation of limbs; physical limb deformation resulting in mobility impairments; psychological trauma; and sensory disability such as blindness and deafness. Injury prevention will reduce the causes of disabilities and improved care and services will better the lives of people living with injury-related disabilities.[85]

The data linking road traffic crashes with disability are scarce. At least 2 million people were injured in road crashes in the Asia-Pacific region in 2005, with some reports indicating up to 20 to 30 million injuries in the same year. It is reasonable to infer that a substantial

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81   United Nations ESCAP, 2012.
82   WHO, 2015.
83   Alzheimer's Disease International, 2014.
84   United Nations DESA.
85   World Health Organization and World Bank, 2004.

FIGURE 4.C.
DISTRIBUTION OF PERSONS WITH DISABILITIES IN AUSTRALIA BY AGE GROUP, 2003–2015
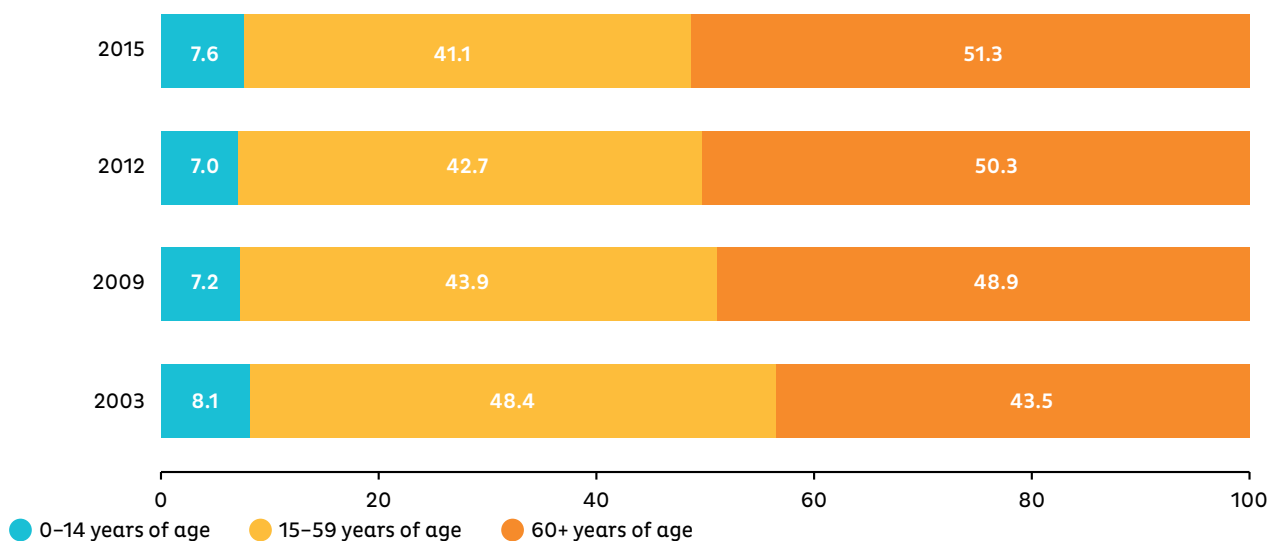
SOURCE: UNITED NATIONS ESCAP DESIGN, BASED ON DATA FROM AUSTRALIAN BUREAU OF STATISTICS, 2015.

FIGURE 4.D.
PROJECTED COMPOSITION OF PERSONS WITH DISABILITIES IN AUSTRALIA BY AGE GROUP, 2030–2100
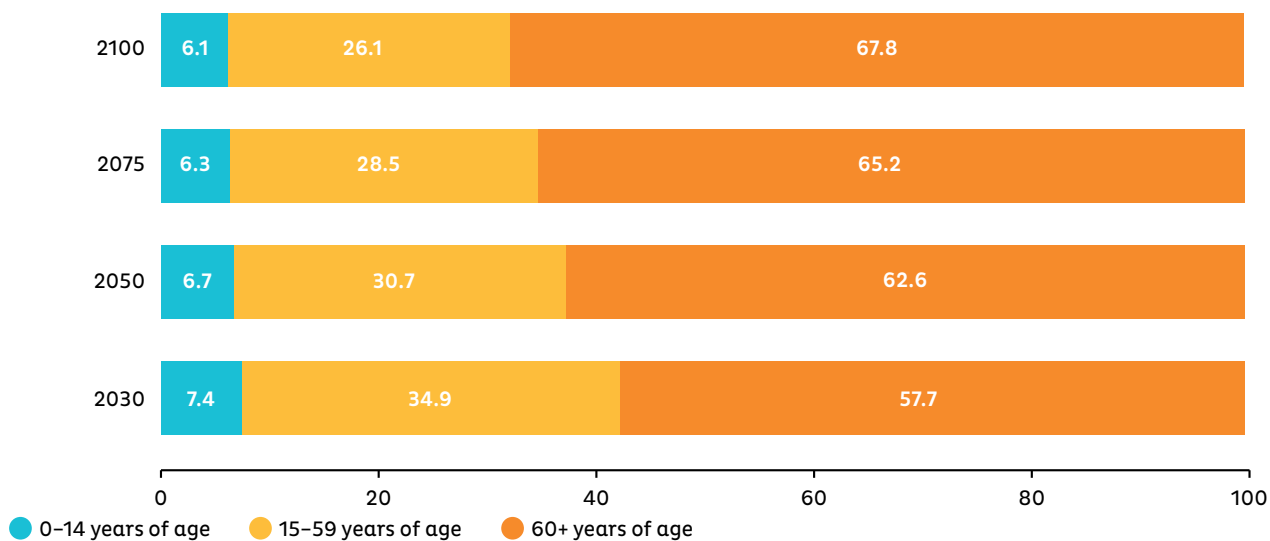
SOURCE: UNITED NATIONS ESCAP DESIGN AND CALCULATIONS BASED ON DISABILITY DATA FROM AUSTRALIAN BUREAU OF STATISTICS, 2015; SURVEY OF DISABILITY, AGEING AND CARING, AND DEMOGRAPHIC DATA FROM UNITED NATIONS DESA, 2019.

number of the survivors of road crashes who sustained injuries became disabled. The number of road crashes is expected to increase in Asia and the Pacific. One driver of this is the variance across the region in existence and enforcement of legislation on risk factors such as speed, drink-driving, helmet use, seat-belt use and child restraints.[86]

These risks are exacerbated by the rapidly increasing number of vehicles on the road. With a growing middle class, and hence more vehicles, this trend is set to continue in China and India, the two most populous countries in the world, as well as other developing countries. The WHO predicts that road crashes will increase from being the ninth leading cause of death in 2004 to the fifth leading cause in 2030. This is mainly due to the increasing number of road crashes in low- and middle-income countries, many of them in the Asia-Pacific region. The nature of road safety issues in developing countries in Asia and the Pacific differs significantly from that in developed countries. In South Asia, typically more than 50 per cent of all road fatalities are pedestrians. In East Asia and South-East Asia, more than two thirds of the victims are motorcyclists.

In addition to these situations of risk, natural disasters may also play a significant role in the cause of disability. Natural disasters could include earthquakes, tsunamis, floods, tropical cyclones, storm surges and drought, among others.[87] This is of particular relevance for Asia and the Pacific, which is one of the most disaster-prone regions in the world. Nearly half of the natural disaster events worldwide in 2018 occurred in Asia and the Pacific, with eight of the ten deadliest natural disasters taking place in the region. Furthermore, of those affected by natural disasters globally since 1970, 87 per cent were those in Asia and the Pacific, despite the region being home to 60 per cent of the global

population.[88] These trends are demonstrated through disasters such as the 2004 earthquake and tsunami in the Indian Ocean, following which there was an estimated 20 per cent increase in disability prevalence in affected regions.[89] Furthermore, it was reported that the 2015 earthquakes in Nepal caused over 22,000 injuries.[90]

In addition to creating disability, the disproportionate impact that natural disasters have on persons with disabilities is an important point to recognize when considering the need for investing in accessibility. For instance, the mortality rate following the 2011 earthquake and tsunami in Japan was double for persons with disabilities compared with the rest of the population.[91] Barriers for persons with disabilities in disaster situations could include inaccessible response training and information, inaccessible early warning and notification systems, as well as inaccessible evacuation routes and emergency shelters. In this regard, Incheon Strategy goal 7 speaks specifically to addressing how the region can take steps to ensure that disaster risk reduction is accessible to and inclusive of persons with disabilities.

4.2 ECONOMIC BENEFITS OF INVESTING IN ACCESSIBILITY

Previously, the potential of harnessing the resources – financial and human – of government to holistically invest in accessibility has been limited by misconceptions of the universality of accessibility. For instance, promoting accessibility was regarded mainly as a responsibility of government ministries focused on disability, rather than a consideration for all ministries involved in the built environment, information and communications, ICT, transport and

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86   World Health Organization, 2018.
87   United Nations ESCAP, 2019b.
88   Ibid.
89   Handicap International, 2012.
90   Lord, A., B. Sijapati, J. Baniya, O. Chand and T. Ghale, 2016.
91   International Federation of Red Cross and Red Crescent Societies, 2015.

services. Furthermore, there has been a school of thought that views incorporating accessibility through Universal Design into infrastructure, transportation, ICT and services as cost prohibitive given the increased upfront time investment it often requires, without consideration of the long-term cost benefits.

However, as the common understandings of disability and accessibility advance, so too does the understanding of the potential economic benefits of investing in and promoting accessibility through Universal Design. While there is a relative lack of data on this dimension of accessibility, existing data demonstrates that the basis for these potential economic benefits is rooted in the following areas of potential:

1 Minimum investment in accessibility through Universal Design from the outset is less costly than doing so at a later stage or retroactively;

2 Persons with disabilities and those with different functional difficulties, as well as their broader communities, constitute a highly underserved client base for accessible goods and services;

3 Persons with disabilities and those with different functional difficulties can contribute more to society and the economy as effective and innovative members of the workforce if working methods and workplaces are created based on principles of Universal Design and are fully accessible; and

4 Persons with disabilities and those with functional difficulties have untapped potential for creating innovative and new goods and services that are accessible and can serve a wider segment of the market.

4.2.1 Reduced costs

There is increasing recognition from governments that incorporating Universal Design principles into projects from the outset can be achieved with minimal investment, and with the added value of returns through social and economic benefits.[92] For example, an Australian state government land development corporation, Landcom, conducted a study to assess the costs of incorporating Universal Design features into home designs and found that if those features are designed into a project from the outset, then "universal housing could be achieved with almost no additional cost".[93]

As described in previous chapters, the benefits of investing in accessible environments extend to persons with disabilities, to those with mobility challenges, and the general public more widely. However, this benefit can also save governments money in the long run. For instance, investing in accessible housing can help prevent and reduce the risk of falls and subsequent injuries, particularly for older persons. This then delays the need for a move into residential care, as such, decreasing government expenditure on this and hospital costs.[94] Research conducted by the University of Kent found that, among those surveyed, more than half of those in older persons homes "had moved there after hospitalization as returning home was not practical".[95] Furthermore, the Victorian Council of Social Service in Australia suggests that increasing the number of Universal Design-based homes in the state of Victoria, Australia would save the state government in excess of AUD 70 million (approx. USD 48 million) each year through reduced "home care, residential aged care and hospital costs based on the ageing population".[96]

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92   Australian Local Government Association, 2017.
93   Landcom, 2008.
94   Victorian Council of Social Service, 2008.
95   Ibid.
96   Ibid.

Studies have found that incorporating Universal Design features such as accessibility in public transportation provide more efficient boarding and alighting and remove the need for assistance.[97] This in turn reduces stop times, increases the efficiency of the service and reduces transportation providers costs.[98] Studies conducted in Norway provide evidence of the relatively low cost of providing accessible public transportation and show a positive benefit-cost ratio in socioeconomic terms. For instance, one study shows the positive benefit-cost ratio of Universal Design-based investments in public transport with relatively low numbers of passengers: only 5,000 annually for enhanced lighting at bus stops; 10,000 annually for low-floor buses; and only 25,000 annually for high curbs at bus stops.[99]

4.2.2 Expanded market

Consumer-oriented industries can greatly expand their business by considering how they can ensure accessibility of their products and services. Based on estimated prevalence by WHO of 15 per cent of the global population being persons with disabilities, there remains a large potential market segment whose needs and interests in consumption of goods and services are untapped. This does not even include the communities of persons with disabilities, such as carers and family members, who also contribute to this underserved population.

Return on Disability, a company providing advice to private sector entities on disability inclusion notes that the number of persons with disabilities globally, 1.3 billion, constitute "an emerging market the size of China" with a disposable income of approximately USD 1.2 trillion annually. It also notes that the requirement for accessible products and services of the rapidly expanding demographic of older persons aligns with those of persons with disabilities, and companies that are inclusive and responsive to these requirements may benefit from loyalty and spending from this group.[100]

Research conducted by the University of Technology Sydney demonstrates the potential economic benefits of investing in accessibility through returns in the tourism sector. It shows that of the estimated 4.2 million persons with disabilities in Australia in 2017, 3.8 million took an overnight trip during the first quarter of the year. This accounts for 17 per cent of overnight trips taken in Australia, and the spending of persons with disabilities equates to 17 per cent of the total tourism expenditure in this period.[101] Furthermore, investment in accessibility has the potential to unlock tourism revenue from other underserved populations that rely on and benefit from accessible environments and services, such as older persons and families with young children.

At the micro-level, early investment in making goods and services accessible can provide strong financial returns. For instance, a company's early entry into production and provision of accessible goods and services can build a market and client base, while at the same time positions the company for compliance with legal and policy measures regarding accessibility. The European Union (EU) now has a directive mandating its Member States to practice disability-inclusive procurement through including compliance with accessibility standards as a requirement for bidding of companies in the public procurement process. Given that public procurement amounts to 17 per cent of the GDP of the EU, equivalent of more than EUR 1.9 trillion annually,[102] companies with an established supply chain in compliance with relevant standards have a competitive advantage in a large emerging market.

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97 International Transport Forum, 2017.
98 Ibid.
99 Odeck, J., T. Hagen and N. Fearnley, 2010. See also Fearnley, N., S. Flügel and F. Ramjerdi, 2011.
100 Return on Disability Group, 2014.
101 Pavkovic, I., A. Lawrie, G. Farrell, L. Huuskes and R. Ryan, 2017.
102 European Commission, 2017.

Likewise, Asia and the Pacific constitutes a region of steady economic growth, with estimates showing that in many developing countries procurement budgets constitute between 15 and 20 per cent of the national GDP.[103] The region comprises close to 60 per cent of population of the world, providing a large potential market. This is supplemented by the projection that by 2050, 59 per cent of the world's population over 80 years of age[104] — a population that will require a wide array of accessible products and services — will be in Asia and the Pacific. In this regard, there is enormous economic potential for making investments in accessibility in the region.

4.2.3 New potential workforce

If working methods and workplaces are more accessible, the potential for persons with disabilities to participate as active members of the labour force increases. It is estimated that the exclusion of persons with disabilities from the labour force, including vocational training and skill development, could result in economic losses as high as seven per cent of GDP.[105]

In Bangladesh, estimates indicate that USD 891 million annually is lost as a result of the exclusion of persons with disabilities from the labour market, with the income loss of adult caregivers adding another USD 234 million to this figure.[106]

Many companies are now realizing this lost potential and are actively promoting the value of persons with disabilities in the workforce. One example is the Singapore Business Network on Disability. The network is a community of businesses established in 2015 working on disability inclusion in business that exchanges information on how to make the workplace more accessible, in addition to advocacy promoting

inclusion of persons with disabilities in the workforce. The members of the Network include Accenture, AIG, Barclays, BP, Deloitte, Deutsche Bank and Standard Chartered Bank.[107]

4.2.4 Innovative goods and services

Looking beyond their potential benefits to the economy as consumers and employees, persons with disabilities can play an important role in the design of innovative and new accessible products and services and in how technology can be utilized for the benefit of all employees.

One such example of innovative services is that of the Mirairo Company. The Mirairo Company is run by persons with disabilities, who are themselves business owners who provide accessibility advisory services in order to improve accessibility and promote inclusion in the workplace.[108] Another instance is the Toronto-Dominion Bank Canada (TD Bank), which created the Assistive Technologies Program and Lab that works in consultation with employees with disabilities to identify assistive technologies that may support their employment and shows how technology can be utilized for the benefit of all employees. For example, accessibility features built into software programs such as Narrator, a screen reader built into Windows 10, are identified, and individual training support is provided for employees to learn how to use the technology.[109] Feedback from employees has been positive, and features such as high-contrast support and warm and cool backgrounds on computer screens prevent visual strain and screen fatigue for all employees, not only employees with disabilities. TD Bank reported that economic benefits derived from incorporating accessibility in the workplace were evident in increased productivity and efficiency, better than average rates

103 World Bank, 2015.
104 United Nations DESA, 2015b.
105 McClain, C., 2017.
106 Morgan Banks, L. and S. Polack.
107 Singapore Business Network on DisAbility.
108 Mirairo Recruiting, 2020.
109 Microsoft, 2018.

of employee retention, and reduced training costs.[110] A study conducted by The Conference Board of Canada suggests that if more businesses improved accessibility in the workplace, that by 2030 the boost to labour income in Canada would facilitate a CAD 10 billion (approx. USD 7.6 billion) increase in consumer spending and could substantially increase the country's GDP by CAD 16.8 billion (approx. USD 12.8 billion).[111]

Investment in accessibility also has the potential to bring about innovative new approaches to goods and services that have important impacts on society. An example of this is captioning. The application of captioning has gone from a focus of facilitating understanding of deaf or hard-of-hearing persons in television broadcasts, to supporting language learning for non-native speakers,[112] to existing across the majority of video-based media currently available.

The proliferation of handheld devices and social media have changed the way we interact with video content and bolstered the value of captioning. The potential for harnessing this for economic benefits is clear, as companies and marketing firms have noted that captions can increase engagement with video content, which in many cases is watched without sound.[113] Furthermore, studies have shown that captioning contributes to increased attention, comprehension and memory of content,[114] providing another impetus for advertisers. This is reflected in the availability of captioning across different video streaming platforms, such as YouTube, which employs speech recognition technology to automatically caption uploaded videos,[115] thereby making them easier to engage with in a variety of contexts in which audio may not be feasible or desirable.

4.3 BROADER SUSTAINABLE DEVELOPMENT OUTCOMES OF INVESTING IN ACCESSIBILITY

The combination of the human rights case for accessibility, as well as demographic drivers and economic benefits of accessibility conveyed in this report contribute to the broader changes that accessible environments can bring in terms of achieving the goal of sustainable development.

For instance, investment in accessibility on public transport has the potential to yield influence on societal behaviours. Incorporating Universal Design-based features into public transportation provides passengers with greater comfort, which can influence choice of transportation.[116] These greater comforts could include "reductions in travel times, greater service quality and convenience, improved safety and greater trip-making".[117] This in turn may assist in creating a modal shift in transportation away from private vehicle use to public transportation and lead to a reduction in traffic congestion.[118]

This provides potential benefits for the well-being of both humanity and the environment. An example of this is how investing in accessible public transportation presents an opportunity to review environmental considerations of vehicles. For instance, as noted by the International Council on Clean Transportation, adoption of emissions standards such as the Euro 6/VI vehicle emission standards can support countries in achieving "up to a 99 per cent reduction in the emission of pollutants like fine particulate matter (PM2.5), reducing the risk of ischemic heart disease, lung cancer, stroke, and asthma".[119]

110 The Conference Board of Canada, 2018.
111 Ibid.
112 National Captioning Institute.
113 American Press Institute, 2015. See also American Press Institute, 2016.
114 Gernsbacher M.A., 2015.
115 Google.
116 Fearnley, N., S. Flügel and F. Ramjerdi, 2011.
117 International Transport Forum, 2017.
118 Aarhaug, J. and B. Elvebakk, 2015. See also Redman, L., M. Friman, T. Gärling and T. Hartig, 2013; International Transport Forum, 2017.
119 The International Council on Clean Transportation, 2016.

Chapter 5

Status of investment in accessibility in Asia and the Pacific

While key mandates, concepts and demographic factors contribute to further need for actions on accessibility investment and improvement, a reflection on the progress made and the gaps remaining specific to Asia and the Pacific is important for ensuring that measures undertaken are impactful.

This chapter first provides an overview of regional trends identified through recent surveys of accessibility in the region. It then provides details on the key findings of these surveys, in particular, the relevant indicators of the review conducted by ESCAP in 2017 to mark the midpoint of the Asian and Pacific Decade of Persons with Disabilities, 2013-2022, as well as the 2018 United Nations e-Government survey. Finally, it will present considerations of accessibility as it relates to both gender and the developing country context, exploring the perspectives of women and girls with disabilities, as well as the perspectives of developing countries with regard to implementation of accessibility.

5.1 REGIONAL TRENDS IN IMPROVING ACCESSIBILITY

Irrespective of level of economic development, reported data from governments across the region reflects a growing level of awareness of accessibility. For instance, there are mandates in national laws and/or regulations for access audits in government buildings in eight countries: Indonesia; Micronesia (Federated States of); Mongolia; Republic of Korea; Russian Federation; Singapore; Thailand; and Turkey, and for access audits in international airports in 12 countries and areas: Bhutan; Georgia; Macao, China; Malaysia; Micronesia (Federated States of); Mongolia; Philippines; Republic of Korea; Russian Federation; Singapore; Thailand and Turkey. The results of this are evident in the significant proportion of accessible

polling stations, accessible government buildings, and accessible international airports (See Figures 5.A, 5.B and 5.C in section 5.2).

When looking in particular at accessibility of ICT and services, the region shows more moderate progress. For instance, the survey conducted in 2017 for the midpoint of the Incheon Strategy found that, based on data from reporting countries, an average of 41 per cent of news programmes across the region are accessible, and a total of 40 per cent of public websites are accessible.[120] Likewise, the e-Government survey conducted in 2018 shows that just over a quarter of responding governments in Asia and the Pacific said that their public websites are accessible.[121]

At the same time, as is the case with disability, the definition of 'accessibility' employed by governments varies. For some, there remains a focus on accessibility in the built environment only, while others take a more comprehensive view that includes ICT and services with regard to polling stations, buildings and airports. In more specific terms, some only focus on mobility through hallways, elevators, parking lots, and toilet facilities, while others include features such as audio and visual forms of guidance on information (e.g. wayfinding signage and illustrations). While in other situations some governments, as part of accessibility measures, provide personal and communication assistants to support the requirements of persons with diverse disabilities, including those who are deaf or hard-of-hearing, blind or partially sighted. Some even included airfare concession as part of accessibility measures put in place.

In this regard, there are numerous factors that could affect the reporting of governments. Firstly, differing understanding of and expectations for Universal Design principles in accessible built environments, ICT and services will likely result in application of different technical standards. Second, varied levels of quality

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120 United Nations ESCAP, 2017a.
121 United Nations DESA, 2018.

and stringency of the access auditing process will affect findings. Thus, it is also important to recognize that low reporting levels may not necessarily reflect poor accessibility. In line with the objective of ensuring both effective and meaningful participation, auditing that involves persons with disabilities, who could provide real users' perspectives, elicits more impactful results for building accessible environments, albeit potentially less favourable ratings of accessibility on paper.

Nonetheless, while data collection can be a challenge and itself should be a focus for improvement, in order to build capacity and ability for the region to invest in accessibility, looking at existing data in detail supports evidence-based policymaking for building an accessible Asia and Pacific.

5.2 RECENT SURVEY FINDINGS ON DISABILITY AND ACCESSIBILITY

5.2.1 Findings of the 2017 ESCAP midpoint review of the Incheon Strategy

The midpoint review of the third and current Asian and Pacific Decade of Persons with Disabilities was conducted in 2017. It reports on progress made by member States and other stakeholders against 30 indicators laid out in the Incheon Strategy. Out of the 30 indicators, eight indicators measure the extent of implementation of accessibility. The indicators are detailed in Box 3.

Reported data from member State governments on Incheon Strategy indicators 2.4, 3.1 and 3.2 on accessibility of polling stations, government buildings and international airports, respectively, point to positive trends, with numerous reporting high proportions of accessibility. A total of 59.8 per cent of polling stations in the national capitals of responding governments have been made accessible. Moreover,

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BOX 3.
INCHEON STRATEGY INDICATORS RELEVANT TO ACCESSIBILITY

Indicator 2.4: Proportion of accessible polling stations in the national capital;

Indicator 3.1: Proportion of accessible government buildings;

Indicator 3.2: Proportion of accessible international airports;

Indicator 3.3: Proportion of daily captioning and sign language interpretation of public television news programmes;

Indicator 3.4: Proportion of accessible and usable public documents and websites that meet internationally recognized accessibility standards;

Indicator 3.5: Proportion of persons with disabilities who need assistive devices or products and have them;

Indicator 7.3: Proportion of accessible emergency shelters and disaster relief sites; and

Indicator 9.2: Availability of national anti-discrimination legislation to uphold and protect the rights of persons with disabilities.

SOURCE: UNITED NATIONS ESCAP, 2018.

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a total of 66.5 per cent of government buildings and 70.6 per cent of international airports across the region are considered accessible.

With regard to accessible polling stations, the following 18 countries and areas have reported on Incheon Strategy indicator 2.4: Macao, China; Mongolia; Nauru; New Caledonia; Republic of Korea; Singapore; Thailand; India; Hong Kong, China; Vanuatu; Russian Federation; Georgia; Kyrgyzstan; Bhutan; Indonesia; Samoa; Micronesia (Federated States of); and Turkey. Out of these 18 countries, the first seven reported that their

polling stations were fully accessible. Some countries, such as Georgia, provide accessible websites, tactile ballot guides, magnifying sheets, mobile ballot boxes, and ensure adequate physical space for the voting process.

A total of 15 countries and areas reported against the Incheon Strategy indicator 3.1 on the proportion of accessible government buildings: Hong Kong, China; Armenia; New Caledonia; Russian Federation; Singapore; Thailand; Nauru; Indonesia; Republic of Korea; India; Vanuatu; Mongolia; Micronesia (Federated States of); Tonga; and Turkey. Out of these, the first five countries reported that all of their government buildings were accessible.

For Incheon Strategy indicator 3.2 on accessible international airports, a total of 20 countries and areas reported: Georgia; Kyrgyzstan; Macao, China; Malaysia; Micronesia (Federated States of), Mongolia; New Caledonia; Nauru; Philippines; Singapore; Thailand; Vanuatu; India; Cambodia; Bhutan; Turkey; Republic of Korea; Russian Federation; Timor-Leste; and Tonga. Out of these 20 countries and areas, the first 12 reported that their international airports were fully accessible.

Focusing more directly on accessibility of ICT and services, findings showed more moderate progress compared with Indicators 2.4, 3.1 and 3.2 through government reports against Indicator 3.3: Proportion of daily captioning and sign language interpretation of

FIGURE 5.A.
PROPORTION OF ACCESSIBLE POLLING STATIONS IN NATIONAL CAPITALS, BY COUNTRY OR AREA
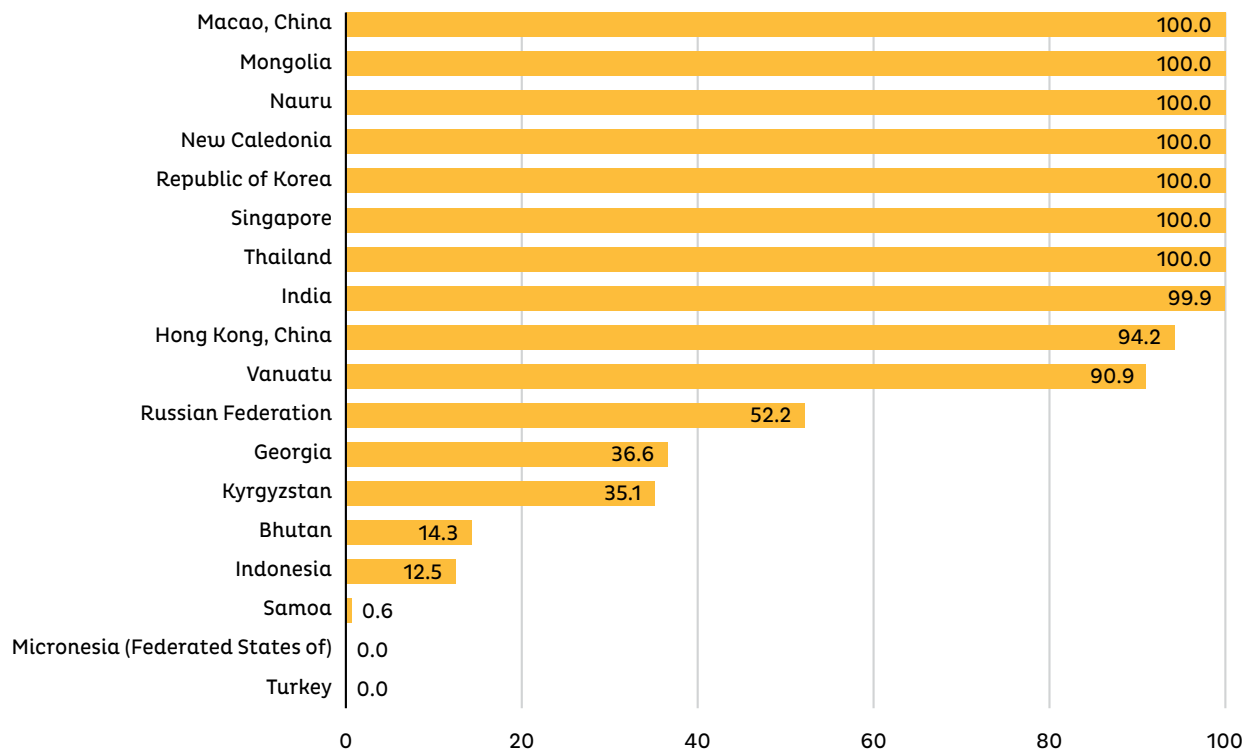
SOURCE: UNITED NATIONS ESCAP, 2017A.

FIGURE 5.B.
PROPORTION OF ACCESSIBLE GOVERNMENT BUILDINGS, BY COUNTRY OR AREA

Country or Area	Value
Armenia	100.0
Hong Kong, China	100.0
New Caledonia	100.0
Russian Federation	100.0
Singapore	100.0
Thailand	86.4
Nauru	79.4
Indonesia	76.9
Republic of Korea	72.9
India	72.7
Vanuatu	30.5
Mongolia	27.9
Micronesia (Federated States of)	25.0
Tonga	25.0
Turkey	0.0
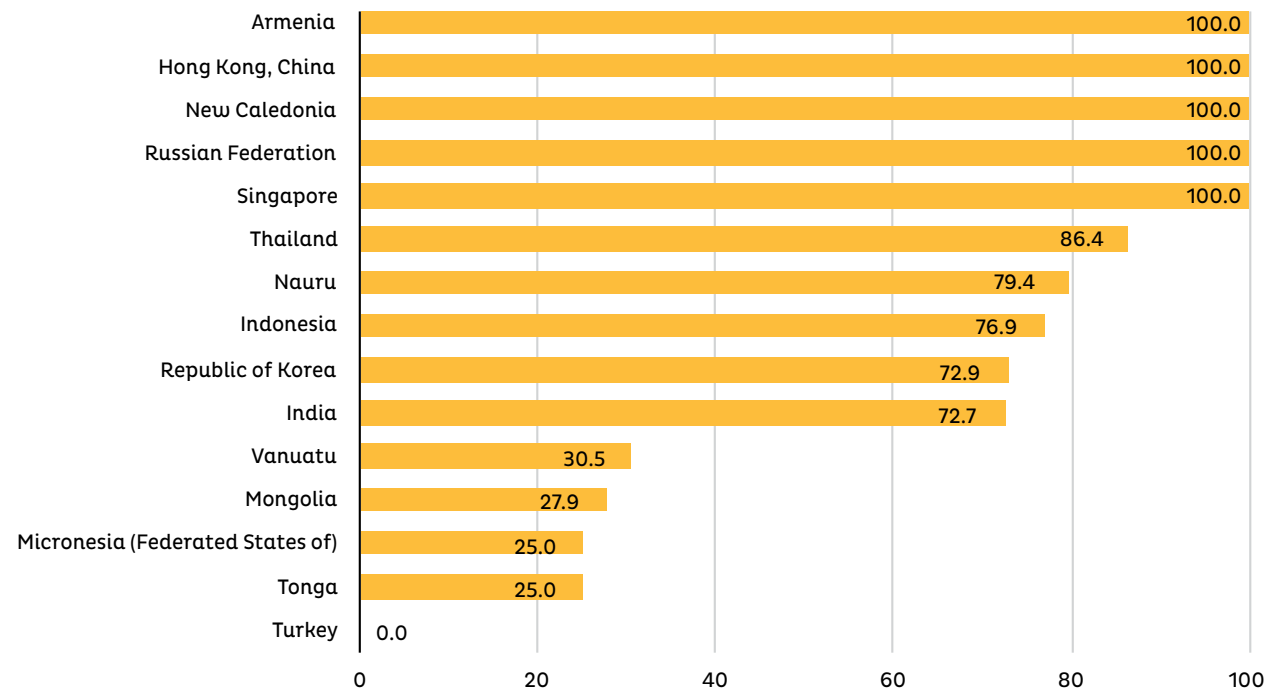
SOURCE: UNITED NATIONS ESCAP, 2017A.

public television news programmes; and Indicator 3.4: Proportion of accessible and usable public documents and websites that meet internationally recognized accessibility standards.

Accessibility for public websites rates vary between zero and 100 per cent, with some governments, including China, India, Republic of Korea, and Thailand, noting having conducted accessibility audits on public websites based on pre-established technical guidelines that meet international accessibility standards, such as the Web Content Accessibility Guidelines 2.0.[122] See Figure 5.D for a breakdown by country.

A notable finding identified from the progress reported on Indicator 3.3 on accessible news programming is that captioning accounts for 82 per cent of total accessible news time, while sign language

interpretation is used less frequently (see Figure 5.E). This could be due to a false perception that provision of real-time captioning is sufficient with regard to accessibility provisions, particularly as sign language interpretation is costlier. In fact, for both rights-based and practical reasons, it is important for broadcasting companies and other relevant entities to provide both of these services.

Article 21 on Freedom of expression and opinion, and access to information, in the CRPD states that "States Parties shall take all appropriate measures to ensure that persons with disabilities can exercise the right to freedom of expression and opinion, including the freedom to seek, receive and impart information and ideas on an equal basis with others and through all forms of communication of their choice". Recalling the guiding principle of the CRPD of respect individual

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122 Web Content Accessibility Guidelines standards seek to ensure websites are perceivable, operable, understandable and robust and that their structure, text, images and sounds are presented in ways that are accessible to users with different disabilities. See W3C, 2012 for more information.

FIGURE 5.C.
PROPORTION OF ACCESSIBLE INTERNATIONAL AIRPORTS, BY COUNTRY OR AREA

Country or Area	Value
Georgia	100.0
Hong Kong, China	100.0
Kyrgyzstan	100.0
Macao, China	100.0
Malaysia	100.0
Micronesia (Federated States of)	100.0
Mongolia	100.0
Nauru	100.0
New Caledonia	100.0
Philippines	100.0
Singapore	100.0
Thailand	100.0
Vanuatu	100.0
India	96.9
Cambodia	95.0
Bhutan	80.0
Turkey	80.0
Republic of Korea	75.3
Russian Federation	70.0
Timor-Leste	0.0
Tonga	0.0
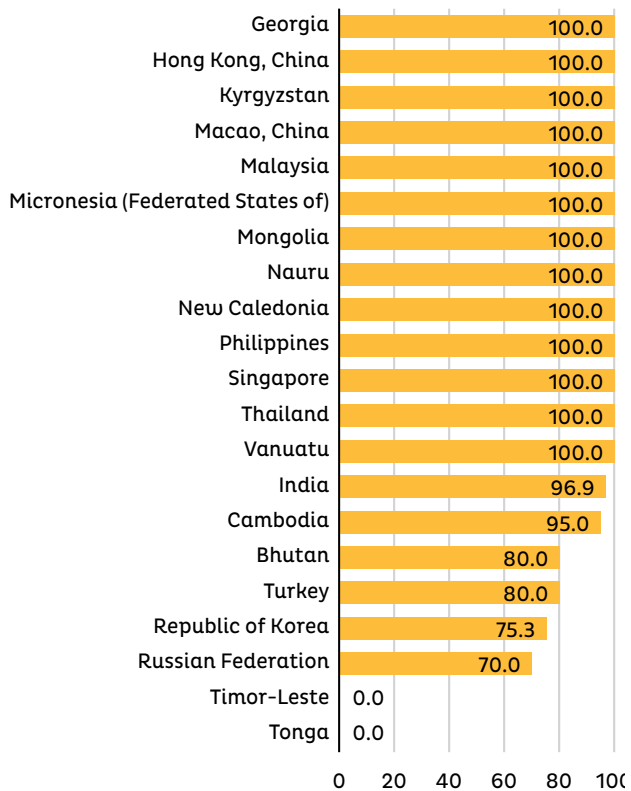
FIGURE 5.E.
DISTRIBUTION OF ACCESSIBLE NEWS PROGRAMMES IN ASIA AND THE PACIFIC, BY TYPE OF ACCESSIBILITY SERVICE

Both services 10%
Sign language 8%
Captioning 82%
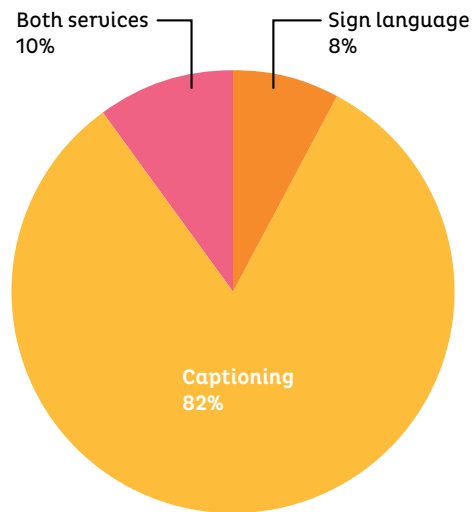
FIGURE 5.D.
PROPORTION OF ACCESSIBLE PUBLIC WEBSITES, BY COUNTRY

Country	Value
Nauru	100.0
Russian Federation	100.0
Hong Kong, China	99.4
Republic of Korea	97.0
Mongolia	36.0
Thailand	5.0
New Caledonia	4.1
China	3.4
Indonesia	0.0
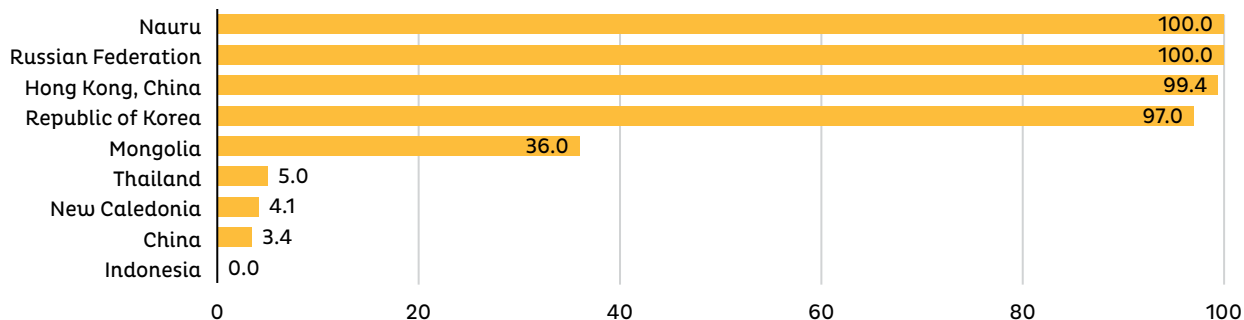
FIGURE 5.F.
ANTI-DISCRIMINATION LEGISLATION FOR PERSONS WITH DISABILITIES,
BY COUNTRY OR AREA AND YEAR OF ENACTMENT
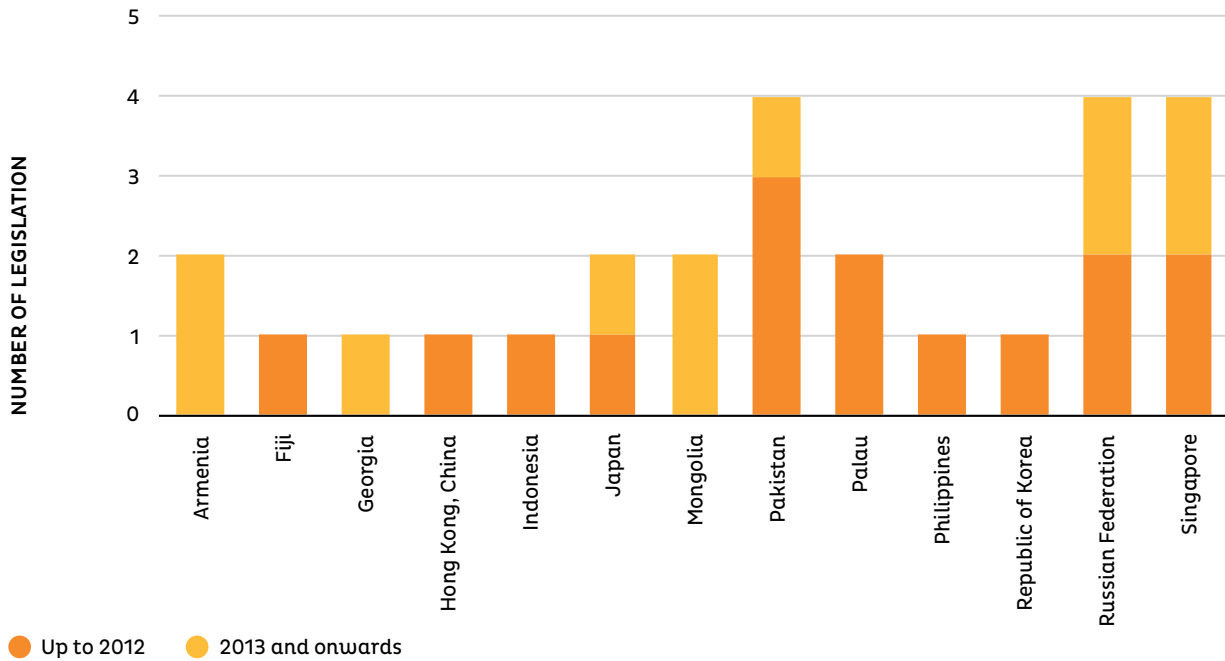
SOURCE: UNITED NATIONS ESCAP, 2017A.

autonomy including the freedom to make one's own choices, it is important that persons with disabilities chose the form of communication best suited to their requirements. Furthermore, in emergency and disaster situations where information provided in television broadcasts can have life-or-death implications, the need for both becomes even more evident.

Another notable finding was regarding access to assistive devices such as wheelchairs, white canes, and hearing devices, which are enablers for persons with disabilities in Asia and the Pacific. Based on the data collected from 14 governments on Indicator 3.5, on average more than one third of persons with disabilities were reported as having no access to

the required assistive devices. While there are some difficulties in collecting the data due to survey methods, the results indicate a reality in which a significant number of persons with disabilities have problems in this area.[123]

Regarding accessibility of emergency shelters and disaster relief sites, only 10 governments reported that they had national accessibility standards applied to emergency shelters and disaster relief sites. Most of their standards only address the requirements of persons with mobility disabilities, such as wheelchair users.

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123 This information was collected via disability-specific or socioeconomic surveys in Indonesia, Republic of Korea, Russian Federation and Thailand and from the administrative records of health authorities in some other countries, where only the number of persons with disabilities under specific support schemes was recorded, thus making it impossible to estimate the proportion due to the lack of data on persons without access to assistive devices.

As discussed in previous chapters, availability and implementation of anti-discrimination law prohibiting disability-based discrimination is a powerful legal tool for improving accessibility. Incheon Strategy indicator 9.2 requests member States to report the availability of anti-discrimination law on disability. A total of 13 Governments reported having anti-discrimination legislation with variance in covering different areas of focus: Armenia; Fiji; Georgia; Hong Kong, China; Indonesia; Japan; Mongolia; Pakistan; Palau; Philippines; Republic of Korea; Russian Federation; Singapore (see Figure 5.F). The survey did not allow for determination of definition of discriminatory practices with regard to accessibility and reasonable accommodation in all cases, however the anti-discrimination legislation of India, which was not reported in this survey, is examined in depth in Chapter 6.

5.2.2 Findings of the 2018 United Nations e-government survey

The United Nations 2018 e-government survey is a survey conducted on the extent of governments performance with regard to e-governance. The survey has been conducted annually since 2001. The 2018 survey compiled results of data and information obtained from 132 Member States though analysing the E-Government Development Index.[124] In line with the axiom of the 2030 Agenda for Sustainable Development to ensure no one is left behind, the survey posed the following seven questions relevant to persons with disabilities and accessibility:

1   Is the website accessible for persons with disabilities?

2   Is there any information regarding equal access to all levels of education for persons with disabilities?

3   Does the website provide any tools for parents and teachers for allowing children with different kinds of disabilities to participate at all levels of education?

4   Does the website provide lists of schools with accessible facilities for children with disabilities?

5   Is there information about accessible public transportation for persons with disabilities?

6   Does the website provide information about specific programs/initiative to benefit women, children, youth, persons with disabilities, older persons, indigenous peoples, people living in poverty, or other vulnerable groups and communities?

7   Is any specific online government service available to the following vulnerable groups: persons with disabilities?

With regard to the first question, only 76 UN Member States were fully compliant with web accessibility standards, according to an automated test, leaving much room for necessary improvement.[125] A total of 38 governments from the Asia and Pacific region responded,[126] with 10 countries stating that their websites are accessible; Australia; Brunei Darussalam; India; Malaysia; New Zealand; Philippines; Singapore; Thailand; Timor Leste and Viet Nam. Figure 5.G shows that within the region, Pacific Island countries, as well as East and North East, and North and Central Asia have much space for improvement compared to other subregions.

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124   United Nations DESA, 2018.
125   United Nations DESA, 2018.
126   Afghanistan, Australia, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Democratic People's Republic of Korea, Fiji, India, Indonesia, Iran, Japan, Kiribati, Lao People's Democratic Republic, Malaysia, Maldives, Marshall Island, Micronesia (Federal States of), Mongolia, Myanmar, Nauru, Nepal, New Zealand, Pakistan, Palau, Papua New Guinea, Philippines, Republic of Korea, Samoa, Singapore, Solomon Islands, Sri Lanka, Thailand, Timor Leste, Tonga, Tuvalu and Viet Nam.

FIGURE 5.G.
RESULTS OF THE 2018 UN SURVEY ON ACCESSIBILITY OF WEBSITES FOR PERSONS WITH DISABILITIES IN ASIA AND THE PACIFIC, BY SUBREGION
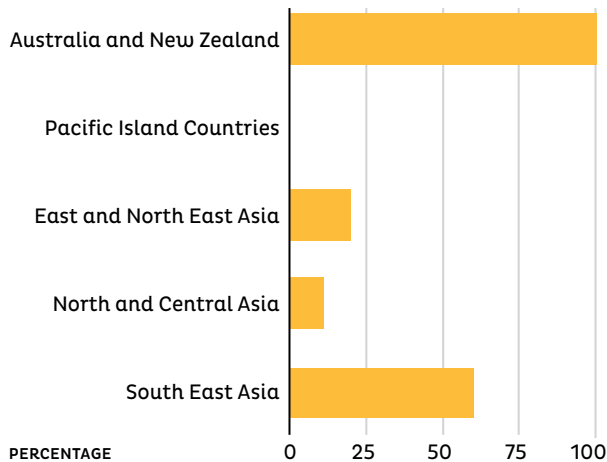
SOURCE: UNITED NATIONS ESCAP DESIGN, BASED ON DATA FROM UNITED NATIONS DESA, 2018.

5.2.3 Findings of the 2019 ESCAP online survey on disability and accessibility

A short online survey conducted by ESCAP in 2019 that targeted disability focal points in the region[127] indicated that at least 10 countries recognize the concept of accessibility through Universal Design in their laws, and at least 10 countries have accessibility technical standards in place. Of technical standards in place, there was greater coverage of public spaces, bathrooms, schools, parking facilities and web accessibility compared with standards on television broadcasts, film, and financial and banking services.

The survey asked if the technical standards in place are in line with the ISO standards, but responses did not clearly indicate this, demonstrating that awareness and knowledge on ISO standards are lagging behind in the region.

5.3 GENDER PERSPECTIVES ON ACCESSIBILITY IN THE REGION

Data on the specific challenges faced by women and girls with disabilities regarding accessibility is scarce, however some national experiences and interviews with women and girls with disabilities indicate common issues.

One challenge faced by women with disabilities is the lack of accessible sexual and reproductive health care and services, and the lack of information on the topic available in accessible formats. A report developed by the Human Rights Commission Mongolia in discussions with health-care facilities found that compared to other disabilities, women with visual disabilities often experience more barriers and difficulties in receiving such care and services.[128] Furthermore, inaccessibility and the resulting lack of confidentiality is a deterrent for women with disabilities to seek sexual and reproductive health care and services. When asked about accessing reproductive health care, 51.3 per cent of respondents answered that "it is difficult" for them to receive care, whereas, 22.1 per cent responded "sometimes it is difficult".

BOX 4.
PERSONAL ACCOUNT OF ACCESS TO SEXUAL AND REPRODUCTIVE HEALTH-CARE SERVICES

"It is very difficult for me to receive medical care as I have a hearing impairment. Medical practitioners try to communicate with me through writing, but I am functionally illiterate. Hospitals do not have sign language interpreters."

SOURCE: NATIONAL HUMAN RIGHTS COMMISSION OF MONGOLIA, 2019.

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127 United Nations ESCAP conducted an online survey in August 2019. A total of 34 disability focal points responded to 12 questions either fully or partially.
128 National Human Rights Commission of Mongolia, 2019.

FIGURE 5.H.
ACCESSIBLE TOILET FACILITIES IN A LOW-INCOME COUNTRY AND IN A HIGH-INCOME COUNTRY

SOURCE: AIKO AKIYAMA, UNITED NATIONS ESCAP.

5.4 DEVELOPING COUNTRY PERSPECTIVES

There is a misconception that investment in and implementation of accessibility measures cannot be done in developing countries. However, evidence from across Asia and the Pacific, in which 25 of the countries and areas are lower-middle and low-income, undermines this argument. For instance, owing to the lack of financial resources and technical know-how on accessibility, there is a mindset amongst policy makers in developing countries that investing in all dimensions of accessibility to match efforts of developed countries is an impossible task.

Accessible toilet facilities are a prime example of this. As pictured in Figure 5.H, accessible toilet facilities look different in developing and developed countries in the region. However, it is important to note that the progress made from simple installation of a low bar to the multi-purpose functionality of some highly accessible toilet facilities is not an overnight task. Nor is it simply a matter of economic ability to

finance such endeavours. Rather, a combination of the following made the facilities a reality: advocacy of local organizations with disabilities; consultations with architects and designers; a series of working meetings with government officials; enhanced understanding and heightened motivation by relevant central and local government officials; engagement of the private sector; enactment of legislative and programme mandates with budget support; and establishment of facility maintenance systems.

As argued throughout this report, it is not financial resources that are the determining factor for effectively investing in accessibility. Building institutional supports, stakeholder partnerships and technical capacity and understanding are key to ensuring that investments in accessibility are impactful. In this regard, many developing countries in Asia and the Pacific already have the tools necessary to build accessible environments for persons with disabilities – the next step is to leverage these toward achieving these goals.

FIGURE 5.I.
OLDER MANUAL WHEELCHAIR FOR WHICH REPLACEMENT PARTS ARE NO LONGER AVAILABLE

SOURCE: AIKO AKIYAMA, UNITED NATIONS ESCAP.

Another relevant consideration of accessibility in the context of developing countries is the availability, affordability and quality of assistive devices and technology. These could include wheelchairs, prostheses, hearings aids, visual aids, and specialized computer software and hardware that increase mobility, hearing, vision, or communication capacities.[129]

The 2017 midpoint review of the Incheon Strategy revealed gaps for persons with disabilities in accessing assistive devices, often due to the abovementioned factors. Furthermore, WHO states that "in many low-income and middle-income countries, only five to 15 per cent of people who require assistive devices and technologies have access to them". Furthermore, inequality of focus within the realm of assistive devices and technologies is a challenge, and research on this topic focuses more on manual wheelchairs and prosthetics, while other dimensions tend to be overlooked.[130]

Another challenge with regard to availability is, for example, while many wheelchairs might be donated or imported from developed countries to low-income settings, the wheelchairs might not be good quality or in good condition, thereby putting users at risk of injury. As well, replacement parts of a wheelchair that need to be obtained from abroad or may not be readily available can also render such devices infective and useless.

It is important to note that to address some of these challenges and to enhance availability, affordability and quality of assistive devices, development assistance provided by bilateral or multilateral organizations, international NGOs or international organizations such as the UN play a key role. For instance, WHO has the Global Cooperation on Assistive Technology (GATE), which seeks to improve access to assistive technology as a part of Universal Health Coverage.[131]

129 WHO, 2019.
130 Borg, J., A. Lindström and S. Larsson, 2017.
131 WHO, 2019.

Chapter 6
Case studies of investing in national accessibility legislation

Building accessible environments requires innovative and creative thinking. However, given the progress made in various national contexts across the region, examining and comparing different case studies can provide invaluable insight to governments of both developing and developed countries seeking to bolster their policy environments and create openings for enhancing accessibility for all.

With recognition of the varied economic and cultural settings and recalling that there is no one-size-fits-all approach to investing in and implementing effective accessibility measures, it makes sense that governments across Asia and the Pacific can vary greatly in their legal approaches to promoting accessibility through Universal Design. Nonetheless, as outlined in Chapter 2, investing in a strong legal basis for accessibility is crucial for all countries in ensuring that investments in accessibility can benefit all of society. This chapter will review the different legal approaches of the Republic of Korea, Australia and India, looking at how both anti-discrimination law and programme-focused law on accessibility work to break down barriers to participation in different contexts. It will also highlight different instances in which punitive and incentive-based enforcement measures are employed. It is notable that all three countries have ratified the CRPD.

Following these three national case studies, this chapter will present a thematic case study that compares how four countries invest in sign language interpretation in particular, comparing and contrasting national approaches to legal recognition of sign language, certification and remuneration of interpretation services, among other dimensions of this service-focused element of accessibility.

It is hoped that this chapter will provide examples of legal and policy approaches to investing in accessibility that policymakers and other stakeholders can identify and replicate in their own national and local contexts.

6.1 CASE STUDY: AUSTRALIA

6.1.1 Overview of accessibility legislation and policy

In 2016, the Australian census survey 'Disability, Ageing and Carers' reported that 18.3 per cent of Australians live with some form of disability.[132] This provides a comprehensive picture of disability in Australia, as the survey results cover the population from birth to over 90 years of age and "identifies all people with a disability as having health conditions or impairments that are associated with limitations or restrictions lasting six months or more, and which affect daily activities".[133] A health condition or an impairment include a back problem, a difficulty learning information or communicating, or limited use of ones hands, among others.[134] Disabilities are classified into four major categories: physical, sensory, psychological and intellectual disability.[135] The survey reported minimal differences in disability prevalence rates across gender (18.6 per cent female, 18 per cent male), however it found that the likelihood of "living with disability increases with age", with two in five people over 65 years of age identifying as having a disability.[136]

While the Australian government recognizes Universal Design, it does so mostly through the integration of Universal Design into strategic framework policies such as the National Disability Strategy 2010–2020. Whereas, accessibility is recognized and promoted through a human rights-based approach that

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132 Australian Bureau of Statistics, 2015.
133 Victorian Government Health, Australia, 2012.
134 Ibid.
135 Ibid.
136 Australian Bureau of Statistics, 2015.

encompasses anti-discrimination legislation in addition to disability-inclusive policy, financial schemes and enforcement rules. These initiatives assist in prohibiting discrimination of persons based on disability, financially support the implementation of accessibility, and provide persons with disabilities statutory protection to ensure equal participation and opportunity in all aspects of life.

The National Disability Strategy 2010–2020, developed through extensive consultations with the disability community and the Australian federal, state and territory governments, is a unified national approach to disability policy and programming aimed at achieving an inclusive society for persons with disabilities.[137] The Strategy drives inclusion policy and service provision across six key outcome areas (see Box 5), one of which is inclusive and accessible communities. The key objective in this area is that "people with disability live in accessible and well-designed communities with opportunity for full inclusion in social, economic, sporting and cultural life".[138] The Strategy recognizes that a first step to achieving this outcome and reducing barriers is to "incorporate Universal Design into the design and build of community resources, from parks to houses, to shopping centres, sporting arenas" and transport journeys.[139]

As a result of discussions surrounding the development and implementation of the National Disability Strategy, in 2009, the federal government announced that a social housing component for disadvantaged persons such as those experiencing homelessness would be included in an AUD 42 billion (approx. USD 29 billion) economic stimulus plan. The social housing component committed to incorporate the principles of Universal Design in the building of 15,000 new public and community housing dwellings, with 5,000 of these set to achieve "an even higher level of adaptability through compliance with the Australian Standard for Adaptable Housing Class C"

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137 Australian Government, Department of Social Services, 2012.
138 Ibid.
139 Ibid.

FIGURE 6.A.
PREVALENCE OF DISABILITY IN AUSTRALIA

1 IN 5
Australians have a disability

Thats an estimated
4.3 MILLION
Australians

SOURCE: UNITED NATIONS ESCAP DESIGN, BASED ON INFORMATION FROM AUSTRALIAN BUREAU OF STATISTICS, 2015.

FIGURE 6.B.
AUSTRALIAN POLICY AND LEGISLATION THAT PROMOTES ACCESSIBILITY AND UNIVERSAL DESIGN PRINCIPLES

Australian Legislation Promoting and Enforcing Accessibility

Federal Disability Discrimination Act. 1992

Australian Technical Standards

Disability Access to Premises Standards 2010

Disability Standards for Accessible Public Transport 2002

Disability Standards for Education 2005

Further Legislation Promoting and Enforcing Accessibility
- National Disability Insurance Act. 2013
- State and Territory Legislation
- Local Government Disability Inclusion Action Plans

Federal Policy Promoting Universal Design and Accessibility
- National Disability Strategy 2010-2020
- State and Territory Policy
- Local Government Disability Inclusion Action Plans

SOURCE: UNITED NATIONS ESCAP DESIGN, BASED ON INFORMATION FROM AUSTRALIAN LOCAL GOVERNMENT ASSOCIATION, 2017.

(AS4299–1995, Class C, see Box 5).[140] In addition, federal, state and territory governments developed disability action plans that guide the implementation of the National Disability Strategy, many of which mandate compliance.[141]

**BOX 5.
NATIONAL DISABILITY
STRATEGY 2010–2020**

Scope: Australian federal, state and territory governments and local councils, disability organizations, private enterprises and the public over a ten-year period. Six priority areas: Inclusive and Accessible Communities; Rights Protection, Justice and Legislation; Economic Security; Personal and Community Support; Learning and Skills; Health and Well-Being.

Responsible Ministries: The Council of Australian Governments, the Disability Reform Council, the Australian federal, state and territory disability ministers.[142]

Monitoring and Evaluation: Progress reports by state and territory governments every two years in consultation with persons with disabilities, their families and carers.

Technical Standards: Recommends the Australian Standard for Adaptable Housing AS4299–1995.[143]

SOURCE: AUSTRALIAN GOVERNMENT, DEPARTMENT OF SOCIAL SERVICES, 2012.

In Australia, there are five federal, 12 state and four territory legislative tools protecting persons with disabilities from discrimination, while promoting and enforcing accessibility (see Table 6.A). The most comprehensive of these legislations is the federal Disability Discrimination Act (1992) (see Box 6 for more details). State and territory legislations often overlap with the Disability Discrimination Act (1992), prohibiting the same types of discrimination and promoting similar requirements for accessibility. In this instance, the Australian Federal Constitution provides that "where a federal law is inconsistent with a state law on the same matter, the state law ceases to operate to the extent of the inconsistency".[144] It is often recommended that when working out obligations in these areas, both the Disability Discrimination Act (1992) and state or territory legislation relevant to the situation are referenced.[145]

The Disability Discrimination Act (1992) was developed as a standardization of rights and regulation of discriminatory practices of Commonwealth authorities across Australia and to implement Australia's responsibilities under the CRPD.[146] It sets out rights and responsibilities that aim to protect persons with disabilities and their caregivers against discrimination, to ensure legal equality through enforceable rights, and to promote community acceptance of the rights of persons with disabilities.[147]

The Act protects persons with disabilities in access to areas of education; accessible transportation; accessible ICT; access to premises used by the public (e.g., areas such as shops, theatres and public swimming pools); accessible accommodation; purchase of land; provision of goods, services and facilities; activities

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140 Ibid.
141 Ibid.
142 Australian Capital Territory: Minister for Disability; New South Wales: Minister for Disability Services; Northern Territory: Minister for Health; Queensland: Minister for Disability; South Australia: Minister for Human Services; Tasmania: Minister for Disability Services and Community Development; Victoria: Minister for Housing, Disability and Ageing; Western Australia: Minister for Disability Services.
143 SAI Global (a).
144 Australian Human Rights Commission.
145 Australian Local Government Association, 2017.
146 Australia ratified the CRPD (2006) in 2008 and the Optional Protocol in 2009.
147 Australian Human Rights Commission, 2012.

of clubs and associations; participation in sport; and administration of Commonwealth government laws and programs and access to employment.[148] For example, in Australia, it is unlawful to not employ or to treat persons with disabilities less favourably because of their disability. An employer is required to provide reasonable accommodations (e.g., installing accessible computer applications or modifying the interview process) so as to ensure that persons with disabilities are not discriminated against in their ability to perform their job, through terms of conditions of employment or through the interview process.[149]

Each level of government has varied roles and responsibilities in funding initiatives and ensuring policies and programs meet their objectives.[150] For example, in order to assist employers meet disability and accessible employment standards, the federal government created the workplace modifications scheme titled the 'Employment Assistance Fund' that aims to assist businesses in costs associated with purchasing equipment or modifying the work environment to cater for employees with disabilities. The scheme is overseen by the Australian Public Service Commission and provides employers financial and service support in ICT, specialized equipment, disability awareness training, modifications to work vehicles, work-place modification assessments to determine needs, sign language interpreting services, and tax breaks.[151]

State and territory governments undertake initiatives such as supporting the growth of disability inclusive employment. For example, the New South Wales state government has implemented a plan to ensure accessible work environments in public service and have set a target to increase the number of persons with disabilities employed in the public sector from 2.7 per cent to 5.6 per cent by 2027.[152]

TABLE 6.A.
SUMMARY OF AUSTRALIAN FEDERAL, STATE AND TERRITORY LEGISLATION PERTAINING TO DISABILITY, ACCESSIBILITY AND/OR ANTI-DISCRIMINATION

FEDERAL, STATE OR TERRITORY	LEGISLATION
Federal	Australian Human Rights Commission Act 1986
	Social Security Act 1991
	Disability Discrimination Act 1992
	Fair Work Act 2009
	The National Disability Insurance Scheme Act. 2013
Australian Capital Territory	Discrimination Act 1991
	Disability Services Act 1991
New South Wales	Anti-Discrimination Act 1977
	Disability Inclusion Act 2014
Northern Territory	Anti-Discrimination Act 1996
	Disability Services Act 2012
Queensland	Anti-Discrimination Act 1991
	Disability Services Act 2006
South Australia	Equal Opportunity Act 1984
	Disability Services Act 1993
Tasmania	Anti-Discrimination Act 1998
	Disability Services Act 2011
Victoria	Equal Opportunity Act 2010
	Disability Services Act 2006
Western Australia	Equal Opportunity Act 1984
	Disability Services Act 1993

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148 Ibid.
149 Australian Human Rights Commission, 2014.
150 Australian Government, Department of Social Services, 2012.
151 Australian Government, 2019.
152 New South Wales Government, Australia (a).

BOX 6.
DISABILITY DISCRIMINATION ACT 1992

Scope: Applies to all individuals, and public and private organizations within Australia.

Responsible Ministry: The Attorney-General's Department, and the Australian Human Rights Commission.

Monitoring and Evaluation: In 2004, the Productivity Commission undertook a review of the Disability Discrimination Act (1992), the emanating recommendations were subsequently incorporated into the Act. In addition, various national inquiries and reviews are conducted on specific areas of discrimination such as the 'National Inquiry into Employment Discrimination Against Older Australians and Australians with Disability' and 'Violence Against People with Disability in Institutional Settings'.

Technical Standards: Australian technical standards on accessibility are incorporated into both the Disability Standards for Accessible Public Transport 2002 and the Disability (Access to Premises – Buildings) Standards 2010 (see Boxes 7, 8 and 9). In addition, in 2016, the Minister of Finance announced the use of the European standard for the procurement of accessible ICT (EN 301 549:2016) as a minimum standard for ICT-related products and services.

SOURCE: AUSTRALIAN HUMAN RIGHTS COMMISSION, 2012.

6.1.2 Standards and guidance on accessibility

The Disability Discrimination Act (1992) is supplemented by procedure guides and Disability Standards. Procedure guides are non-legally binding and created as guidance for relevant persons and organizations to understand their rights and responsibilities in implementing the Disability Discrimination Act (1992). The Disability Standards are legally binding measures that set out technical standards and specify rights and regulations to equal access and opportunity for persons with disabilities, based upon existing Australian technical standards. They are set by the Attorney-General in support of the Disability Discrimination Act (1992) "to make existing rights and obligations clearer and therefore easier to comply with and to enforce"[153] in the following areas: Disability Standards for Accessible

Public Transport (2002), Disability Standards for Education (2005) and Disability (Access to Premises – Buildings) Standards (2010).

The Disability Standards for Accessible Public Transport (2002) set out accessibility requirements for public transport providers and operators in areas such as access paths, ramps for boarding, signage, ticket machines, allocated spaces, and how information is provided.[154] For example, "tactile ground surface indicators must be installed on an access path to indicate stairways, ramps and changes of direction" and comply with Australian Technical Standard 1428.2 (1992; Clause 18.1, Tactile ground surface indicators).[155]

State and territory governments provide public transport and have their own transport action plans and strategies that comply with the Disability Standards for Accessible Public Transport (2002) and

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153   Australian Human Rights Commission.
154   Victorian Equal Opportunity and Rights Commission, Australia (b).
155   Commonwealth of Australia, 2002.

FIGURE 6.C.
UNIVERSALLY DESIGNED TRANSPORT IN NEW SOUTH WALES

Train features

Double doors for faster loading and unloading

Two multi-purpose areas per train for prams, luggage and bicycles

Wheelchair spaces, separate priority seating and emergency intercoms

Real-time travel information and live electronic route maps

Customer service assistants at every station and moving through the network during the day and night

Heating and air conditioning

Level access between platform and train

Platform screen doors keep people and objects away from the edge and allow trains to get in and out of stations much faster

Inside you can see from one end of the train to the other

SOURCE: NEW SOUTH WALES GOVERNMENT, AUSTRALIA (B)

thus also the Disability Discrimination Act (1992). For example, the Public Transport Authority of the state of Western Australia notes that all printed and web-based information conforms to disability guidelines (e.g., resizable text and Braille timetables), and that many of its trains and train stations have accessible features such as raised numbering on train seats, Braille and tactile signage, audio induction loops at help points, tactile ground-surface indicators, and high-visibility colour-contrast painting.[156] Furthermore, in 2017, the state Public Transit Authority announced that they would be upgrading 600 bus stops per year to ensure accessibility and would invest AUD 680 million (approx. USD 470 million) over a 10-year period to extend and replace their entire bus fleet with up to 900 low-floor accessible buses that incorporate USB charging points and meet Euro 6 emissions standards.[157]

Full compliance with the Disability Standards for Accessible Public Transport 2002 is required by 2022, which includes detailed timelines for gradual phaseouts and mandatory compliance milestones for existing public transport vehicles, premises

and infrastructure. Reviews of these standards are conducted every five years in consultation with transport providers, operators, governments, the public, persons with disabilities, carers and advocacy groups. A review conducted in 2017 recommended public transport providers consider incorporating the principles of Universal Design in planning and delivery,[158] and as a result of the review a journey planning guide was developed to assist transport planners to create accessible public transport journeys from start to finish.[159]

The Disability Standards for Education (2005) place obligations on education and training providers in three areas: obligation to consult; obligation to make reasonable adjustments; and obligation to eliminate harassment and victimization.[160] The standards specify how education and training are to be made accessible in areas of "enrolment; participation; curriculum development, accreditation and delivery; student support services; and elimination of harassment and victimization".[161] For example, in addressing the criteria of accessible participation, the services provider

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156 Government of Western Australia.
157 Killen, G., 2014.
158 Australian Government, Department of Infrastructure, Transport, Cities and Regional Development.
159 Australian Government, Department of Infrastructure, Transport, Cities and Regional Development, 2018.
160 National Disability Coordination Officer Programme, 2015.
161 Australian Government, Department of Education and Training, 2005.

BOX 7.
DISABILITY STANDARDS FOR ACCESSIBLE PUBLIC TRANSPORT 2002

Scope: Applies to transport providers and operators, and the conveyances that are used as public transport: aircraft, buses, ferries, taxis, trains, trams, light rail, monorails, premises and infrastructure; covering new public transport vehicles, premises or infrastructure brought into service after 2002.

Funding: Predominantly state and territory governments through their respective disability action plans

Responsible Ministry: The Department of Infrastructure, Transport and Regional Development in consultation with the Attorney-General's Department.

Monitoring and Evaluation: Every five years.

Technical Standards:

AS 1428.1 Design for access and mobility. Part 1: General requirements for access - New building work.

AS 1428.1 Supplement 1: Design for access and mobility. Part 1: General requirements for access – Buildings. AS 1428.2 Design for access and mobility. Part 2: Enhanced and additional requirements - Buildings and facilities.

AS 1428.4 Design for access and mobility. Part 4: Tactile ground surface indicators for the orientation of people with vision impairment.

AS 1735.12 Lifts, escalators and moving walks. Part 12: Facilities for persons with disabilities

AS 2899.1 Public information symbol signs. Part 1: General information signs.

AS/NZS 3856.1 Hoists and ramps for people with disabilities - Vehicle-mounted. Part 1: Product requirements. Australian Design Rule 58

SOURCE: VICTORIAN EQUAL OPPORTUNITY AND RIGHTS COMMISSION, AUSTRALIA (B), AND SAI GLOBAL (B).

FIGURE 6.D.
ACCESSIBLE EDUCATION

Sign language   E-Books   Braille   Voice to Text

SOURCE: UNITED NATIONS ESCAP DESIGN.

consults with students to determine if any adjustments to the course material are necessary. All course materials are required to be available in an accessible format that enables students with disabilities to participate in the course on an equal basis with students without a disability. Accessible materials may be in the format of e-books or accessible through use of software such as Narrator, a screen reader built into Windows 10 that can facilitate access to course materials for students with intellectual and learning disabilities or those with visual disabilities.

BOX 8.
DISABILITY STANDARDS FOR EDUCATION 2005

Scope: Applies to all providers of education, public and private across all education sectors: "pre-school, school, vocational education and training, higher education and adult and community education".[162]

Responsible Ministry: The Minister for Education, Science and Training in consultation with the Attorney-General's Department.

Funding: Predominantly state and territory governments through their respective disability action plans.

Monitoring and Evaluation: Every five years in consultation with education providers, persons with disabilities, carers and advocacy groups and anti-discrimination bodies.

SOURCE: AUSTRALIAN GOVERNMENT, DEPARTMENT OF EDUCATION AND TRAINING, 2005.

Disability (Access to Premises – Buildings) Standards (2010) set out requirements that aim to ensure persons with disabilities have equitable access to and use of public buildings, premises and services within buildings.[163] This can include most of the built environment that the public access, such as hospitals, transport vehicles, banks, restaurants, theatres, recreation areas and car parks.[164] In addition, these standards assist the building industry in understanding their obligations to ensuring different levels of accessibility and "assist them to design, construct or manage buildings in ways that do not discriminate".[165]

The Disability (Access to Premises – Buildings) Standards (2010) come into effect when an application for approval of a new building or upgrade of an existing building is placed with local government council.[166] The standards apply to new public buildings, to new parts of a building constructed post-2011, and to any existing public transport related building in use as of May 2011. Once an application for approval is submitted, the standards may also trigger a required upgrade to an "affected part of an existing building", which refers to provision of an "accessible path of travel from the principal pedestrian entrance of an existing building to the new or modified part of that building".[167] In order to upgrade existing buildings, alterations will often include removing steps at building entrances and providing features such as Braille or tactile buttons in lifts.[168]

The Disability (Access to Premises – Buildings) Standards (2010) bring about positive changes to accessibility in many areas, such as increases in: the number of accessible entrances and doorways to buildings; the supply of unisex accessible toilets; the number of accessible units in hotels and motels; the distribution of accessible spaces in cinemas

162   Commonwealth of Australia, 2006.
163   Attorney-General's Department, Canberra, 2010.
164   Australian Human Rights Commission, 2013.
165   Ibid.
166   Ibid.
167   Ibid.
168   Victorian Building Authority, 2018.

and theatres; and "circulation space requirements in most places such as in lifts, accessible toilets and at doorways".[169] Residential buildings are not covered under standards, however "common areas of apartment blocks are covered if the apartment block has apartments available for short-term rent".[170]

On release of the Disability (Access to Premises – Buildings) Standards (2010), the Building Code of Australia (BCA) was amended to achieve consistency with accessibility requirements. State and territory building laws require "compliance with the BCA and compliance with the access provisions of the BCA", thereby ensuring compliance and consistency with the Disability (Access to Premises – Buildings) Standards (2010).[171]

FIGURE 6.E.
LIVVI'S PLACE, FEATURING ACCESSIBLE PLAYGROUND EQUIPMENT, IN PORT MACQUARIE, AUSTRALIA

SOURCE: HAVE WHEELCHAIR WILL TRAVEL, 2015.

BOX 9.
DISABILITY (ACCESS TO PREMISES – BUILDINGS) STANDARDS 2010

Scope: Applies to builders, developers, certifiers, building designers, architects, building and project managers, certifiers, and building operators.

Responsible Ministry: The Department of Industry, Innovation and Science in consultation with the Attorney-General's Department.

Monitoring and Evaluation: Every five years in consultation with governments, persons with disabilities, carers and advocacy groups, and building industry organizations.

Technical Standards: AS 1428.1:2009 General requirements for access – New building work (and Amendments 2010); AS/NZS 1428.4.1:2009 Means to assist the orientation of people with vision impairment – Tactile ground surface indicators (and Amendments 2010); AS/NZS 2890.6:2009 Off-street parking for people with disabilities.

SOURCE: AUSTRALIAN HUMAN RIGHTS COMMISSION, 2013, AND SAI GLOBAL (B).

Compliance with the Disability Discrimination Act (1992) and Disability Standards made under the Act are required to the maximum extent, whereby non-compliance constitutes an unlawful act. The Act does however include a clause of unjustifiable hardship, that also applies to the Disability Standards. This clause renders compliance void if the provision of accessibility would impose 'unjustifiable hardship', meaning that it is deemed too hard on the person providing the accessibility support.

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169   Australian Human Rights Commission, 2013.
170   Victorian Equal Opportunity and Human Rights Commission (a).
171   Australian Human Rights Commission, 2013.

Unjustifiable hardship is determined by taking into account relevant circumstances such as the circumstance of the person(s) requesting accessibility support, the nature of any benefit or detriment likely to be experienced as a result, technical limitations, and the estimated costs of the work along with the financial circumstances of the responsible party.[172] For example, if the cost associated with providing an accessible ramp was so high that the responsible party may go bankrupt, this may be deemed an unjustifiable hardship.

What constitutes unjustifiable hardship is ultimately determined by the Federal Court or Federal Magistrates Service. As the Disability Discrimination Act (1992) is a complaints-based system, allegations of contravention are made by lodging a formal complaint to the Australian Human Rights Commission. If resolution of the alleged contravention is not resolved through a conciliation process, litigation through court proceedings may commence.

6.1.3 Disability insurance

The National Disability Insurance Scheme Act (2013), commonly referred to as NDIS, is one of the largest social policy reforms in Australian history. The NDIS was introduced into legislation to reform disability social services by moving away from a "service-focussed delivery model to a person-centred model" in which persons with disabilities are provided an individualized plan whereby they have more choice and control in pursuing their goals and planning the delivery of their supports and care.[173]

Persons with disabilities who are eligible to receive NDIS funding (see Box 10) meet with an NDIS service coordinator annually to establish goals and an individualized plan. Once approved, a set amount of funding is allocated under various support categories "such as education, employment, social participation, independence, living arrangements and health and well-being".[174] A person may be provided with a funding plan of AUD 20,000 (approx. USD 14,000) annually, of which AUD 10,000 (approx. USD 7,000) may be allocated towards the category of 'independence' and used for accessing support such as Australian Sign Language (Auslan) interpreting services, while the remaining funds may be allocated towards the category of 'employment' and could be spent, for example, on accessible equipment used in work settings.

The NDIS is an uncapped, demand-driven scheme that is jointly funded by federal, state and territory governments through intergovernmental agreements and tax raising initiatives.[175] One such initiative has been to increase the health-care levy from 1.5 per cent to 2.0 per cent of taxable income. The NDIS is a move away from a welfare approach to disability services whereby governments historically planned for expenditures over a 12-month period (in which funds are subject to changes in the economy, tax, or shifts in government priorities), to an insurance approach to disability services.[176] In an insurance approach, "expenditure is factored in over the life of an individual and scheme sustainability is measured by calculating the total future costs of all those who are insured".[177] Thus, it ensures the sustainability of the NDIS and creates an "incentive to make short-term investments in participants aimed at increasing their independence and participation in the community and the workforce", with the hope of reducing long-term costs.[178]

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172 Attorney-General's Department, Canberra, 1992.
173 Australian Local Government Association, 2017.
174 Parliament of Australia, 2016.
175 Ibid.
176 Ibid.
177 Ibid.
178 Ibid.

BOX 10.
THE NATIONAL DISABILITY INSURANCE SCHEME ACT 2013

Scope: Applies to federal, state and territory governments. By 2020, it is expected that 475,000 persons with disabilities will receive individualized support.

Eligibility: Australian citizens under 65 years of age (over 65 years of age provided support through the Commonwealth aged care system), who meet a disability checklist or early intervention requirements.

Responsible Ministries: The Federal Minister for Government Services and the National Disability Insurance Agency. Funding and policy governance are shared by federal, state and territory governments.

Monitoring and Evaluation: To date only a costing review has been produced by the Productivity Commission.

SOURCE: PARLIAMENT OF AUSTRALIA, 2016.

6.1.4 Lessons learned and remaining challenges

Australian policy and legislation promoting accessibility through Universal Design has brought about significant reforms in accessibility for persons with disabilities living in Australia. In terms of education, persons with disabilities are staying at school for longer and achieving higher academic attainment. In 2003, 48.7 per cent of persons with disabilities aged over 20 years old reported completing year 12, whereas in 2015 that figure rose to 68.3 per cent. With regard to transportation, bus services are more accessible, with the New South Wales State Transit Authority reporting in 2013 that 82 per cent of their fleet were accessible, up from 35.5 per cent in 2007,

and accessibility of train stations for wheelchairs users having improved from 31.8 per cent in 2007 to 47.4 per cent in 2013. Furthermore, currently 224,000 persons with disabilities receive individualized plans funded through the NDIS, providing them with necessary supports to facilitate building their skills and independence.[179]

There is, however, much still to be done in incorporating Universal Design principles into projects and improving accessibility in Australia. Overcoming financial challenges associated with replacing or upgrading infrastructure and services to increase accessibility for people with a range of abilities is one example. In Australia, regional and rural councils experience greater financial challenges in implementing changes than their city counterparts, and as such, are more reliant on government grants or applying scheduled upgrades to infrastructure or services over a period of time.[180]

In addition, a survey conducted by Larkin, Hitch, Watchorn and Ang (2015) sought to investigate factors that promote or hinder incorporation of Universal Design in practice found that building industry bodies felt that the Disability (Access to Premises – Buildings) Standards (2010) may "promote a tick the box and lowest common denominator approach to Universal Design which is more about meeting criteria than meeting consumer need".[181] One survey respondent suggested that "people provide access because the law requires them to, not because they understand the reasons for it".[182]

Furthermore, a review suggests that the nature and operation of the Disability Discrimination Act (1992) as an individual complaints-based system "may limit the ability of people with disability to access the system".[183] Suggesting that the role and powers of

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179   Australian Government, Institute of Health and Welfare, 2017. See also Australian Government, 2015; National Disability Support Partners, 2019.
180   Australian Local Government Association, 2017.
181   Larkin, H., D. Hitch, V. Watchorn and S. Ang, 2015.
182   Ibid.
183   Australian Government, Law Reform Commission, 2013.

the Australian Human Rights Council are limited, the process of making a formal complaint about an alleged contravention is burdensome and time consuming, and costs associated with proceeding past conciliation are prohibitive.[184] Conciliation costs can be up to AUD 10,000 (approx. USD 7000), while a Federal Magistrates Court hearing may surpass AUD 40,000 (approx. USD 28,000).[185]

Policy initiatives outlined here provide a normative approach to compliance, in which people understand the motivations, and objectives may over time support overcoming a 'tick-the-box' approach to compliance. Whereas, implementing a consumer watchdog service to oversee if compliance milestones are being met will alleviate concerns of the lack of powers

of the Australian Human Rights Council and costs associated with proceeding to conciliation or a Federal Magistrates Court hearing.

6.2 CASE STUDY: THE REPUBLIC OF KOREA

6.2.1 Overview of accessibility legislation and policy

In 2018, an estimated 2.58 million people residing in the Republic of Korea had some form of disability – nearly five per cent of the population, a figure increasing annually (see Figure 6.F).[186] Furthermore, one in four individuals in the Republic of Korea identify as having

FIGURE 6.F.
NUMBER OF PERSONS WITH DISABILITIES, AND PROPORTION OF PERSONS WITH DISABILITIES IN THE REPUBLIC OF KOREA, BETWEEN 2003 AND 2018
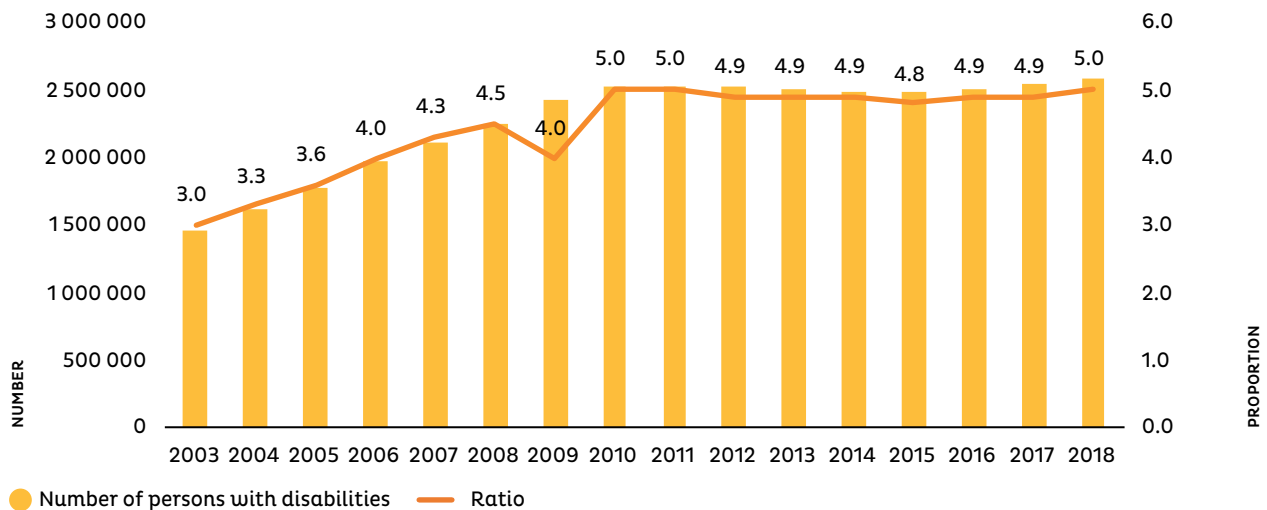
SOURCE: THE GOVERNMENT OF THE REPUBLIC OF KOREA, MINISTRY OF HEALTH AND WELFARE, 2018B.

184 Ibid.
185 Australian Government, Productivity Commission, 2019.
186 Government of the Republic of Korea, Ministry of Health and Welfare, 2018b.

'low mobility', such as older persons, pregnant women, children and guardians of infants, with that number also expected to grow as demographic trends point to an ageing population.[187]

The Republic of Korea has employed both anti-discrimination and programme-focused legal measures to promote accessibility through Universal Design across many sectors such as the physical environment, ICT, transportation, and services. Though the terms 'Universal Design' and 'accessibility' are often used interchangeably in the Republic of Korea, 'accessibility' is primarily used in ICT accessibility legislation, whereas 'Universal Design' is used in some municipalities to signify the provision of physical barrier-free environments.[188]

6.2.2 Accessibility in the built environment

Though a legal clause regarding accessibility was incorporated into the Act on Welfare of Persons with Disabilities (1981)[189] in 1981, it was not until the 1988 Paralympic Games in Seoul that public interest in accessible amenities such as toilets, ramps and elevators began to emerge.[190] Discussions on mandatory installation of amenities was discussed in the National Assembly, which triggered an enactment of the Act on Guarantee of Promotion of Convenience of Persons with Disabilities, the Aged, Pregnant Women, etc. (1998). This law encompasses improving accessibility in the physical environment and facilities such as parks, public buildings and multi-family housing.[191]

In addition to progressing its realization of an accessible environment for the above-mentioned legislation, the Republic of Korea has also employed

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BOX 11.
ACT ON THE GUARANTEE OF PROMOTION OF CONVENIENCE OF PERSONS WITH DISABILITIES, THE AGED, PREGNANT WOMEN, ETC. (1998)

Objectives: To increase participation by persons with disabilities, senior citizens and pregnant women and to ensure their safe and convenient use of facilities and their easy access to information in daily life.

Scope: Parks, public buildings including supermarkets and restaurants with a floor area of more than 300 square metres and beauty parlours, hospitals and art centre facilities with a floor area of more than 500 square metres. In addition, public facilities shall be equipped with parking areas, ramps, toilet facilities and Braille blocks for persons with disabilities.

Responsible ministries: Ministry of Health and Welfare, and Ministry of Land, Infrastructure, and Transport.

Monitoring System: In order to verify compliance of the legislation, the Ministry of Health and Welfare can prescribe a monitoring ordinance to organizations advocating for persons with disabilities. An agency in charge of facilities shall provide direction and supervision necessary for installing and operating amenities with respect to the target facilities under its jurisdiction. If the organization infringes on the provision of accessibility it shall be fined.

SOURCE: GOVERNMENT OF THE REPUBLIC OF KOREA, MINISTRY OF HEALTH AND WELFARE, DISABILITY RIGHTS SUPPORT DIVISION, 1998.

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187   Government of the Republic of Korea, Ministry of Land, Infrastructure, and Transport, 2018.
188   Daejeon Dong-gu District, 2011.
189   Government of the Republic of Korea, Ministry of Health and Welfare, 2018a.
190   Park, S.I., 2002.
191   Government of the Republic of Korea, Ministry of Health and Welfare, Disability Rights Support Division, 1998.

local-level approaches to contribute to this effort, as evidenced through enactment of Universal Design ordinance in various municipalities.[192]

The approach of ensuring accessibility of the built environment in the Republic of Korea relies on audits, as well as both incentive-based and punitive enforcement measures, while still recognizing different obligations for different types of spaces. The Act on Guarantee of Promotion of Convenience of Persons with Disabilities, the Aged, Pregnant Women, etc. (1998) mandates designated areas such as parks, multi-family housing, public agencies and public buildings to be accessible.[193] However, small businesses built before January 1998 or businesses occupying less than 300 square metres such as convenience stores and restaurants were exempt. In the event of renovations to any substantial part of the building, the owner is required to install, maintain, and manage amenities complying with standards for installation under Article 8 (Criteria for Installation of Convenience Facilities) so that persons with disabilities may continually use the facility.[194]

To check the accessibility of facilities, the Ministry of Health and Welfare in collaboration with local governments conducts a full fact-finding survey every five years.[195] The fact-finding survey seeks to ascertain whether all aspects of the premises are accessible, and to advise building owners of the areas they are required to make accessible. The survey is carried out in the form of a door-to-door survey in which the investigators visit select facilities to check if accessibility is ensured. If the facilities and buildings do

not comply with this law, relevant municipalities issue a correction order to the building owners and levy a fine under KRW 5,000,000 (approximately USD 4,235).

According to the field survey conducted in 2018, the installation of accessible features in buildings such as ramps at main entrances and Braille blocks resulted in an increase in the number of accessible buildings, from 67.9 per cent in 2013 to 80.2 per cent in 2018.[196] Improvement in the installation rate is attributed to continuous efforts for awareness enhancement and financial assistance from the government to encourage organizations to implement barrier-free design. For example, Daegu Metropolitan City subsidizes up to KRW one million (equivalent to USD 850) to make shops accessible for wheelchair users.[197]

In addition, incentives such as financial assistance for enhancing accessibility in the workplace are provided to employers who hire persons with disabilities.[198] For example, if an organization employs a person with disabilities and needs to provide a feature such as accessible software, they can request assistance from the government. Furthermore, to encourage a more accessible environment, the 'Barrier-Free Certification'[199] system was introduced in 2015 and became mandatory for government office buildings and cultural facilities built by state or local government.[200]

192 Maeil, J., 2014.
193 Public buildings including supermarkets, restaurants with a floor area of more than 300 square metres, and beauty parlors, hospitals and art centers facilities with a floor area of more than 500 square metres need to abide by this law.
194 Government of the Republic of Korea, Ministry of Health and Welfare, 2011.
195 Ibid.
196 Korea Disabled People's Development Institute, 2018.
197 Ibid.
198 Korea Employment Agency for Persons with Disabilities.
199 Government of the Republic of Korea, Ministry of Health and Welfare, 2015.
200 Government of the Republic of Korea, Ministry of Health and Welfare, Disability Rights Support Division, 1998.

FIGURE 6.G.
BARRIER-FREE LOGO AND CERTIFICATION IN THE REPUBLIC OF KOREA

SOURCE: GOVERNMENT OF THE REPUBLIC OF KOREA, MINISTRY OF GOVERNMENT LEGISLATION.
NOTE: The sign states: Barrier free life environment

6.2.3 Accessible transportation

As the Act on Guarantee of Promotion of Convenience of Persons with Disabilities, the Aged, Pregnant Women, etc. (1998) does not contain provisions for accessible transportation facilities, the Act on the Promotion of the Transportation Convenience for Mobility Disadvantaged Persons (2004) was legislated to guarantee the mobility rights of low-mobility citizens.[201] It was passed under the authority of the Minister of Land, Infrastructure and Transport. 'Mobility disadvantaged persons' is defined in the legislation as wheelchair users, older persons, pregnant women, children, and guardians of infants.

Early in 2019, the government established a legal basis to support financial assistance for bus transport services. When introducing low-floor buses, the local government subsidizes up to 50 per cent of the difference between the price of low-floor buses and regular buses, and the central government matches this 50 per cent. Thus, it is anticipated that more

BOX 12.
ACT ON PROMOTION OF THE TRANSPORTATION CONVENIENCE FOR MOBILITY DISADVANTAGED PERSONS (2004)

Objectives: To establish human-oriented transportation systems by expanding convenient mobility equipment in public transportation, passenger facilities, and on the roads, and by improving the pedestrian environment, so that mobility disadvantaged persons may travel safely and conveniently, thereby contributing to the promotion of social participation of mobility disadvantaged persons and of their welfare.

Scope: The term 'mobility disadvantaged persons' means persons who feel inconvenient in mobility in their daily lives, such as persons with disabilities, the aged, pregnant women, persons accompanied by infants, and children. This law specifies accessibility requirements for public transport providers such as access paths, ramps for boarding on intra-city bus, inter-city bus, trains, subways, flights and vessels.

Responsible Ministries: Ministry of Land, Infrastructure and Transport

Monitoring System: The Metropolitan City Mayor established a five-year local plan to enhance the transportation convenience of mobility disadvantaged persons in his/her jurisdiction.

SOURCE: NATIONAL ASSEMBLY SECRETARIAT, 2005.

wheelchair users will be able to use inter-city bus or express bus, which previously was not accessible to them.

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201 National Assembly Secretariat, 2005.

6.2.4 Accessibility in ICT

The Discrimination against and Remedies for Persons with Disabilities Act (2008) was introduced to prohibit disability-based discrimination in all areas of society and to enable persons with disabilities to participate fully in social activities by securing equal rights and access through employment, education and political representation. This law has further accelerated its provision of accessibility related services through a phased implementation approach with different enforcement periods for targeted groups.[202] For example, for companies that employ 300 people or more, the law came into effect from April 2009, whereas for those employing less than 100 employees the law was applied from April 2013.

In terms of ICT accessibility, the Discrimination against and Remedies for Persons with Disabilities Act (2008) encompasses three scopes: web, mobile, and public terminals and kiosks,[203] and as of 2013, obligated all medical institutions and corporations to comply with web accessibility standards.[204] In terms of web accessibility, standards such as the Korean Web Content Accessibility Guidelines 2.1 (KWCAG 2.1) derived from ISO standards of W3C & WCAG 2.0 guidelines have been employed since 2015, developed by the National Information Society Agency under the Ministry of Science and ICT.[205] A study on the status of web accessibility in the private sector in the Republic of Korea 2018 showed that financial and insurance industries were found to have relatively high web accessibility guarantees when compared with real estate and rental sectors.[206]

In 2019, mobile application software accessible guidelines were incorporated into the scope of web accessibility.[207] To facilitate compliance, a certification system was introduced targeting ICT product manufacturers to ensure that persons with disabilities and older persons could easily access and use appliances and software.[208] However, more endeavours need to be undertaken, particularly in the private sector, as there is no legal obligation for the private sector to comply with web accessibility guidelines.

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202 Government of the Republic of Korea, Ministry of Health and Welfare, Disability Rights Support Division, 2008b.
203 Note: A public terminal or kiosk is unmanned information device, often with a touchscreen, installed in a public place that provides goods.
204 Government of the Republic of Korea, Ministry of Health and Welfare, 2007.
205 W3C, 2019.
206 Government of the Republic of Korea, Ministry of Science and ICT, 2018.
207 Government of the Republic of Korea, Ministry of Science and ICT, 2019.
208 Government of the Republic of Korea, Ministry of Science and ICT, 2017.

BOX 14.
GUIDELINES FOR THE PROMOTION OF ACCESS TO INFORMATION AND USE BY PERSONS WITH DISABILITIES AND THE ELDERLY (2010)

Objectives: To guarantee accessibility in providing information and services through the Internet so that persons with disabilities and older persons may easily use a website and application software.

Scope: Websites, mobile content, Automatic teller machines (ATM), application software and kiosks (e.g., ticketing machines, self-check-in machines and document issuing machines).

• Korean Web Content – 2016

• Mobile application content – 2019

• Public terminals (kiosks) – 2019

Responsible Ministry: Ministry of Science and ICT

Monitoring System: The Minister of Science and ICT designate a certification institution that carries out web accessibility quality certification in order to improve access to information by persons with disabilities and aged persons for user-friendly purposes. It is mandatory for public organizations such as hospitals and education providers.

SOURCE: GOVERNMENT OF THE REPUBLIC OF KOREA, MINISTRY OF SCIENCE AND ICT, 2019. SEE ALSO GOVERNMENT OF THE REPUBLIC OF KOREA, MINISTRY OF HEALTH AND WELFARE, DEPARTMENT OF HUMAN RIGHTS SUPPORT, 2008A.

Recently, there has been an increase of installation of kiosks due to the convenience they provide and a reduction of operator costs. However, since the introduction of the 'Guidelines for Enhancing Accessibility and ease of use of Information for Persons with Disabilities and the Elderly' in 2019, adoption of kiosk accessibility has now become feasible on statutory grounds.

Despite these legislative grounds for kiosk accessibility, more improvement needs to be undertaken for the development of public terminals. In 2018, results from a study conducted by the Ministry of Science and ICT revealed that only two accessible kiosks were installed in both the domestic and international airport terminals (see Table 6.B) and only 58.8 per cent of kiosks in local government were accessible.[209] Whereas, 93.1 per cent of ATMs in commercial banks were found to be inclusively designed for persons with disabilities, such as with screen magnifier functions for persons with visual impairment.[210]

The Act on Guarantee of Rights of and Support for Persons with Developmental Disabilities (2017) was enacted to facilitate social engagement of persons with developmental disabilities and to protect their rights. According to this law, state and local governments are expected to prepare and distribute information on various welfare assistance programs in a form that persons with developmental disabilities can readily

TABLE 6.B.
INSTALLATION RATE OF PUBLIC TERMINALS IN DIFFERENT VENUES IN THE REPUBLIC OF KOREA

VENUE	SECTION	TOTAL NUMBER OF DEVICES	NUMBER OF ACCESSIBLE DEVICES	PERCENTAGE
Airport	Domestic airlines	141	2	1.4
	International airlines	34	2	5.9
Local government		3,830	2,253	58.8
Commercial bank ATM		40,682	37,879	93.1

SOURCE: NATIONAL ASSEMBLY RESEARCH SERVICE, 2018.

209 Government of the Republic of Korea, Ministry of Science and ICT, 2018.
210 Ibid.

understand.[211] In this regard, 'ALDA, Easy Read Center' opened in 2018, funded by Seoul Metropolitan City, with the purpose of publishing easy-read information books on disability policies, as well as guidelines on easy-read materials.[212] Therefore, it is expected that more accessible information will be provided for persons with developmental disabilities in an easy to read format.

BOX 15.
ACT ON GUARANTEE OF RIGHTS OF AND SUPPORT FOR PERSONS WITH DEVELOPMENTAL DISABILITIES (2017)

Objectives: To facilitate social engagement of persons with developmental disabilities and to protect their rights. For example, 'Article 10: Assistance in Communications' specifies that state and local governments shall prepare and distribute information in a form that persons with developmental disabilities can readily understand.

Responsible ministry: Ministry of Health and Welfare

Monitoring System: The Minister of Health and Welfare shall conduct a fact-finding survey on persons with developmental disabilities and their families every three years so as to obtain basic data for ascertaining actual conditions of persons with developmental disabilities and for formulating welfare policies.

SOURCE: GOVERNMENT OF THE REPUBLIC OF KOREA, MINISTRY OF HEALTH AND WELFARE, 2017.

6.2.5 Lessons learned and remaining challenges

The government of the Republic of Korea has set statutory grounds for making an accessible environment across many sectors and operating systems, such as monitoring and certification systems

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BOX 16.
ADDITIONAL LEGISLATION ON ACCESSIBILITY IN THE REPUBLIC OF KOREA

Republic of Korea Sign Language Act (2016)

Objectives: This law recognizes Hanguk Sueo (Korean Sign Language) as a language, and delineates that sign language interpretation should be provided, if deemed necessary, with respect to public events; judicial, administrative and other procedures; use of public facilities; public broadcasting; and other cases deemed necessary for the public interest by state and local governments.

Responsible Ministry: Ministry of Culture, Sports and Tourism

Act on Guarantee of Right to Health and Access to Medical Services for Persons with Disabilities (2017)

Objectives: The purpose of this Act is to contribute to improving the health of persons with disabilities by providing for matters concerning support for the guarantee of the right to health, establishment of a health-care system, and guarantee of access to medical care for persons with disabilities.

Responsible Ministry: Ministry of Health and Welfare

Scope: State and local governments may subsidize medical expenses to persons with disabilities deemed unable to afford medical expenses, taking into account consideration of factors such as degree of disability and economic circumstances. Provision of medical services at designated medical institutions which meet the standards, such as facilities, human resources, and equipment is possible.

SOURCE: GOVERNMENT OF THE REPUBLIC OF KOREA, MINISTRY OF GOVERNMENT LEGISLATION.

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211 Government of the Republic of Korea, Ministry of Health and Welfare, 2017.
212 ALDA Easy Read Center.

that are well organized and being conducted regularly. However, buildings which were built before 1998 and buildings with less than 300 square metres are exempt from accessibility laws, leaving many persons with disabilities feeling isolated in their daily lives.

Furthermore, despite an increasing trend in the number of persons with developmental disabilities (6.9 per cent in 2009 to 9.0 per cent in 2018) and having a legal duty to provide information in an easy-read format for persons with developmental disabilities, designing guidelines for people with cognitive impairment is still lacking.

6.3 CASE STUDY: INDIA

6.3.1 Overview of accessibility legislation and policy

The 2011 Population Census of India and National Sample Survey Organisation's surveys on disability put the official estimate of disability prevalence in India at 2.21 per cent of the population (approximately 26.8 million persons).[213] A person was determined as having a disability if they were "suffering from not less than 40 per cent of any disability", under eight conditions of disability ("disability in seeing, in hearing, in speech, in movement, in mental retardation, in mental illness, any other and multiple disability").[214] However, estimates vary across sources, with a World Bank report stating that there is growing evidence that persons with disabilities comprise between five and eight per cent of the Indian population (approximately 55–90 million persons).[215]

The Constitution of India contains articles guaranteeing its citizens the full range of civil, political, economic, cultural and social rights and protection against discrimination[216] which includes persons with disabilities.[217] Furthermore, a number of laws and guidelines have been passed addressing both anti-discrimination of persons with disabilities and programmatic approaches to enhancing accessibility. These include the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act (1995), the Rights of Persons with Disabilities Act (2016), and the Rights of Persons with Disabilities Rules (2017). Moreover, the judicial branch of the Government plays an active role in shaping an accessible society, in particular through providing persons with disabilities an avenue for claiming their rights and seeking redress from various levels of government under Public Interest Litigation as well as the Rights of Persons with Disabilities Act (2016).[218]

The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act (1995) was until 2016 the primary legislation on disability rights with the aim of providing equal opportunity for persons with disabilities. However, the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act (1995) covered only seven conditions of disability. Following India's ratification in 2007 of the CRPD, efforts began to enact new legislation that was more compliant with the CRPD.[219] Subsequently, in 2017, the Government of India enacted the Rights of Persons with Disabilities Act (2016), extending its definition of disability to include 21 conditions.[220]

213 Government of India, Ministry of Statistics and Programme Implementation, 2016.
214 Ibid.
215 O'Keefe, P., 2007.
216 Disability Rights Promotion International, 2009.
217 Laddha, C.N., 2016.
218 Ibid.
219 Narayan, C.L. and J. Thomas, 2017.
220 Ibid.

6.3.2 Anti-discrimination legislation and accompanying rules

The Rights of Persons with Disabilities Act (2016) is an anti-discrimination law on disability that mandates the Government of India to formulate rules – known as the Rights of Persons with Disabilities Rules (2017) which include accessibility standards for the public environment including public buildings, transportation, information and communication and other facilities and services provided to the public in urban and rural areas. "Public building" means a "government or private building, used or accessed by the public at large, including a building used for educational or vocational purposes, workplace, commercial activities, public utilities, religious, cultural, leisure or recreational activities, medical or health services, law enforcement agencies, reformatories or judicial fora's, railway stations or platforms, roadways bus stands or terminus, airports or waterway".[221]

The Rights of Persons with Disabilities Act (2016) also mandates federal and state governments to "take measures to promote development, production and distribution of universally designed electronic goods and equipment, consumer products and accessories for general use by persons with disabilities".[222] The Act defines 'Universal Design' as the design of products, environments, programmes and services to be usable by all people to the greatest extent possible, without the need for adaptation or specialized design and shall apply to assistive devices including advanced technologies for particular group of persons with disabilities.[223] In addition, the Act calls for steps to ensure "accessibility, reasonable accommodation, non-discrimination for persons with disabilities vis-à-vis information, services and the built environment and their participation in social life".[224] It defines

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221 Government of India, Ministry of Law and Justice, 2016.
222 Ibid.
223 Ibid.
224 Ibid.

'reasonable accommodation' as making "necessary and appropriate modification and adjustments, without imposing a disproportionate or undue burden in a particular case, to ensure to persons with disabilities the enjoyment or exercise of rights equally with others".[225]

The Act targets "not only government but also 'private establishments', being companies, firms, cooperatives or other societies, associations, trusts, agencies, institutions, organizations, unions, factories or such other establishments as may be specified".[226] "Such private employers are now subject to requirements (i) to promote an equal opportunity policy, and (ii) to comply with the standards of accessibility prescribed by the Indian Central government".[227] Existing establishments must comply with the standards within five years. The Rights of Persons with Disabilities Rules (2017) mandate both public and private sectors to comply with accessibility standards concerning physical built environment, transportation and ICT.

In India, the National Model Building Byelaws (2016) are followed for the construction of buildings.[228] The byelaws seek to build barrier-free environments, specifying how buildings are to be made accessible for persons with disabilities, children and older persons. The classification for buildings is broad, covering higher secondary schools, conference halls, sport pavilions, swimming pools, police stations, law courts, court houses, cinemas, cafes, banks, airport terminals, postal offices and more.[229] An analysis of the bye-laws is provided on the site of the Indian Ministry of Urban Development, recommending the inclusion of accessibility in buildings and highlights the importance of moving towards Universal Design.[230]

With the introduction of the Rights of Persons with Disabilities Act (2016), it has been mandated that "all public buildings (including those owned by the private sector and are for public use) should be made accessible as per standards".[231] The Act states that "the permission to build and the certificate of completion would not be given" if standards are not met," and sets out timelines for retrofitting existing infrastructure.[232]

In 2016, the Indian Ministry of Urban Development released the 'Harmonized Guidelines and Space Standards for Barrier Free Environment for Persons with Disability and Elderly Persons' (Guidelines and Space Standards, 2016). The aim of the Guidelines and Space Standards (2016) is "to guide design of spaces to ensure equitable, easy access to persons with disabilities".[233] "Equitable access would translate into access to the physical environment, to transportation, to information and communications."[234] The Guidelines and Space Standards (2016) include accessibility standards and provide detailed information on how public places, access to buildings and transportation is to be made accessible. For example, they provide diagrams for positioning of handrails, door identification and visual signage, along with recommendations for wheelchair manoeuvring space in corridors.[235]

The Rights of Persons with Disabilities Act (2016) mandates that the Indian Government take steps for ensuring access to roads and accessibility in various modes of transportation. The Guidelines and Space Standards (2016) set out how roads and transportation are to be made accessible in the following areas: sidewalks/footpaths, kerb ramps at walkways and pedestrian crossings, road intersections, median refuge/islands, traffic signals, subways and foot over

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225 Ibid.
226 Jumabhoy, F., 2017.
227 Ibid.
228 Government of India, Ministry of Urban Development, 2016b.
229 Ibid.
230 Government of India, Ministry of Urban Development, 2016a.
231 National Disability Network and National Committee on the Rights of Persons with Disabilities, 2017.
232 Ibid.
233 Government of India, Ministry of Urban Development, 2016a.
234 Ibid
235 Ibid.

BOX 18.
LEGISLATIVE RULES OF THE RIGHTS OF PERSONS WITH DISABILITIES ACT (2016)

Accessible built environments: Section 65 and Section 71 state that the Central Advisory Board on disability and the State Advisory Board respectively, shall be the national-level consultative and advisory bodies on disability matters and shall: facilitate the evolution of a comprehensive policy for the empowerment of persons with disabilities and the full enjoyment of rights; recommend steps to ensure accessibility, reasonable accommodation, non-discrimination vis-à-vis information, services and the built environment and participation in social life; monitor and evaluate the impact of laws, policies and programmes designed to achieve full participation of persons with disabilities.

Accessible Transportation: Under Section 41, rules state that the appropriate Government shall take measures to provide facilities for persons with disabilities at bus stops, railway stations and airports conforming to the accessibility standards relating to parking spaces, toilets, ticketing counters and ticketing machines. In addition, access to all modes of transport should conform to the design standards, including retrofitting old modes of transport. Furthermore, the Government is required to develop programmes to promote the mobility of persons with disabilities at an affordable cost through incentives and concessions; retrofitting of vehicles; and personal mobility assistance.

Accessible ICT: Under Section 42, rules state that the appropriate Government shall take measures to ensure that content available in audio, print and electronic media are in an accessible format; electronic media should be made accessible by providing audio description, sign language interpretation and close captioning. Electronic goods and equipment which are meant for everyday use should be available in Universal Design.

Accessible Education: Under Section 16 and 17 rules state that the duty of educational institutions, wherein; the appropriate Government and the local authorities shall endeavour that all educational institutions funded or recognized by them provide inclusive education to children with disabilities and shall: not discriminate against children with disabilities in enrolment, sport, or recreation; shall all ensure that education provided to persons who are blind or deaf or both is imparted in the most appropriate languages and modes and means of communication. Furthermore, shall detect learning disabilities, monitor participation and provide transportation facilities to children with disabilities.

In order to facilitate inclusive education, the appropriate Government and local authorities shall: undertake surveys every five years to identify children with disabilities their needs and if they are being met; establish resource centres to support educational institutions, establish an adequate number of teacher training institutions; train and employ teachers in disability related concepts, sign language and Braille; provide books, other learning materials and appropriate assistive devices to students with benchmark disabilities free of cost up to the age of eighteen years; provide scholarships in certain situations; implement modifications in the curriculum and examination system; and promote research in order to improve learning.

Under Section 18 rules lay down the provision for Adult education. The appropriate Government and local authorities shall take measures to promote, protect and ensure participation of persons with disabilities in adult education and continuing education programmes equally with others.

SOURCE: GOVERNMENT OF INDIA, MINISTRY OF LAW AND JUSTICE, 2016.

bridges and public transport. Infrastructure such as bus stops, piers and airports are covered under the National Model Building Byelaws (2016) and the 'buildings' section of Guidelines and Space Standards (2016).

Guidelines for web accessibility have been developed by India's National Informatics Centre, in collaboration with the Ministry of Electronics & Information Technology and the Government of India. Titled 'Guidelines for Indian Government Websites' they aim to "make Indian Government Websites conform to the essential prerequisites of UUU trilogy i.e. Usable, User-Centric and Universally Accessible".[236] They also "form the basis for obtaining Website Quality Certification from Standardisation Testing Quality Certification, an organization of the Ministry of Electronics & Information Technology, Government of India". Furthermore, the "guidelines are based on International Standards including ISO 23026, W3C's Web Content Accessibility Guidelines (WCAG 2.0), Rights of Persons with Disabilities Act 2016 as well as the Information Technology Act of India".[237]

"One of the major focus areas of the Guidelines is web accessibility. With respect to accessibility focus is on the following":[238]

1   Addressing the needs of the persons with disabilities; and

2   Ensuring that the sites are accessible with equal ease to all users on all of the major browsers and across all platforms and bandwidths (i.e. universally accessible).[239]

The Department of School Education and Literacy under the Ministry of Human Resource Development sets policy and guidelines pertaining to access to inclusive education for children with disabilities.[240] This includes school admission procedures, the right of children to free education and on the prevention of discrimination. Whereas, the Department of Empowerment of Persons with Disabilities under the Ministry of Social Justice and Empowerment sets guidelines for conducting written examinations for persons with disabilities.[241] Thus, making buildings and various facilities accessible and providing reasonable accommodation and individualized support that maximizes academic and social development consistent with the goal of full inclusion.

6.3.3 Complaints, penalties, and Public Interest Litigation

In addition, non-compliance with the stipulations of the Rights of Persons with Disabilities Act (2016) constitutes an unlawful act, which "can result in a fine of up to INR 10,000 for the first offence (approximately USD 140), or between INR 50,000 (approximately USD 700) and INR 500,000 (approximately USD 7000) for subsequent offences".[242] Additionally, "any person who fails to provide to the relevant authority any records and information which he is under a duty to produce will be liable to a fine of up to INR 25,000 (approximately USD 350) in respect of each offence".[243] "If the violation is committed by a company, both the entity as well as the person(s) responsible for the conduct of the business of the company would be liable."[244] Furthermore, "directors, officers and

236 National Informatics' Centre India, 2018.
237 Ibid.
238 Ibid.
239 Ibid.
240 Government of India, Ministry of Human Resource Development, 2019.
241 Government of India, Ministry of Social Justice and Empowerment, Department of Empowerment of Persons with Disabilities, 2018.
242 Jumabhoy, F., 2017.
243 Ibid.
244 Lus Laboris, 2018.

managers of a company would be individually liable if it is established that the violation was committed with their consent or is attributable to their negligence".[245]

The Act also imposes criminal liability (imprisonment for a term between 6 months to 5 years and a fine) on anyone who "within public view insults or intimidates a person with disability with the intention of humiliating such person".[246] "Exploitation of persons with a disability can be made to the Executive Magistrate and the local police", while "prosecutions for offences under the New Act are triable by a Sessions Court which is required to be notified by state governments for each district as a Special Court".[247]

In a landmark judgment invoking the Rights of Persons with Disabilities Act (2016), the Supreme Court of India directed accessibility for students with disabilities in institutions of higher education.[248] In 2017, the Disabled Rights Group India initiated legal proceedings against the Government Union of India, claiming that the government had failed in its mandatory obligation under the Act to provide accessible courses and campus facilities, stating that a "barrier-free campus environment had not been provided", which had the effect of inhibiting the mobility of students with disabilities.[249] Furthermore, the claim stated that "modifications, aids and appliances for lectures, curricula, teaching materials, libraries, examinations and more had not been undertaken, further inhibiting their participation".[250] Finally, the claim stated that "there was no government mechanism to monitor the adherence to the 5 per cent reservation quota" for persons with disabilities in higher education.[251] The Supreme Court of India determined that the claims

were justified and "directed the University Grants Commission to form an expert committee to perform a detailed study for making measures for accessibility and pedagogy".[252] Furthermore, the Supreme Court tasked the expert committee with "examining the feasibility of setting up an in-house body in each university and college, consisting of teachers, staff, parents and students, for taking care of the day-to-day needs of persons with disabilities as well as for the implementation of the schemes to be formulated by the Committee".[253]

In addition, under Article 32 of the Indian Constitution, persons with disabilities have the right to pursue legal action if they believe that their rights have been unduly deprived. However, due to the high cost and complicated procedure of litigating through the court system for many, equal access is rarely afforded. However, in 1986, the Supreme Court of India pioneered Public Interest Litigation. In Indian law, Public Interest Litigation refers to litigation for the protection of the public interest. It is introduced in a court of law, not by the aggrieved party but by the court itself or by any other private party. [254] "It is not necessary, for the exercise of the court's jurisdiction, that the person who is the victim of the violation of his or her right should personally approach the court".[255] Public Interest Litigation may be filed against any level of government, however not against a private entity.

One such example was the 2018 filing of Public Interest Litigation by the Human Rights Law Network in the Supreme Court of India under Article 32 of the Constitution of India, seeking the implementation of the Rights of Persons with Disabilities Act (2016) for

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245 Ibid.
246 Ibid.
247 Ibid.
248 Human Rights Law Network, 2017.
249 Ibid.
250 Ibid.
251 Ibid.
252 Ibid.
253 Ibid.
254 Bhat, V.P., 2018.
255 The Fact Factor, 2019.

treatment of thalassemia patients.[256] The litigation filed by Human Rights Law Network argues that the Indian Government has failed in its obligations under the Rights of Persons with Disabilities Act 2016, Section 4 (b) to the Schedule under Section 2 (c), to provide adequate measures to combat thalassemia disease in India and "has not taken any steps to create accountability for the funds allocated for the same".[257]

6.3.4 Equal Opportunity Policy

Under the Rights of Persons with Disabilities Act (2016), all government organizations and private companies must prepare and publish an Equal Opportunity Policy for persons with disabilities. A copy of the policy is to be published on the organization/companies' website and is required to be registered with the State Commissioner or the Central Commissioner. Furthermore, the policy must outline how the government, organization or private company will provide barrier-free accessibility for persons with disabilities, along with the following stipulations:

- Provision of details regarding amenities and facilities put in place for persons with disabilities;

- Provision of lists of posts identified for persons with disabilities;

- Provision of details of training, promotion, allotment of accommodation and provision of assistive devices;

- Provision of information on the manner of selection of persons with disabilities for various posts, post recruitment and pre-promotion training, preference in transfer and posting, special leave, preference in allocation of residential accommodation, if any, and other facilities;[258]

- Organizations/companies with more than 20 employees "must appoint a liaison officer to ensure compliance with the policy and to look after the recruitment of persons with disabilities".[259]

- All organizations/companies "must also maintain hard and soft copy records of the persons with disabilities in relation to the organization/companies' compliance with the equal opportunity policy".[260]

6.3.5 Public campaign for accessibility

In 2015, the Indian Government Ministry of Social Justice and Empowerment under the Department of Empowerment of Persons with Disabilities announced a nationwide campaign entitled 'Accessible India' that aimed to promote and raise awareness about accessibility, and towards "achieving universal accessibility for all citizens including persons with disabilities in creating an enabling and barrier-free environment".[261] In particular, the campaign focused on achieving accessible solutions in urban and rural areas across India in the following areas: physical built environment, transportation system and ICT.

With regard to enhancing accessibility of the built environment, the campaign sought to increase the proportion of accessible government buildings (such as schools, hospitals and government buildings), converting 50 per cent of all government buildings of the national capital and state capitals into accessible buildings by July 2018, and conducting audits of 50 per cent of government buildings and converting them into accessible buildings in the 10 most important cities / towns of all states by July 2019.

The campaign identified 1,707 public buildings in 50 cities to be made accessible, and undertook accessibility audits, identifying physical barriers to access against pre-determined criteria in order to determine the types of accessibility features required

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256 "Thalassaemia is the name for a group of inherited conditions that affect a substance in the blood called haemoglobin." See National Health Service, United Kingdom.
257 Human Rights Law Network, 2017.
258 Jumabhoy, F., 2017.
259 Ibid.
260 Ibid.
261 Media Access Australia, 2015.

FIGURE 6.H.
A VISUALLY IMPAIRED PERSON USING THE BRAILLE TACTILE MAP TO NAVIGATE ACROSS THE KRS RAILWAY STATION IN BENGALURU

SOURCE: ANUPRAYAAS, 2019.

FIGURE 6.I.
A VISUALLY IMPAIRED PERSON USING BRAILLE ON THE HANDRAIL TO NAVIGATE THE KRS RAILWAY STATION IN BENGALURU

SOURCE: ANUPRAYAAS, 2019.

in making each building accessible to persons with disabilities. Accessibility audits were "conducted in 1,662 of the 1,707 buildings" and subsequent cost estimates of 1,304 buildings were sent to the Department of Empowerment of Persons with Disabilities to approve and to release funding for retrofit of the buildings.[262] As of 2018, INR 280.21 crore (approximately USD 39,403,000) had been disbursed by the Indian government to states for retrofitting of 937 buildings.[263]

Furthermore, the Department created an Accessible India Campaign Mobile Application and web portal, enabling people to submit pictures or videos to report inaccessible public places.[264] The portal will "process the request for access audit, financial sanction and final retrofitting of the building to make it completely accessible".[265]

The Accessible India Campaign also sought to enhance accessibility by increasing the proportion of accessible public transportation facilities and services. The Ministries of Railways, Road Transport and Highways and Civil Aviation was entrusted with the creation of accessible railway stations, accessible international and domestic airports and accessible transport carriers. The Economic Times, India reports that "all 34 international and 48 domestic airports in the country now have accessibility features such as ramps, toilets and lifts with Braille symbols", while "1,131 railway stations have been provided with accessibility features".[266] However, only about nine per cent of public buses have been made accessible.[267]

Furthermore, the campaign aimed to enhance ICT accessibility by increasing the proportion of accessible and usable public documents and websites that meet internationally recognized accessibility standards, enhancing the pool of sign language interpreters, and

262 Sharma, N., 2018.
263 Government of India, Ministry of Social Justice and Empowerment, Department of Empowerment of Persons with Disabilities, 2015.
264 Ibid.
265 Media Access Australia, 2015.
266 Sharma, N., 2019.
267 Global Accessibility News, 2019.

develop adopting national standards on captioning and sign-language interpretation in consultation with national media authorities, by July 2016. For example, government websites were to incorporate audio options and larger fonts. In addition, there were plans to "improve access for blind or visually impaired people by providing audio description-enabled television set-top boxes, text-to-speech functionality and screen reader support for government websites, as well as implementation of sign language on 25 per cent of television programming for people who are Deaf or hearing impaired".[268]

As of 2018, out of 897 selected state government websites, 231 had been made live, with 161 websites pending hosting.[269]

6.3.6 Remaining challenges

While the establishment of the Rights of Persons with Disabilities Act (2016) has been a welcome legislative measure to support persons with disabilities, it faces challenges in implementing accessibility due to a lack of monitoring mechanisms and government accountability. For example, as in the case of the *Disabled Rights Group India vs. the Government Union of India*, it was noted that the "lack of a government mechanism to monitor the adherence to the 5 per cent reservation quota" for persons with disabilities in higher education meant that the government did not meet its obligations under the Act in providing accessible education.[270] Furthermore, a study conducted by the National Disability Network and National Committee on the Rights of Persons with Disabilities found that many government websites still remain inaccessible.[271]

BOX 19.
ACCESSIBLE INDIA CAMPAIGN 2015

Scope: A nationwide campaign aimed at achieving universal accessibility for persons with disabilities across both the public and private sectors.

Responsible Ministries: Ministry of Social Justice and Empowerment, Department of Empowerment of Persons with Disabilities.

Monitoring and Evaluation: Accessibility Audits.

The department of empowerment of persons with disabilities had entrusted the task of auditing public buildings to 18 empanelled auditors.

The Central Public Works Department is responsible for retrofitting buildings.

Technical Standards: Recommends ISO 21542:2011 'Building Construction —Accessibility and Usability of the Built Environment' and ISO / IEC 40500: 2012, Information Technology

SOURCE: GOVERNMENT OF INDIA, MINISTRY OF SOCIAL JUSTICE AND EMPOWERMENT, DEPARTMENT OF EMPOWERMENT OF PERSONS WITH DISABILITIES, AND GOVERNMENT OF INDIA, MINISTRY OF SOCIAL JUSTICE AND EMPOWERMENT, DEPARTMENT OF EMPOWERMENT OF PERSONS WITH DISABILITIES, 2015.

6.4 CASE STUDY: SIGN LANGUAGE AND SIGN LANGUAGE INTERPRETATION SYSTEMS: COUNTRY COMPARISONS

This case study focuses on comparing different systems of provision of sign language interpretation from four countries. It is an important example of how successful investment in and provision of accessibility support services requires strong legal, regulatory, operational and financial backing to be effective in different national contexts, particularly to those who are in a position to facilitate accessible communication

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268 Media Access Australia, 2015.
269 Government of India, Ministry of Social Justice and Empowerment, Department of Empowerment of Persons with Disabilities, 2015.
270 Human Rights Law Network, 2017.
271 National Disability Network and National Committee on the Rights of Persons with Disabilities, 2017.

support. Professionalization of this kind of support is important, as volunteer support is insufficient. Similarly, it demonstrates how there is not a one size fits all approach to success, but rather how adapting to specific contexts is the most effective way to yield impactful results.

6.4.1 Introduction to sign language and sign language interpretation

Sign language is "a natural language that, instead of relying on acoustically conveyed sound patterns, uses signs made by moving the hands combined with facial expressions and postures of the body to convey meaning".[272] Sign language varies greatly across countries and communities. Presently, there are over 300 unique sign languages globally.[273] As "sign languages develop within deaf communities, they can be independent of the surrounding spoken language",[274] which means that sign language has a different linguistic structure from spoken language, whereby word order and language structure differs.[275]

Historically, access to and use of sign language was systematically denied in many countries. In 1880, the Second International Congress on the Education of the Deaf, held in Milan, Italy declared a ban on teaching sign language in schools, stating that oral education was best.[276] In 2010, the International Congress on the Education of the Deaf expressed regret of the 1880 Milan Congress and the harmful consequences, and "promoted the acceptance of and respect for all languages and forms of communication in educational programs".[277] Today, however, the Convention on the Rights of Persons with Disabilities recognizes and promotes the use of sign languages, making "clear

that sign languages are equal in status to spoken languages" and obligating "States parties to facilitate the learning of sign language and promote the linguistic identity of the deaf community".[278] However, as of 2019 only 41 countries globally recognize sign language as an official language, [279] leaving significant room for improving the legal protection and promotion of sign languages.

For many of the 70 million persons globally who are deaf or hard-of-hearing, sign language and support from sign language interpreters are a crucial means of communication and access to information and services.[280] Sign language interpretation can take place in various forms. Some deaf or hard-of-hearing persons use sign language interpretation on a personal basis in the office. Some organizations may wish to engage sign language interpreters to reach wider audiences in conference, event or media broadcasting contexts. Furthermore, service provision agencies companies may benefit from video relay services (VRS), a telecommunication service that allows deaf or hard-of-hearing persons to make a phone call with hearing and speaking users by converting voice message to and from sign language through an intermediary.

Despite the various contexts in which they are needed, in many countries, there remains a shortage of qualified sign language interpreters. The Malaysian Federation of the Deaf acknowledges low wages as a reason for a shortage of sign language interpreters in Malaysia.[281] While in India, the founder of a regional deaf society states that "Indian Sign Language needs to be accepted as another Indian language, and the effect of that recognition would filter into schools, universities and parents", thus raising awareness of

272 Perlmutter, D.M.
273 International Telecomunications Union.
274 Okrent, A., 2015.
275 Ibid. See also Mori, S., 2019.
276 Berke, J., 2019.
277 World Federation of the Deaf.
278 United Nations, 2018.
279 Kiprop, V., 2019.
280 World Federation of the Deaf, 2016a.
281 Murad, D., 2013.

FIGURE 6.J.
'THANK YOU' IN DIFFERENT SIGN LANGUAGES

KOREAN SIGN LANGUAGE (KSL)

JAPANESE SIGN LANGUAGE (JSL)

**AMERICAN SIGN LANGUAGE (ASL),
LANGUE DES SIGNES QUÉBÉCOISE (LSQ),
AND INTERNATIONAL SIGN (IS)**

AUSTRALIAN SIGN LANGUAGE (AUSLAN)

SOURCE: KOREAN SIGN LANGUAGE – PHOTO OF AND PROVIDED BY CHA JEONKYOUNG ESCAP; JAPANESE SIGN LANGUAGE —PHOTOS OF AND PROVIDED BY IKUMI KAWAMATA OF THE NIPPON FOUNDATION; AMERICAN SIGN LANGUAGE, LANGUE DES SIGNES QUÉBÉCOISE, AND INTERNATIONAL SIGN —PHOTOS OF AND PROVIDED BY DR VICARS OF THE AMERICAN SIGN LANGUAGE UNIVERSITY; AUSTRALIAN SIGN LANGUAGE (IMAGE OF KALEA SIEGERT, KAHSHA JUDGE AND DAMIEN MCCORMACK) —PORT LINCOLN TIMES, 2018.

the need for qualified sign language interpreters.[282] Furthermore, factors such as work fatigue can cause sign language interpreters in the field to either reduce working hours or leave the field entirely.[283]

Sign language interpreting is a complex task, that requires high degrees of language, cognitive and technical skill — in this regard, adequate training opportunities, as well as a quality certification

and accreditation system are required to build a pool of skilled interpreters. Such training and evaluation systems may vary greatly from country to country, though in many countries, no professional accreditation system exists. A global survey conducted by the World Federation of the Deaf and the Swedish National Association of the Deaf found that of 93 countries surveyed, "very few respondents had an established sign language interpreter service, formal

282 Public Radio International, 2017.
283 Bower, K., 2015.

education and training opportunities for interpreters, or an endorsed code of ethics to regulate the practice of interpreters in their country".[284]

As outlined, the potential for sign language to be an effective means of accessibility service is limited in many national contexts by the persisting lack of legal recognition of sign language, lack of adequate training opportunities, low wages, and demanding work environment, and lack of professional certification of sign language interpretation. In this regard, the following case studies will provide comparisons from across the region and beyond, looking at specific examples of how the Republic of Korea, Australia, Canada and Japan effectively invest in addressing these challenges.

Table 6.C. summarizes key aspects of the legal and practical provision of sign language interpretation services of the Republic of Korea, Australia, Canada and Japan.

BOX 20.
INTERNATIONAL SIGN INTERPRETATION

International Sign is "a contact variety of sign language used in a variety of different contexts, particularly at international meetings". It can be considered "as a pidgin form of sign language, which is not as conventionalized or complex as natural sign languages and has a limited lexicon".[285]

The World Federation of the Deaf (WFD) and the World Association of Sign Language Interpreters (WASLI) have established an International Sign Interpreter Accreditation system. The International Sign Interpreter Accreditation system "aims to set, maintain and promote standards in International Sign Interpretation".[286] In addition, this system "strives to create and maintain a lifelong professional development system" that may assist in creating a professionalization of the system of sign language interpreting in terms of "training, testing and accreditation".[287]

TABLE 6.C.
SUMMARY OF STATUS OF SIGN LANGUAGE INTERPRETATION SERVICES, BY COUNTRY

COUNTRY	IS SIGN LANGUAGE A NATIONALLY RECOGNIZED LANGUAGE?	IS ACCREDITATION OR CERTIFICATION REQUIRED FOR SIGN LANGUAGE INTERPRETATION?	WHAT IS THE HOURLY RATE FOR USING SIGN LANGUAGE INTERPRETATION SERVICES?
Republic of Korea	Yes	National accreditation is required	KRW 50,000 (approx. USD 40) to KRW 300,000 (approx. USD 252)
Australia	Yes	National accreditation is required	AUD 40 (approx. USD 28) to AUD 300 (approx. USD 207)
Canada	Yes	It is not a legal requirement to have earned a certificate of interpretation in order to work as an interpreter in Canada, except if working as a sign language interpreter for the Translation Bureau – a federal agency	CAD 50 (approx. USD 38) to CAD 150 (approx. USD 114)
Japan	No	There are three categories of how sign language interpretation is provided. In two categories, it is not a legal requirement to have earned a certificate of interpretation however, for the third category it is.	JPY 1,679 (approx. USD 16) on average.JPY 700 (less than USD 7) to JPY 3700 (USD 34)

SOURCE: INFORMATION PROVIDED TO ESCAP AND WORLD ASSOCIATION OF SIGN LANGUAGE INTERPRETERS, 2015.

284 Haualand, H., 2009. See also Haualand, H. and C. Allen, 2009.
285 World Association of Sign Language Interpreters.
286 World Federation of the Deaf, 2016b.
287 Ibid. See also Napier, J., 2004.

6.4.2 Sign language in the Republic of Korea

The Korean Sign Language Act (2016) was enacted under the authority of the Minister of Culture, Sports and Tourism, with the purpose of improving the right to language and quality of life of deaf and hard-of-hearing persons who use Korean Sign Language as a means of communication.[288] The Korean Sign Language Act (2016) declares that Korean Sign Language is the inherent language of the deaf and has the same status as the Korean national spoken language, and mandates government agencies to make requests for sign language interpreters as a part of proper provision of services for persons with disabilities.[289] More details on the Act are available in Box 16 in section 6.2.

FIGURE 6.K.
SIGN LANGUAGE IN THE REPUBLIC OF KOREA

STATISTICS FROM THE REPUBLIC OF KOREA MINISTRY OF HEALTH AND WELFARE REPORT THAT APPROXIMATELY 255,000 PERSONS IN THE REPUBLIC OF KOREA HAVE A HEARING IMPAIRMENT.

The Republic of Korea has 192 sign-language interpretation centres throughout the country receiving government funding. There are approximately 1,100 nationally certified sign language interpreters in the Republic of Korea.

SOURCE: UNITED NATIONS ESCAP DESIGN. INFORMATION FROM HANKYOREH, 2014.

The Korea Association of the Deaf is a non-profit disability organization under the Ministry of Health and Welfare which issues sign language interpreter certificates and provides sign language interpretation support to persons with disabilities. With funding from the Government of the Republic of Korea it operates 16 regional offices across the country.[290]

In order to receive certification as a sign language interpreter from the Korea Association of the Deaf, an interpreter is required to pass an examination comprising of written and practical assessments. The sign language interpreter certification has been adopted and accredited as a state certificate since 2006.

There are two common forms of employment of sign language interpreters in the Republic of Korea. The first is through direct requests from deaf or hard-of-hearing persons, who can make requests for sign language interpreters through the Korea Sign Language Interpreter Center, which provides interpretation services at no cost. The second is through organizations which provide sign language interpretation services. Real-time telecommunication relay service is another option that can readily be used.

A remaining challenge is that there are no standardized fees for sign language interpreter services, though public agencies in the Republic of Korea make efforts to remunerate sign language interpreters with a fee equivalent to that charged by other language interpreters. An estimated daily rate is between KRW 50,000 (approx. USD 40) to KRW 300,000 (approx. USD 252).[291]

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288 Korean Sign Language (KSL) referred to in this publication is the sign language Hanguk Sueo that is used in the Republic of Korea.
289 Government of the Republic of Korea, Ministry of Culture, Sports and Tourism, Language Policy Division, 2016.
290 Seoul Metropolitan Government and Jeonnam Municipality established the Ordinance which lays the groundwork for budget supports to Sign Language Translation Centers.
291 World Association of Sign Language Interpreters, 2015.

6.4.3 Sign language in Australia

Australian Sign Language, referred to as Auslan, "is an indigenous Australian language, having developed from British and Irish sign languages brought to Australia",[292] and the system of sign language commonly used in the country. Sign language does not have explicit legal recognition in Australia, however, it does have implicit legal recognition by way of declaration.[293] For example, in 1991, the Australian Department of Employment, Education and Training stated that "it is now increasingly recognized that signing deaf people constitute a group like any other non-English-speaking language group in Australia, with a distinct sub-culture recognized by shared history, social life and sense of identity, united and symbolized by fluency in Auslan, the principal means of communication within the Australian deaf community".[294]

The National Accreditation Authority for Translators and Interpreters is a not-for-profit organization jointly owned and funded by federal, state and territory governments of Australia. The National Accreditation Authority for Translators and Interpreters aims to maintain and provide high professional sign language standards nationally. In order to become accredited as a sign language interpreter and translator, candidates must "possess fluency in Auslan and English, have an understanding of the Deaf community and an ability to manage the interpreting process". In addition, a person applying for accreditation will need to have successfully completed a Technical and Further Education (TAFE) or university course accredited by the National Accreditation Authority for Translators and Interpreters, as well as pass the Authority's certification examination.[295]

FIGURE 6.L.
SIGN LANGUAGE IN AUSTRALIA

Australian Sign Language
Auslan

The Australian Census (2016) indicates 10,000 people in Australia use Auslan as their primary language at home

Deaf Australia Inc.

estimates up to 18,000 deaf Australians use Auslan across all age groups

Interpreters and translators in Australia are accredited by the National Accreditation Authority for Translators and Interpreters (NAATI)

How many interpreters?

In 2017, it was reported that 961 Auslan interpreters were accredited. However, only 350 work full-time

Often the Australian government will provide Auslan interpreters free of charge

In what situations?

In many medical, legal and educational settings

With the introduction of the National Disability Insurance Scheme (NDIS) many deaf people can access Auslan interpreters as part of their support plan

For example:

The NDIS may approve an individual support plan of which a portion may be allocated to Auslan interpreting services

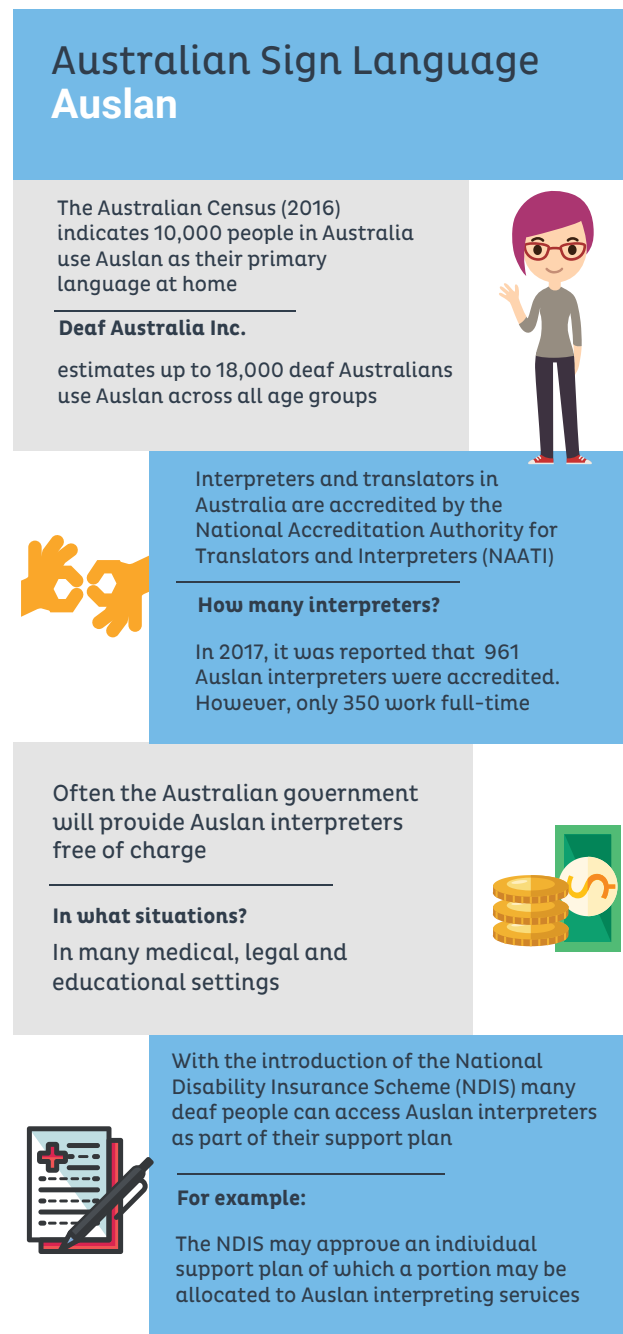SOURCE: UNITED NATIONS ESCAP DESIGN. INFORMATION FROM ID COMMUNITY. SEE ALSO: DEAF AUSTRALIA INC., 2017.

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292 Australian Government, Department of Employment, Education and Training, 1991.
293 De Meulder, M., 2015.
294 Australian Government, Department of Employment, Education and Training, 1991.
295 Australian Sign Language Interpreters Association.

Many Auslan interpreters work on a freelance basis or through agencies, providing services for individuals, professional organizations or for the Australian government in medical, legal or educational settings. The hourly rate for an Auslan interpreter varies from AUD 40 (approx. USD 28) to AUD 300 (approx. USD 207) per hour, which is similar to rates for spoken language interpreters. Generally, sign language users can select individual sign language interpreters, however, this will be dependent upon the situation. For example, in a hospital setting the sign language interpreter may be a member of staff and as such would be instated and remunerated by the hospital, many of which provide free Auslan services to deaf or hard-of-hearing patients. The Australian federal, state and territory governments may assist in covering costs of Auslan interpreters in various situations. In addition, through fund-raising initiatives, Deaf organizations may also assist in covering costs of Auslan interpreters.

In 2016, Auslan was added to the Australian Curriculum, providing deaf and hearing students in primary and secondary schools the opportunity to learn sign language. In 2018, the government of the Australian state of Victoria announced that it would be implementing a fully funded program to teach Auslan for three hours per week in 26 preschools across the state.[296] Offering Auslan as a language of formal study in schools offers students and teachers "opportunities for engagement with the Deaf community and insight into its rich cultural heritage" and "opportunities to develop intercultural capabilities, understanding and respect for others, appreciation of diversity and openness to different perspectives and experiences".[297]

State and territory governments in Australia are required to provide Auslan interpreters on emergency broadcasts, however, they are not required to provide interpreters on general news broadcasts. On particular occasions, such as National Week of Deaf People or International Day of Sign Languages, broadcasting organizations like the Australian Broadcasting Corporation will include Auslan interpreters in primetime news.[298] The Queensland state government has taken this a step further by including an Auslan interpreter in a television program 'Sally and Possum' developed especially for children aged four to eight years of age who are deaf or hard-of-hearing.[299]

6.4.4 Sign language in Canada

The Accessible Canada Act came into force on 11 July 2019. The Act establishes a framework to create a barrier-free Canada through the proactive identification, removal and prevention of accessibility barriers. It applies to the federally regulated private sector, which includes the banking, transportation and telecommunications sectors, as well as the Government of Canada, Crown corporations and Parliament. Section 5.1(2) of the Accessible Canada Act recognizes three sign languages: American Sign Language; *Langue des signes québécoise*; and Indigenous Sign Language; as the primary languages for communications by deaf persons in Canada.[300]

Training of sign language interpreters takes place through Interpreter Education Programs, which fall under the jurisdiction of Canadian provinces and territories. The Canadian Association of Sign Language Interpreters is a national association that represents professional interpreters between American Sign Language and spoken English in Canada and maintains a list of recognized Interpreter Education Programs.[301] The *Association Québécoise des interprètes en langues des signes* represents interpreters between *Langue des signes québécoise* and spoken French. Some of its members are Deaf Interpreters.

296 SBS News, 2018.
297 Australian Curriculum, 2016.
298 TV Tonight, 2018.
299 Queensland Government.
300 Parliament of Canada, 2019.
301 Association of Visual Language Interpreters of Canada (c).

The Canadian Association of Sign Language Interpreters also oversees the Canadian Evaluation System for interpretation, and members of the association who successfully complete the Canadian Evaluation System are awarded a Certificate of Interpretation.[302] However, it is not a legal requirement to have earned a Certificate of Interpretation in order to work as an interpreter in Canada. The *Association Québécoise des interprètes en langues des signes* has developed eligibility requirements for *Langue des signes québécoise*, but does not have a screening or certification process per se.[303] However, the Translation Bureau – a federal agency – requires that interpreters – both American Sign Language and *Langue des signes québécoise* – to, among other things, meet certain eligibility criteria and pass its accreditation exam before being permitted to offer interpretation services through the Translation Bureau.[304]

The individual or organization booking the interpretation service is often responsible for the cost. Some interpretation agencies receive funding from provincial governments to cover the costs of interpreting services in certain settings, such as for students in all levels of schooling. This is often coordinated by school boards, colleges and universities. As well, employees of the federal government receive work-related interpretation services at no cost.

It is also notable that there are instances where companies will pay for interpretation services for their customers. For example, one telecommunications service provider, Rogers, states that customers are able to bring a sign language interpreter to retail stores and bill the company directly for the services of the interpreter. [305]

Sign language interpretation service rates vary by province, and are largely determined by the cost of living, and in some instances, also reflects the level of experience of the interpreter. Rates for community and educational interpreting as reported by independent interpreters ranges from CAD 50 (approx. USD 38) to CAD 150 (approx. USD 114) dollars per hour, with a two to three hour minimum requirement.[306] With regards

FIGURE 6.M.
SIGN LANGUAGE IN CANADA

SIGN LANGUAGE IN CANADA

According to Statistics Canada, there are 1,334,520 or 5 per cent of Canadians aged 15 years and over who report having a hearing disability. Deaf sign language interpreters are used in a variety of settings, such as in medical and palliative care settings, in court proceedings and legal settings, in theatre, as well as at conferences and during international events when multiple signed languages are being used.

SOURCE: UNITED NATIONS ESCAP DESIGN. INFORMATION FROM STATISTICS CANADA, 2018

302 Association of Visual Language Interpreters of Canada (a). See also Association of Visual Language Interpreters of Canada (b).
303 Association Québécoise des Interprètes en Langues des Signes.
304 Government of Canada.
305 Rogers.
306 Based on information provided by a Senior Interpreter with the Translation Bureau of Public Services and Procurement Canada.

to Conference-level Interpreters who work for the Government of Canada through the Translation Bureau, fees are comparable to official and foreign spoken language interpretation fees.

The availability of professional sign language interpreters has historically been an issue. In fact, the availability of sign language interpreters impacted the initial launch of video relay service (VRS) in Canada. When it first launched in September 2016, the service could only offer 76 hours of services each week despite being available 7 days a week, due to an insufficient number of sign language interpreters available. The following year, once sign language interpreter capacity improved, VRS was offered as a 24-hour service, 7 days a week. It provides services in American Sign Language and *Langue des signes québécoise* and allows registered users to make emergency calls. When the Canadian Radio-television and Telecommunications Commission established its framework for VRS in Canada, it designated VRS as a basic telecommunications service and designed the system "to build service capacity within Canada and to fit the Canadian context".[307]

6.4.5 Sign language in Japan

In Japan, there are approximately 397,000 persons who have some hearing disabilities, and fewer than 30,000 of whom are estimated to use sign language.[308] Sign language does not have explicit legal recognition in Japan, however, many local public entities have adopted ordinances on sign language in their jurisdiction. According to the Japan Federation of the Deaf, there are 280 local public entities located in 26 prefectures; seven wards; 205 cities; 41 towns; and one village; that have adopted such an ordinance.[309]

Sign language interpreters in Japan are divided into three categories by the Ministry of Health, Labour and Welfare:[310]

1   Sign language volunteer

2   Sign language interpreter

3   Certified sign language interpreter

Sign language volunteer and interpreter positions were established in the 1970s to support deaf and hard-of-hearing persons at the community level.[311] These positions were then updated to meet the requirements of the Act on Independence Support for Persons with Disabilities (2006) and its successor, the Comprehensive Support Law for Persons with Disabilities (2012), thereby requiring sign language interpretation services at local public entities.[312]

Local public entities are mandated to provide training courses for volunteers and interpreters. However, while intelligibility of content is taken into consideration, there is no linguistically focused requirement on the qualification process for these categories, and thus it is left to each entity how such qualification is to be undertaken. Most local public entities, in practice, adopt the National Sign Language Interpreter Examination prepared by the National Sign Language Training Center,[313] a non-profit organization, as the qualifying requirement. Taking the National Sign Language Interpreter Examination requires two prerequisite steps: first, completion of a sign language volunteer training course conducted by the municipality and secondly, completion of a sign language interpreter training course or demonstration of an equivalent level of sign language competence. Successful candidates are "persons who are eligible to

307   Government of Canada, 2014.
308   Government of Japan, Ministry of Welfare and Labour, 2019.
309   Japanese Federation of the Deaf, 2019.
310   Government of Japan, Ministry of Health, Labour and Welfare.
311   Ibid.
312   National Sign Language Training Center, Japan.
313   Ibid.

become sign language interpreters" at prefecture level, which may require further examination depending on prefecture requirements.

Further to being a sign language volunteer or interpreter, the designated programme of 'certified sign language interpreter' was created by the Ministry of Health, Labour and Welfare Ministerial Ordinance No. 96 (2000), which stipulates the assessment and certification requirements of sign language interpretation skills.[314] Qualifications can be obtained by passing the Sign Language Interpretation Skills Certification Examination conducted by the Deaf Information Culture Center, which works as a proxy for the Ministry of Health, Labour and Welfare. As of February 2019, there were 3,695 certified sign language interpreters, of which 436 (11.8 per cent) are male and 3,259 (88.2 per cent) are female.[315] The examination is rigorous and competitive, as demonstrated by the success rate of only 9.8 per cent in the December 2018 sitting, with the overall average success rate of applicants since its first examination sitting at 14.6 per cent.[316] On average, the process of passing the examination and obtaining certification takes close to 13 years.[317]

The Japanese Association of Sign Language Interpreters is the organization of certified sign language interpreters. It was established in 1992, three years after the initial Sign Language Interpreting Skill Certifying Examination was first administered in 1989. The aim of the Japanese Association of Sign Language Interpreters is continuous contribution to the sign language interpreting system through the enhancement of sign language interpreters' performance and the improvement of specialist skills.[318]

As part of requirements mandated by the Comprehensive Support Law for Persons with Disabilities (2012), the cost of dispatching a sign language interpreter, for example, to hospitals, when requested by persons with disabilities, is partly covered by local public entities and partly by national government. For other services, it is usually the case that the individual or organization requiring the sign language interpretation service is responsible for paying for the service.

According to a study conducted in 2009, the average hourly wage for a sign language interpreter was JPY 1,679.7 (approx. USD 15.60), and the average monthly salary was JPY 166,783[319] (approx. USD 1550). However, the actual situation may vary greatly, with the low end of the salary spectrum at less than JPY 700 (approx. USD 6.50), with the high end sitting at JPY 3,700 (approx. USD 34) hourly.[320]

Currently, there is no public telecommunications relay service in Japan, however, some private companies provide certain functions of telecommunications relay service.[321] These companies also provide remote video interpretation, as well as sign language video receptionist services for third party companies. The Nippon Foundation has hosted a platform for telecommunications relay service as its model project since 2013.[322] Prompted partly by this, the Ministry of Internal Affairs and Communications, together with the Ministry of Health, Labour and Welfare, organized a working group for the discussion of telecommunications relay service in January 2019,[323] leading to the discussion of creating a national relay service, including VRS.

314 Government of Japan, Ministry of Health, Labour and Welfare, 2000.
315 Government of Japan, Ministry of Internal Affairs and Communications, 2019.
316 Ibid.
317 Ibid.
318 Japanese Association of Sign Language Interpreters.
319 Government of Japan, Ministry of Internal Affairs and Communications (2019).
320 Ibid.
321 For companies providing interpreter services in Japan see Mirairo; Plusvoice; ShuR.
322 Government of Japan, Ministry of Internal Affairs and Communications, 2019.
323 Ibid.

Chapter 7

Good practices of investment in accessibility in programming and projects

Building upon the previous chapter's exploration of examples of legal mandates and enforcement of accessibility in different national contexts, this chapter looks at how investments in establishing enabling policy environments can be leveraged so that accessibility provision can be effectively put into practice by a variety of stakeholders across all dimensions of accessibility in programming and projects. This encompasses all endeavours undertaken by organizations and communities in cooperation with other stakeholders to enhance accessibility in their neighbourhood, community, city, region or even country.

As previously discussed, the CRPD's Article 9 requires States Parties to make buildings, roads, transportation and other indoor and outdoor facilities, including schools, housing, medical facilities and workplaces along with information, communications and other services including electronic and emergency services accessible to persons with disabilities.[324] Across the region many governments, development cooperation agencies, advocacy organizations, organizations of and for persons with disabilities, and private sector and other civil society organizations are undertaking practices that promote Universal Design and implement accessible solutions in line with Article 9 to address everyday barriers that persons with disabilities face.

The practices presented in this chapter are organized based on the type of outcomes they seek to provide ensuring accessibility of built environments and transport; building capacity of policymakers and service providers; and promoting accessibility through Universal Design in tourism. The examples are not necessarily 'best' practices, but rather highlight interesting approaches that may provide helpful for stakeholders to learn from, connect with and emulate such practices across the region.

7.1 ENHANCING ACCESSIBILITY OF BUILT ENVIRONMENTS AND TRANSPORTATION

As outlined in Chapter 2 and reflected throughout this report, built environments and transport are key areas that impact the access to and mobility around and within spaces. Ensuring accessibility of these is a precursor to making everyday life easier and richer for all members of society.

7.1.1 Making schools accessible and inclusive in less resourceful settings

NAME OF ORGANIZATION:	
The Liliane Foundation Inclusion Network (LINC-Asia)	
KEY WORDS:	
Accessible schools; inclusive education; access audits.	
RELEVANT SDGS:	
Goal 4: Ensuring inclusive and equitable quality education for all persons with disabilities.	
FURTHER INFORMATION:	
www.linc-network.org	

It is estimated that in developing countries, 50 per cent of all children with disabilities do not go to school, while in some rural areas this runs as high as 90 per cent.[325] In particular, children with moderate and severe disabilities find it difficult to access school and to participate in learning and other school activities.[326]

By recognizing accessibility as a minimum standard, national laws in the countries of Bangladesh, India, the Philippines and Viet Nam have moved beyond a narrow interpretation of least restrictive environments[327] to the concepts of inclusive education and working in the community. In developing countries, there is a need to

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324 United Nations General Assembly, 2006. A/RES/61/106. Article 9.
325 Data provided by Liliane Foundation Inclusion Network (LINC-Asia Countries' Access Audit).
326 Ibid.
327 A least restrictive environment refers to students with disabilities receiving their education with non-disabled peers.

FIGURE 7.A.
THE GANDHI SCHOOL, INDIA, WITH AND WITHOUT ACCESSIBLE ENTRANCE

SOURCE: LILIANE FOUNDATION INCLUSION NETWORK (LINC-ASIA).

undertake structural modifications to make schools accessible, for example, widening school entrances and installing access ramps. Furthermore, the gaps between policies and implementation are wide and need to be addressed. Local governance should also become a part of this initiative so as there is an alignment to existing policies at the local, national and regional levels.

The Liliane Foundation Inclusion Network (LINC) is an international learning and collaboration network for members that are striving for inclusion of children and youth with disabilities in society.[328] There are three sub Networks of LINC: LINC-Asia, LINC-Africa and LINC-Latin America. There are six member organizations in LINC-Asia namely:

- Catholic Health Association of India, India;

- Disabled Rehabilitation and Research Association, Bangladesh;

- Jan Vikas Samiti, India;

- Netherlands Leprosy Relief Indonesia regional office, Indonesia;

- Netherlands Leprosy Relief Mekong regional office, Viet Nam; and

- NORFIL Foundation, Philippines.[329]

To date, LINC-Asia has carried out access audits in 50 schools of its member countries to create a barrier-free environment by adopting the Universal Design principles for mainstream educational systems.

328 Ibid.
329 Ibid.

FIGURE 7.B.
THE GANDHI SCHOOL, INDIA, WITH AN ACCESSIBLE CLASSROOM ENTRANCE INSTALLED

SOURCE: LILIANE FOUNDATION INCLUSION NETWORK (LINC-ASIA).

Findings of these access audits have been shared with local governments along with requests for renovation/building of accessible features in these schools. Through these access audits LINC-Asia has been able to successfully bring about changes in schools by making the school accessible, such as widening entrances and installing ramps in place of stairs. This has also been made possible through the financial support of the Liliane Foundation in the Access Audits project and various platforms such as Disabled People's Organizations (DPOs), School Management Committees as well as other community-based systems in funding the school modifications.

There are, however, several challenges that LINC-Asia faces in implementing accessible features in schools and creating inclusive education, they are as follows:

- Creating disability inclusive legislation and policies in alignment with the Universal Design of infrastructure;

- Non-implementation of legislation and policies;

- Insufficient budget for infrastructural adaptations in governmental/public schools; and

- Physical accessibility of schools remains a challenge for children with disabilities.

LINC-Asia advocates for national and local governments in Bangladesh, India, the Philippines and Viet Nam to mobilize funds needed for creating qualitative and inclusive education. Furthermore, LINC-Asia will continue to support children, teachers and communities to raise their voice and stand up for accessibility.

7.1.2 Ensuring accessible transportation through mainstreaming disability in bilateral development assistance

NAME OF ORGANIZATION:
Japan International Cooperation Agency (JICA)

KEY WORDS:
ACCESSIBLE TRANSPORTATION; UNIVERSAL DESIGN; accessibility.

RELEVANT SDGS:
Goal 11: Making cities and human settlements inclusive and sustainable for persons with disabilities.

FURTHER INFORMATION:
http://open_jicareport.jica.go.jp/pdf/12307021_01.pdf

Ratification of the CRPD by the Government of Japan in 2016 prompted the Japan International Cooperation Agency (JICA) to enhance disability-mainstreaming in built environment development projects. A good example of such initiative is the Colombo Light Rail Transit System, the first urban electrified railway in Sri Lanka.[330]

In 2016, the Japan International Cooperation Agency first conducted a desk review, field research and focused interviews of wheelchair users and persons with visual impairments who were using public transport in Sri Lanka. This exercise identified focus areas for which to further develop technical standards on accessibility, for instance lifts, ticket gates, available ramps, and guiding Braille blocks and tactile paths, which either were lacking or did not fully meet the requirements of users with disabilities.

Following this, a workshop was organized in cooperation with the Ministry of Megalopolis and Western Development, the Ministry of Primary Industries and Social Empowerment and organizations of persons with disabilities in Sri Lanka, as well as a consultant team and external Japanese accessibility

FIGURE 7.C.

GOVERNMENT OFFICIALS AND PERSONS WITH DIVERSE DISABILITIES CHECKING HEIGHT OF HANDRAILS AT A WORKSHOP

SOURCE: JAPAN INTERNATIONAL COOPERATION AGENCY.

FIGURE 7.D.

CHECKING THE WIDTH AND HEIGHT OF A TICKETING GATE FOR PERSONS WITH VISUAL IMPAIRMENTS AT A WORKSHOP

SOURCE: JAPAN INTERNATIONAL COOPERATION AGENCY.

experts. The workshop agreed on implementing specific aspects of the forthcoming development of the Light Rail Transit including: installation of an accessible ticket gate; utilization of colour contrasts across facilities for persons with visual impairments; installation of an accessible emergency button for

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[330] Japan International Cooperation Agency, 2018.

assistance; guiding blocks for persons with visual impairments; ticket vending machines utilizing touch screen and audio outputs; minimizing the gap between train vehicles and platforms; ensuring connectivity between bus stations and train stations; building capacities of staff working at stations to support passengers with disabilities; and promoting public awareness of accessibility through Universal Design.

Building on this successful blueprint of an accessible Light Rail Transit system, in 2019, the Japan International Cooperation Agency also started implementation to realize an "all inclusive" Light Rail Transit system, while also taking into consideration the gender dimension of public transport. The Light Rail Transit system is expected to be completed by 2024.

7.1.3 Mobile, lightweight, portable ramps to facilitate access for all

NAME OF ORGANIZATION:
Make Level Paths

KEY WORDS:
Mobile light-weight ramp; portable ramp; accessible paths; accessible roads.

RELEVANT SDGS:
Goal 11: Making cities and human settlements inclusive and sustainable for persons with disabilities.

FURTHER INFORMATION:
http://itempage3.auction.co.kr/DetailView.aspx?ItemNo=B707718514&frm3=V2

In 2014, a survey on the status of persons with disabilities found that a "lack of convenience facilities" for persons with disabilities showed the highest response (47 per cent) among the reasons of discomfort experienced by persons with disabilities when working outside of the home.[331] When travelling outside of the home, persons with disabilities experience restrictions accessing many facilities such as restaurants, cafes, commercial and public facilities. Wheelchair users in particular, find it difficult to navigate many commercial facilities in the Republic of Korea due to a variety of factors such as:

- Legislation only requiring shops larger than 297.5 square metres to install ramps;

- Costliness of off-the-shelf ramps;

- Public complaints that the installation of fixed ramps will cause inconvenience for pedestrians in narrow areas;

- Difficult installation of off-the-shelf ramps which use heavy materials such as steel plates, plywood, and rubber; and

- Currently, there is a mobile aluminium ramp available, however it is heavy, and because the slope is not firmly adhered to the road surface, there is a risk of the slope leaving its seat thereby causing risk to users.

As a solution to these issues, "Make Level Paths" have devised and manufactured mobile light-weight ramps and portable ramps. The benefits are as follows:

- Will not disrupt traffic on narrow roads;

- Ultra-light for easy installation;

- Easily folded and moved when not required;

- Customized and tailored to fit the requirements of the shop; and

- Economical with low prices.

Mobile ramps have the advantage of using lightweight, flexible, and economical materials. The mobile ramp slope can overcome stairs or a kerb, with an adequate proportion so as not to interfere with narrow roads compared to conventional installed slopes. The portable ramp consists of a total height of 15cm, and

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331 Korea Institute for Health and Social Affairs, 2017.

can be separated into four levels (4cm, 8cm, 12cm, 15cm) so that it can be used in a variety of situations to suit the appropriate height.

The mobile ramps costs approximately USD 200 and can be purchased online.[332] Following delivery of the mobile ramp, continuous follow-up inspections and management of any issues or damage to the ramp is carried out. After the installation of ramps, business owners can place a notice sticker at the entrance so that wheelchair users are aware of the availability.

FIGURE 7.E.
MOBILE LIGHT-WEIGHT RAMP

SOURCE: MAKE LEVEL PATHS.

Both the mobile light-weight ramp and the portable ramps have had much success in the Republic of Korea, winning a public design award and installing in a variety of organizations such as in:

- The Wonju People with Disability Self-Reliance Center: 90 installations;

- Pyeongchang Winter Paralympics Committee and Volunteer Hoster: four installations;

- Sokcho Nodeul-yahag People with Disability Conference: 10 installations;

- The Ansan Sangrok Rehabilitation Center for People with Disability: five installations;

- The NODEUL Popular School for People with Disability: four installations; and

- Cheongunhyoja-dong Aleumdaun-gil in Seoul: 10 installations.

In May 2019, "Make Level Paths" also undertook a project called "Making Beautiful Roads". The aim of the project was to install mobile ramps to facilitate access for wheelchairs and strollers through the entrances of Cheongunhyoja-dong area stores in Seoul. As part of the project, stickers were attached to stores where ramps were installed, and shops were provided fundraising bins to secure funding for additional ramp installations. A survey is planned in order to measure progress of the project, which aims to raise awareness of the need for portable access ramps and to improve the mobility rights of persons with disabilities who use wheelchairs.

7.1.4 Access audits undertaken in the Pacific to assist in creating accessible infrastructure

NAME OF ORGANIZATION:
Pacific Disability Forum

KEY WORDS:
Collaborating with and strengthening disabled persons' organizations; accessible transport; disability inclusive disaster risk reduction.

RELEVANT SDGS:
Goal 11: Making cities and human settlements inclusive and sustainable for persons with disabilities.

FURTHER INFORMATION:
http://www.pacificdisability.org

Under the CRPD, States Parties must develop comprehensive standards including accessibility requirements in public procurement, train all relevant professionals, and put in place enforcement mechanisms to ensure these standards are met.

They also have to ensure that any new buildings, transportation systems, websites and public information materials are accessible from the start. In doing so, a key step is to involve persons with disabilities and Disabled Peoples' Organizations (DPOs) to consider the accessibility requirements of diverse groups of persons with disabilities. Efforts made for some groups can actually inadvertently create barriers for other groups. It is critical to note that these obligations also apply in all international cooperation supported projects and programmes.

Pacific Disability Forum is a regional organization of and for persons with disabilities, representing their voice for inclusion in compliance with the CRPD. Pacific Disability Forum has representation in 20 Pacific Island countries and territories with membership across the Pacific. The Pacific Island Forum Secretariat is an inter-governmental organization of the Pacific that has worked with Pacific Disability Forum and relevant stakeholders and partners to develop a set of accessibility blueprints for the Pacific. The SDG-CRPD Regional Report[333] has highlighted that no Pacific Island country has a basic set of accessibility standards and corresponding enforcement mechanisms. Through a technical multi-stakeholder meeting organized by Pacific Disability Forum, a consensus was reached for a need to develop a Pacific 'blueprint' for comprehensive accessibility standards aligned with Goal 3 of the Pacific Framework on the Rights of Persons with Disabilities, as evidence has shown that Pacific countries lack a comprehensive set of standards for the built environment (road, airport, jetties, buildings, parks, etc.), transport (land, water and air) and ICT, as well as enforcement mechanisms. This work is due to be completed by the end of 2020. The blueprint is expected to include:

- A comprehensive set of accessibility standards; and

- Guidelines to support national government efforts in setting effective and legal and regulatory framework for enforcement, including related public procurement.

An access audit from Tuvalu on the Funafuti airport undertaken by a DPO is an example of ways in achieving accessible infrastructure, where in this case, DPOs were consulted prior to the airport's renovation.

Funafuti International Airport is used by many people to enter and depart Tuvalu by plane and is the only airport in the country. In general, sign language support is not readily available nor is Braille or easy-read information in services and facilities. While the Pacific Region Infrastructure Facility[334] audit conducted in 2015 highlighted a severe lack of accessibility, the audit conducted in August 2018 by DPOs showed that significant improvements have taken place since. There are now accessible toilets as well as a lower counter for wheelchair users. The terminal is on ground level and there is signage to support wayfinding. There is also an accessible ramp for access to aircraft. There are still areas for improvement such as sign language training for staff as well as installing wider metal detectors which currently are too narrow for wheelchair users to pass through.

Furthermore, the Pacific Disability Forum through its newly established Preparedness for Emergency Response Unit will promote the 'Pacific Disability Inclusive Preparedness for Response Strategy' as its vision for achieving disability inclusion within Preparedness for Response efforts throughout the Pacific. The Strategy is aligned with the ultimate goal of the Pacific Disability Forum Strategic Plan 2016 – 2020: "An Inclusive Pacific society where all human rights of all persons with disabilities are realised."

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333 Pacific Disability Forum, 2018.
334 Pacific Region Infrastructure Development, 2008.

Pacific Disability Forum aims to realize this through supporting and influencing government, mainstream actors, donors, communities and faith-based organizations to make their Preparedness for Response processes, policies, practices, services, coordination mechanisms and evidence more inclusive for persons with disabilities. Pacific Disability Forum has identified six change areas that it wants to influence to become more disability inclusive, outlined in Box 21.

7.1.5 Equitable fire prevention and protection measures

NAME OF ORGANIZATION:
Sustainable Design International

KEY WORDS:
Fire safety for all; fire protection; fire prevention; equitable fire evacuation.

RELEVANT SDGS:
Goal 10: Reducing inequality for persons with disabilities; Goal 11: Making cities and human settlements inclusive and sustainable for persons with disabilities.

FURTHER INFORMATION:
https://www.sustainable-design.ie

In many countries, statistics reveal that persons with disabilities, older persons, children and pregnant women are most at risk of fatality in fire situations.[335] Fire prevention, situations of risk and humanitarian emergencies such as earthquakes, landslides, or floods go beyond the responsibility of first responders. Consideration needs to be given to ethical building design, fire detection and emergency warning systems.

Sustainable Design International (SDI)[336] is an international organization that travels across the globe presenting at international conferences and seminars, offer consultancy services and conduct workshops in order to share their technical knowledge and

BOX 21.
PACIFIC DISABILITY FORUM'S SIX AREAS OF REQUIRED CHANGE TO FACILITATE DISABILITY INCLUSION

Change area 1: Disabled People's Organizations (DPOs) are well resourced, coordinated and mobilized to lead and oversee the success of the Pacific Disability Inclusive Preparedness for Response Strategy at regional and national levels, with technical support provided.

Change area 2: Government-led preparedness for response processes (including legislation, policies and coordination mechanisms) are fully inclusive and able to meet the needs of persons with disabilities.

Change area 3: Mainstream preparedness for response actors have policies and practices in place to ensure full inclusion of persons with disabilities.

Change area 4: All services and processes operating as part of preparedness for response are inclusive of and accessible to persons with disabilities.

Change area 5: Preparedness for response processes for individuals, households, communities and churches and faith-based organizations are inclusive of persons with disabilities.

Change area 6: Disability-inclusive approaches to disaster preparedness for response are based on evidence drawn from inclusive research and monitoring, evaluation and learning processes.

SOURCE: PACIFIC DISABILITY FORUM, 2018.

expertise on all aspects of Sustainable Development, and Sustainable Design. In particular, SDI focuses on issues surrounding fire safety for all and recognizes that fire prevention and fire protection measures are

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335 Storesund, K., 2017.
336 Sustainable Design International.

particularly important across the Asia-Pacific region as our cities are densely constructed, providing for a diverse resident population.

As stated in the CRPD and the Universal Declaration of Human Rights, in all areas of life every person is equal before the law and is entitled, without any discrimination, to equal protection of the law.[337] When they are in a building, for example, all of the occupants and users have an equal right to feel 'fire safe' as required by law. This must also include building users at high risk in case of emergency, such as persons with disabilities.

Many countries have no legal provisions to protect high-risk populations in fire situations, while a small group of countries offer only token and often inadequate protection. An ethical, technical response is urgently required, therefore, at the regional level in Asia-Pacific.[338]

Fire safety for all is the inclusion of at-risk building users, including persons with disabilities, young children, older persons, persons with health conditions, and women in late-stage pregnancy. Fire safety for all is a critical component of accessibility and usability for all persons and is a key factor in facilitating full social participation and inclusion for all. This design objective is achieved by equitable fire prevention and fire protection measures, essential occupant/user practices, independent fire evacuation procedures, proactive management and, as a last but necessary resort, reliable assisted evacuation and/or firefighter rescue.

Management systems and fire protection measures in buildings are never completely reliable. Persons with disabilities must, therefore, be trained to be self-aware in situations of risk, particularly in fire emergencies, and actively encouraged to develop the skills of self-protection and adaptive self-evacuation. During the

first critical 10 to 15 minutes in a fire emergency —the time between when a fire is first accurately detected, warnings are transmitted, and firefighters arrive at the building — many persons with disabilities are capable of independent evacuation using reliably functioning lift fire evacuation assemblies. The enormous benefit for those individuals who are capable of negotiating horizontal and vertical circulation routes by themselves is being able to evacuate a building and reach a 'place of safety' in the company of other building occupants/ users. They remain independent, in control of their own evacuation, and able to leave without waiting for someone else to rescue them or render assistance.

Fire safety for all must be carefully considered at the initial stages of building design. To be effective, however, the following essential passive and active fire protection measures must be incorporated in buildings:

• A smart 'whole building' fire emergency detection and multi-format warning system is an essential fire safety feature in all building types, new and existing. Certain building occupants/users need much more time to react, and evacuate, than other users during a fire incident;

• All building occupants/users must be provided with alternative, intuitive and obvious evacuation routes away from a fire outbreak in a building. A significant number of building users will never pass through the smoke generated by fire;

• All fire evacuation routes in a building must be accessible for building occupants/users, and be sufficiently wide to accommodate contraflow, i.e. building users evacuating while firefighters enter the building at the same time. Under no circumstances must 'stay put' policies be normalized or practiced;

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337   See United Nations General Assembly, 2006, A/RES/61/106; and United Nations General Assembly, 1948, resolution 217, Article 7.
338   See Dublin Code of Ethics, 2016. Note that a regional strategy is already in the process of being developed for Asia–Pacific.

- Phased horizontal evacuation must be facilitated, in design, by providing 'buffer zones' around fire compartments, and adjacent 'places of relative safety';

- All lifts in a building must be capable of being used during a fire emergency. This is already the case, in most countries, with firefighter lifts;

- Fire protected evacuation staircases must be sufficiently wide (1.5m between leading handrail edges) to facilitate contraflow and the assisted evacuation of manual wheelchair users; they must open into fire protected lift lobbies at every storey level, and open directly to the exterior at ground level;

- Sufficiently large, fire protected 'areas of rescue assistance', where people can safely wait during a fire emergency, must adjoin each evacuation staircase on every floor/storey above ground level. When calculating space provision for evacuation and waiting areas in buildings, the minimum reasonable provision for persons with disabilities must be 10 per cent of the design building occupant/user population; for people with activity limitations,[339] minimum space provision must rise to 15 per cent of the design occupant/user population;

- Such is the universal level of fire compartment unreliability, that lift/elevator lobbies and 'areas of rescue assistance' must be fitted with an active fire suppression system, i.e. water mist, an environmentally clean suppression medium which is person-friendly and will not greatly interfere with visibility;

- In tall, super-tall and mega-tall buildings, every 20th storey must be an accessible 'floor of temporary refuge' and the roofs of those buildings must be capable of being used for aerial evacuation; and

- In health-care facilities, for example, hospitals, the fire safety strategy must always be to 'protect in place'. Patient evacuation is highly hazardous, and unacceptable.

7.1.6 Accessibility in Rohingya refugee camps in Cox's Bazaar, Bangladesh

NAME OF ORGANIZATION:
Centre for Disability in Development (CDD)

KEY WORDS:
Refugees; refugee camp accessibility; disability inclusion.

RELEVANT SDGS:
Goal 10: Reducing inequality for persons with disabilities; Goal 11: Making cities and human settlements inclusive and sustainable for persons with disabilities.

FURTHER INFORMATION:
www.cdd.org.bd

Bangladesh hosts the largest refugee camp in the world for Rohingya refugees in Ukhiya, Cox's Bazaar. As of 15 September 2019, a total of 913,981 Rohingya people were living in Bangladesh.[340] Furthermore, 17 per cent of the families experience temporary functional limitations owing to injury, predominantly caused by gunshots, shrapnel, fire, or landmines.[341]

The camps are often inaccessible in many ways for persons with physical, visual, and intellectual disabilities, and deaf and hard-of hearing persons,[342] which limits their access to services and facilities including toilets, water sources, and reaching health and distribution points. The topography of the camp is a big barrier as the area is mostly hilly. In addition to the paths being uneven, slippery and muddy, there are small bamboo bridges which are not constructed

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339 People with activity limitations: those people, of all ages, who are unable to perform, independently and without assistance, basic human activities or tasks — because of a health condition or physical / mental / cognitive / psychological impairment of a permanent or temporary nature. See WHO, 2001.
340 United Nations High Commissioner for Refugees (UNHCR), 2019.
341 United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA), 2017.
342 In December 2017, a rapid assessment was conducted by the Centre for Disability in Development and Arbeiter-Samariter-Bund (ASB) on the situation of people with disabilities and functional limitations in the refugee camp.

parallel to the ground level and most do not have connected pathways. Furthermore, most of the stairs have a narrow width and are made without handrails. When it rains, there are brief periods of flash flooding submerging the pathways, and there is a risk of landslide.

Houses are made for a temporary basis and most of them are small and low height, having narrow access paths and insufficient space which is not suitable to build ramps or stairs. Existing tube wells and latrines especially in uphill areas are made without considering any Universal Design or minimum standard of accessibility. In addition, most persons with disabilities do not have access to required and essential devices for example, eyeglasses, hearing aids, prosthetics and orthotics, or metal and wood assistive devices, thus, severely impacting upon their mobility.

Furthermore, it is difficult to find expertise on the ground on accessibility. There are only a few disability-specific agencies working on advocacy and extending technical support to mainstream humanitarian organizations. Moreover, mainstream humanitarian organizations often have limited awareness and understanding of accessibility, and there is no common guidance on Universal Design and reasonable accommodation and technical standards. Often, the staff who are trained on disability inclusion and accessibility leave after a few months, which severely hampers the efforts to promote inclusion.

Against this backdrop, the Centre for Disability in Development[343] started its operations on Inclusive Humanitarian Actions in the Rohingya and Host Community in December 2017 with the support of the international development organization CBM.

The Centre has made great progress in enhancing accessibility of the built environment. The service centre at one of the camps was made accessible by

FIGURE 7.F.
UNEVEN GROUND IN REFUGEE CAMP

SOURCE: CENTRE FOR DISABILITY IN DEVELOPMENT.

making the approach pathway flat, installation of handrails, creating separate lines for persons with disabilities at registration desks, making doors with adequate space, using colour contrast, making toilet facilities accessible, and making information accessible with graphics and easy-read language. The Centre for Disability in Development has conducted accessibility audits of over 100 learning centres and child friendly spaces of different organizations and provides on-site

343   Established in 1996, the Centre for Disability in Development (CDD) is working in the field of disability–inclusive development in Bangladesh. CDD is a strategic and funding partner organization of CBM since 1997. For further information see Centre for Disability in Development.

FIGURE 7.G.
TOILET FACILITIES MADE ACCESSIBLE

SOURCE: CENTRE FOR DISABILITY IN DEVELOPMENT.

accessibility assessment and recommendations for the existing water, sanitation and hygiene (WASH) facilities provided by mainstream humanitarian organizations. The Centre also strengthens capacity of mainstream humanitarian actors (international and local NGOs, UN agencies) to consider accessibility issues within their planning and activity implementation on sectors like WASH, protection, education, site management, gender-based violence, and others.

The Centre for Disability in Development has formed home-based rehabilitation teams who visit persons with disabilities and provide services. To improve accessibility within the home and the surrounding areas, modification is done. Furthermore, the Centre also supports movement costs of persons with disabilities (slings or chairs used to carry sick persons by local porters) to access health and rehabilitation services.

The Centre for Disability in Development has also conducted key informant interviews and focus group discussions with persons with disabilities in the camps to understand and seek their recommendations on disability inclusion, where the issues of accessibility were discussed.

FIGURE 7.H.
BUS TRANSPORT MADE ACCESSIBLE

SOURCE: CENTRE FOR DISABILITY IN DEVELOPMENT.

As a result of the interventions, a greater number of persons with disabilities are accessing services. As well, staff members of mainstream humanitarian agencies are now more informed and conscious about disability inclusion and accessibility. They have also installed accessibility features in WASH facilities, and the food distribution process is being addressed to be made inclusive. A few organizations are also adding columns to their monitoring forms to collect information on persons with disabilities.

7.1.7 Subregional cooperation on gender-responsive accessibility promotion

NAME OF ORGANIZATION:
Central Asian Network of Women with Disabilities

KEY WORDS:
Women with disabilities; subregional coordination and partnerships.

RELEVANT SDGS:
Goal 5: Gender quality; Goal 10: Reducing inequality for persons with disabilities; Goal 11: Making cities and human settlements inclusive and sustainable for persons with disabilities; Goal 17: Partnerships.

FURTHER INFORMATION:
http://ravenstvo.kg/%D1%81%D0%B5%D1%82%D1%8C/?lang=en

The Central Asian Network of Women with Disabilities is a not-for-profit organization based in Kyrgyzstan representing 16 women with disabilities organizations from Kazakhstan, Kyrgyzstan, Uzbekistan and Tajikistan.[344] The aim of the organization is to eliminate negative social stereotypes and to strengthen the rights of women and girls with disabilities in the region. The organization achieves these goals through various practices such as disability awareness campaigns and monitoring laws and regulations regarding accessibility for persons with disabilities.

In March 2019, Kyrgyzstan ratified the Convention on the Rights of Persons with Disabilities (2006). In addition, its Constitution in Article 16 prohibits discrimination on the basis of disability.[345] Furthermore, there are special measures in place to assist in creating equality for persons with disabilities in Kyrgyzstan. For example, there are a number of regulatory legal acts and the predominant law "On Rights and Guarantees of Persons with Disabilities 2008", which regulates policy in the field of persons with disabilities.

Of particular significance, is the introduction of the regulatory document 'Construction Norms of the Kyrgyz Republic, 2018'. The construction standards introduce, for the first time in Kyrgyzstan, thoroughly prescribed design, planning and development of populated areas, and the development of projects for the construction of new and alteration of existing buildings and structures in order to create a well-developed living environment, taking into account the needs of persons with disabilities.

In addition to the monitoring of such laws and regulations the Central Asian Network of Women with Disabilities also undertake regular public monitoring of implementation of disability services and facilities.

FIGURE 7.I.
A WHEELCHAIR USER REQUIRING ASSISTANCE ON A RAMP THAT IS NOT USER-FRIENDLY

SOURCE: CENTRAL ASIAN NETWORK OF WOMEN WITH DISABILITIES.

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344 Ravenstvo, Union of People with Disabilities, 2014.
345 Constitution of the Kyrgyz Republic, 2010.

7.2 BUILDING CAPACITY OF POLICYMAKERS AND SERVICE PROVIDERS ON ACCESSIBILITY

Understanding disability and accessibility is fundamental to successfully investing in breaking down barriers and building an accessible world for all. In this regard, building capacity of policymakers and service providers, among other stakeholders in society, ensures that a common, foundational approach to investing in accessibility can be effectively and consistently employed across different sectors.

7.2.1 Sign language training of health-care providers

NAME OF ORGANIZATION:
Bangla Sign Language Training at the Bangladesh National Institute of Ear, Nose and Throat

KEY WORDS:
Sign language; sign language training; access to health-care services.

RELEVANT SDGS:
Goal 3: Ensuring healthy lives and promoting well-being for all persons with disabilities.

FURTHER INFORMATION:
Dr. Khaleda Islam (see footnote for contact information)[346]

In Bangladesh, 5.6 per cent of people report living with some form of disability.[347] Furthermore, findings from a recent study conducted by the Bangladesh National Institute of Ear, Nose and Throat demonstrate that sign language is used by more than 3 million citizens of Bangladesh, who report being deaf or hard-of-hearing or having speech disabilities.[348]

FIGURE 7.J.
TRAINING HEALTH-CARE PROVIDERS TO USE SIGN LANGUAGE IN BANGLADESH

SOURCE: BANGLADESH, NATIONAL INSTITUTE OF EAR, NOSE AND THROAT, 2018.

Bangladesh's Non-Communicable Disease Control Program of Directorate General of Health Services has undertaken a series of initiatives to address disability, one such initiative has been the training of health-care providers in sign language, including doctors, nurses, paramedics who work in primary health care. Historically, health-care providers working at primary health-care settings have faced difficulties in providing appropriate medical assistance to persons with speech difficulties or deaf or hard-of-hearing persons due to a lack of training.

The Non-Communicable Disease Control Program provided funding to the National Institute of Ear, Nose and Throat to develop and deliver the sign language training programme, which is delivered by the Centre for Disability in Development. The training programme commenced in December 2017 and was completed in March 2018. In total, 166 health-care providers (52

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346 Dr. Islam, K. MMEd (UK), MPH (Dhaka), MBBS (Chattagram). Former Director Primary Health Care Directorate General of Health Services, Bangladesh. Phone: +880-1819-255-489. Email: dr.khaleda.islam@gmail.com.
347 Al Mahmud Titumir, R. and J. Hossain, 2005.
348 Bangladesh, National Institute of Ear, Nose and Throat, 2018.

doctors, 60 nurses and 54 sub-assistant community medical officers) were trained in sign language. Six group training sessions were conducted, each lasting 14 days, with 30 participants in each group session. The training package included 1,200 Bangla sign words, clinical management to support persons with speech disabilities and deaf or hard-of-hearing persons, and the Bangladesh Persons with Disabilities Rights Protection Act (2013).[349]

Lessons learned upon completion include large class sizes and short time frame as contributing factors to the high difficulty of the programme. In addition, it was recommended that participants who are motivated and willing should be identified to continue learning post training. Further suggestions to improve the training were as follows:

• Only including three staff members from one health complex is insufficient, more health personnel need to be trained; and

• Many areas of Bangla sign language still need to be developed and some contextualization of the local dialect needs to be addressed.

The Non-Communicable Disease Control Program is planning to run the same sign language training programme for health-care providers again in 2019 and 2020. The Program recommends that all stakeholders working in the field and NGOs need to work in collaboration with the Bangladesh government to ensure strong outcomes. It is also recommended that other sector personnel such as police or law enforcement personnel from each district should be trained in sign language in order to communicate and provide support to persons with speech disabilities or deaf or hard-of-hearing persons.

7.2.2 Building knowledge of the social model of disability

NAME OF ORGANIZATION:
Disability Equality Training (DET)

KEY WORDS:
Disability equality training; building knowledge of the social understanding of disability.

RELEVANT SDGS:
Goal 10: Reducing inequality for persons with disabilities.

FURTHER INFORMATION:
www.detforum.com; DET manuals are freely available

Disability Equality Training (DET) is a training model aimed at filling in the capacity gap and understanding of concepts of disability equality and accessibility across various dimensions of society amongst all stakeholders, including policymakers across ministries and professionals across industries in the private sector.

DET was developed in the early 1970s by persons with disabilities, however, a formalized structure of DET was officially established in the United Kingdom in the mid 1980s.[350] Since its conception, the DET model has reached at least 38 countries, involving government officials, the private sector and civil society organizations.[351] Furthermore, there are approximately 500 DET facilitators globally, who along with the 38 member countries form an active part of "DET Forum".[352]

DET is based on the social model of disability which regards causation of disability by the way in which society is organized, regarding "disabling social institutions as the main cause of issues faced by

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349 Women with Disabilities Development Foundation in collaboration with Asia-Pacific Development Center on Disability and South Asian Disability.
350 Gillespie-Sells, K. and J. Campbell, 1991.
351 Japan International Cooperation Agency, 2005.
352 Ibid. Note: DET Forum is a network which consists with DET facilitators who were trained by Japan International Cooperation Agency (JICA) or DET Forum only.

persons with disabilities".[353] Thus, "DET deals with disability as social discrimination and inequality" as opposed to the medical model of disability which looks at disability in terms of a person's impairments or differences.[354] An important aspect of the DET model promotes persons with varying disabilities to be facilitators of the programme, who are coached with professional training techniques.[355] This is based on a thinking that persons with disabilities who have experienced "disability" in the social sense can better facilitate an understanding of disability among training participants.

Through interactive workshops that utilize visual materials and incorporate group work, DET aims "to challenge one's sense of values of disability, and to facilitate the development of each participant's proactive action to break social barriers, i.e. assisting participants to be agents for social change".[356] "The ultimate goal of DET is to change societal attitudes to become just, equal and inclusive, where full participation and equality for persons with disabilities is assured."[357]

In Asia and the Pacific, DET has become increasingly practiced by governments and other stakeholders. In Japan alone, there are approximately 100 DET facilitators.[358] The rise of interest in DET in Japan has in part been facilitated by the government's enactment of the Act for Eliminating Discrimination against Persons with Disabilities (2013). This has resulted in greater awareness in society of disability discrimination and spiked interest to learn about disability-based discrimination.

In the Gunma Prefecture, two hours north of Tokyo, 'DET Gunma' was established in 2017 with three DET facilitators. DET Gunma has provided training for various organizations and topics, such as for government officials working on social welfare issues, on labour policies, inclusive education for pupils with disabilities, human rights, tourism, civil engineering, as well as for primary, secondary and high school students. Since the inception of the organization, DET Gunma has provided training to a total of 5000 people through more than 120 sessions. Furthermore, since 2017, DET Gunma has conducted exchange programmes with DET facilitators from Mongolia, assisted by the Japan International Cooperation Agency.[359]

FIGURE 7.K.
DISABILITY EQUALITY TRAINING PROVIDED IN GUNMA, JAPAN

SOURCE: DISABILITY EQUALITY TRAINING FORUM, GUNMA, JAPAN.

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353 Kuno, K., 2009.
354 Ibid.
355 Ibid. See also Gillespie-Sells, K. and J. Campbell, 1991.
356 Kuno, K., 2009.
357 Ibid.
358 Disability Equality Training Forum.
359 Disability Equality Training Forum, Gunma, Japan.

7.3 ADVOCATING FOR ACCESSIBILITY IN TOURISM

Across the region there is growing interest in advancing accessible tourism. Accessible tourism is the practice of ensuring "tourist destinations, products and services are accessible to all people, regardless of their physical limitations, disabilities or age".[360] There are many benefits of accessible tourism, including good market opportunities such as increased visitors, connecting people and promoting greater social inclusion for persons with disabilities.[361] As stated by Taleb Rifai previous Secretary-General of the United Nations' World Tourism Organization "with the world's population ageing, all of us will benefit sooner or later from universal accessibility in tourism".[362]

7.3.1 Regional promotion of accessibility in tourism

NAME OF ORGANIZATION:
Asia-Pacific Network on Accessible Tourism

KEY WORDS:
Universal accessibility in tourism; tourism for all.

RELEVANT SDGS:
Goal 11: Making cities and human settlements inclusive and sustainable for persons with disabilities.

FURTHER INFORMATION:
apnat.info@gmail.com

In January 2006, the European Network for Accessible Tourism was established with the aim of "making European tourism destinations, products and services accessible to all travellers and to promote accessible tourism around the world".[363] More recently, following the International Conference on Accessible Tourism in Malaysia in 2014, the Asia-Pacific Network on Accessible

Tourism was initiated and officially established in September 2019 with the aim of creating "accessible and inclusive tourism for all" across Asia and the Pacific.[364] Asia-Pacific Network on Accessible Tourism states the following goals:

- To integrate all activities related to accessible tourism in the Asia-Pacific region;

- To conduct research and develop training guidelines and manuals which aim to make the Asia-Pacific region accessible for older tourists and tourists with disabilities;

- To create a rating system and reward travel companies, hotels and resorts, tourist destinations and operators, within the Asia-Pacific region, that adhere to the system;

- To supply and disseminate information relating to accessible tours, facilities and services;

- To participate in activities, training, talks and workshops in the Asia-Pacific region to introduce this organization and the concept of accessible tourism for persons with disabilities and older persons; and

- To network with existing international organizations with the same goal of promoting accessible tourism.

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360 Victorian Government, Australia.
361 United Nations World Tourism Organization, 2016.
362 Ibid.
363 European Network for Accessible Tourism.
364 For information on the Asia–Pacific Network on Accessible Tourism, contact Mr Antony Leopold, President. email: apnat.info@gmail.com

7.3.2 Accessible tourism initiatives in Hong Kong, China

NAME OF ORGANIZATION:
The Hong Kong Society for Rehabilitation

KEY WORDS:
Accessible beaches; accessible country parks; accessible tourism.

RELEVANT SDGS:
Goal 11: Making cities and human settlements inclusive and sustainable for persons with disabilities.

FURTHER INFORMATION:
https://accessguide.hk/index.php?lang=en

The Hong Kong Society for Rehabilitation was founded in 1959 and through services delivered, research and advocacy, promotes "collaboration towards building an engaging, inclusive and caring society" so persons with disability may live an equitable fulfilling life.[365] In recent times, the Hong Kong Society for Rehabilitation has found that persons with disabilities have faced several issues in the city, such as:

- Insufficient accessible facilities and design in parks and beaches;

- Insufficient information on accessibility of sightseeing points and facilities; and

- Insufficient training and experience for tourist guides and tour escorts.

In order to resolve these issues, several projects were undertaken. Firstly, a series of "Accessible Fun Days on the Beach" were initiated whereby a number of volunteers assisted wheelchair users to enjoy a day on the beach with the support of five floating beach wheelchairs. These beach days were facilitated through cooperation with NGOs, special schools, and related authorities.

In addition, the Hong Kong Society for Rehabilitation submits request for review of accessibility of certain facilities. For example, the Society will request that the relevant government departments provide accessible means of access, beach mats and floating beach wheelchairs for rental at public beaches. In addition, the "Accessible Fun Days on the Beach" initiative prompted media interest and subsequently led to an increase in public awareness of the challenges persons with disabilities face when accessing public spaces in the city.

FIGURE 7.L.

PERSONS WITH DISABILITIES ENJOYING THE USE OF FLOATING BEACH WHEELCHAIRS AT A PUBLIC BEACH IN HONG KONG, CHINA

SOURCE: THE HONG KONG SOCIETY FOR REHABILITATION (B).

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365 The Hong Kong Society for Rehabilitation (b).

The next project undertaken to resolve issues of accessibility was "Hong Kong Access Guide".[366] The project aimed to revamp the website of "Hong Kong Access Guide" to enhance user experience in accessing information about accessible Hong Kong sightseeing points and facilities. The project achieved this through updating content, including sightseeing points including country parks and beaches, and adopting the following technological upgrades:

- W3C AA level of web accessibility;

- 360-degree photos and videos;

- Website with both text and map versions;

- Mobile-responsive web design; and

- Search function for accessible toilets.

FIGURE 7.M.
SURVEY TEAM, INCLUDING WHEELCHAIR USERS, CONDUCTING AN ACCESSIBILITY SURVEY IN A PARK

SOURCE: THE HONG KONG SOCIETY FOR REHABILITATION (B).

The third project titled "Collaboration with the Travel Industry in Enhancement of Training for Tourist Guides and Tour Escorts" involved a subsidiary of the Hong Kong Society for Rehabilitation, "Easy-Access Travel", a registered travel agent. Through representatives of Easy-Access Travel in the Travel Industry Council of Hong Kong, the Hong Kong Society for Rehabilitation helps the council in updating the syllabus of training to tourist guides and tour escorts in serving persons with disability and older persons. Furthermore, the society collaborates with the council and invites the trainers of tourist guides and tour escorts to attend "Accessible Tours" in order for them to learn about accessibility through practice.

The following persisting challenges were identified during implementation of the three projects:

- Securing funding, including donations and sponsorship;

- Human resources for the provision of service and training; and

- Finding volunteers, especially corporate volunteers.

7.3.3 Creating accessible beaches Australia

NAME OF ORGANIZATION:	Accessible Beaches Australia
KEY WORDS:	Accessible beaches; wheelchairs; older persons; toddler's access to beaches.
RELEVANT SDGS:	Goal 11: Making cities and human settlements inclusive and sustainable for persons with disabilities.
FURTHER INFORMATION:	https://accessiblebeaches.com

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366 The Hong Kong Society for Rehabilitation (a).

FIGURE 7.N.
MOBI-MAT, AN ECO-FRIENDLY PORTABLE BEACH ACCESS MAT

SOURCE: ACCESSIBLE BEACHES AUSTRALIA, 2017.

Going to the beach is an important part of Australian culture and identity. For some persons with disabilities the beach has been a critical part of their lives but, after an accident or illness, they are no longer able to do so. For other persons with disabilities, going to the beach and getting involved in beach culture has never been an accessible option.

Approximately one in five Australians identify as having a disability, equating to almost 4.3 million community members who are more likely to experience some kind of barrier when trying to access their local beach.[367] Typical barriers include:

• The physical environment: for example: a lack of accessible car parks, footpaths and amenities; no sand or water access; a lack of/outdated/damaged access equipment;

• Communication issues: for example limited or no accessible information publicly available; no accessible signage; little or no access to paid lifeguards and/or volunteer lifeguards;[368] and

• Attitudes of others: for example limited understanding of disability and tendency to make assumptions; or the perception that access and inclusion at the beach is too hard and/or expensive.

Accessible Beaches was founded in 2016 with a vision to make most patrolled beaches in Australia wheelchair accessible by 2020. Accessible Beaches work with local government, Surf Life Saving clubs[369], persons with disabilities, not-for-profit organizations, government-funded programs and other community stakeholders to find solutions for making Australian beaches and beach communities accessible for everyone.

Accessible Beaches is an initiative of Push Mobility, a private company who supply beach access equipment. Push Mobility can provide a range of fit for purpose beach wheelchairs such as the Push Mobility Beach Walker together with Mobi-Mat (see Figure 7.N and 7.O), an eco-friendly portable beach access mat that offers a clear nonslip pathway for beach goers of all ability, including older persons, wheelchair users and parents with strollers. Push Mobility works closely with stakeholders to create customized beach access solutions that are safe and all inclusive. Accessible Beaches also offer beach access consultation and advisory services; detailed site evaluations and planning; operational, safety and disability inclusion training; and scheduled equipment maintenance and retraining programmes.

367 Australian Bureau of Statistics, 2015.
368 Lifeguards are trained in first aid and rescue and monitor beach conditions on Australian beaches.
369 Surf Life Saving is a volunteer organization in Australia that provides lifeguards on Australian beaches to monitor surf conditions and to provide water safety and rescue on beaches should the need be available. See Surf Life Saving, New South Wales, Australia.

FIGURE 7.O.
PUSH MOBILITY BEACH WALKER

SOURCE: PUSH MOBILITY.

Some of the challenges faced include the varied physical features and weather patterns of different beaches, with some beaches better suited to access equipment than others. Even so, there are usually other opportunities to improve access and inclusion even if direct sand and water access is not possible. For example, accessible parking spaces, improved pathways, viewing platforms, accessible amenities, signage, reviewing policies and procedures and membership recruitment practices. Some small improvements do not necessarily involve a significant cost. Financing these initiatives often depends on local government budgets and surf club fundraising, as well as the availability of relevant grants and sponsorship opportunities.

Another challenging aspect is helping break down attitudinal barriers. Increasingly, staff from Accessible Beaches travel around Australia educating key community stakeholders about beach access equipment, dignity of risk, accessible tourism and inclusive practices for visible and invisible disabilities at the beach. Accessible Beaches also work with local community members, including persons with disabilities and their families and carers, to help advocate for positive and sustainable change at local beaches.

To date, Accessible Beaches has helped activate at least 25 accessible patrolled beaches across Australia. In addition, Accessible Beaches has facilitated five of the largest beach access events in the world such as the Norfolk Island Beach Access Day, Burleigh Heads Australia Beach Access Event and the City of Charles Sturt Accessible Beach Day, Henley Beach South Australia.[370]

370   Accessible Beaches Australia.

Chapter 8

Recommendations for enhanced investment in accessibility

From refugee camps to residential buildings, and from sunny tourist beaches to urban public transit and office towers; across both developing and developed countries, all facets of society including in the built environment, information and communications including ICT, and services are important target areas for investing in accessibility.

As outlined in this report, a crucial part of building accessible societies is to ensure that the foundational components of accessibility are understood and put into practice in governmental settings, in the private sector, and other contexts. There are numerous drivers for investing in accessibility, which provide added benefits that go far beyond serving only a segment of the population. The key to unlocking this potential is putting in place enabling tools that can support all stakeholders in their efforts.

As demonstrated, Asia and the Pacific, in particular, presents immense opportunity for empowering persons with disabilities and making accessible and inclusive societies for all. Firstly, the vast and diverse region enjoys steady economic growth which is only expected to increase with the participation of persons with disabilities. In addition, the region is subject to numerous demographic factors that highlight the importance of investing in accessibility, including ageing populations and the increasing prevalence of disability.

Furthermore, a number of countries already have a strong legal basis for investing in accessibility and can provide examples to those seeking to build a strong legal framework for how both anti-discrimination approaches and programmatic approaches to legislating for accessibility can work in tandem. Such laws set the basis for implementing disability-inclusive public procurement to ensure that accessible goods and services in Asia and the Pacific can contribute to economic potential in a way that benefits all.

Moreover, the good practices outlined from across the region have the potential to be studied and replicated across different contexts. Thus, spurring the creation of new ideas for innovative and engaging approaches to ensure that persons with disabilities and the general population have equal opportunity for effective and meaningful participation. However, it is also clear that levels of accessibility differ across countries and subregions, and gaps remain that call for increased attention and investment.

As demonstrated, investment in accessibility goes beyond that of financial resources. Commitment to laws, policies and programmes on accessibility have a measurable impact on the creation of accessible environments, products and services, as does investment in human resources such as capacity building and consultation. Investment through these means has the potential to yield social and economic benefits for society, in which persons with diverse functional difficulties, including persons with disabilities, can participate and contribute in political, economic and cultural life on an equal basis with others.

Efforts to invest in accessibility align with regional and global efforts to promote disability-inclusive development and sustainable development more broadly, namely the Incheon Strategy to 'Make the Right Real' for Persons with Disabilities in Asia and the Pacific, 2013–2022 and the 2030 Agenda for Sustainable Development, which are themselves underpinned by the rights-based approach reflected in the CRPD. Other agreements such as the Sendai Framework for Disaster Risk Reduction 2015–2030 and the Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired or Otherwise Print Disabled, address accessibility in specific thematic areas.

In this regard, this report proposes recommended approaches and actions to be taken by governments for improving investment in accessibility in Asia and the Pacific. This entails adopting an approach that goes beyond 'business as usual', promoting a broader understanding of accessibility and its value for all of society.

1 POSITIONING ACCESSIBILITY AS A CORE COMPONENT OF NATIONAL DEVELOPMENT STRATEGIES

The potential of investment in accessibility is often overlooked yet is a crucial contributing factor to broader development outcomes, including economic, social and environmental well-being across all sectors of society. In this regard, it is important for policymakers and other stakeholders to understand that not only those conventionally defined as persons with disabilities, but also those with functional difficulties and those who face situational difficulties, along with the majority of the population could benefit from accessibility provisions implemented through a Universal Design-based approach to accessibility. Recognizing at the highest levels of leadership the value of investing in accessibility is a necessary step in motivating policymakers to embed accessibility in their work and to achieving the Sustainable Development Goals and its mandate to leave no one behind.

In this regard, the following actions should be taken:

- At the highest levels, issue statements of support and commitment to the embodiment of the principles and dimensions of accessibility across all development actions;

- Mandate integration of accessibility through Universal Design across national development plans, including economic stimulus plans, urban development plans, education and social welfare plans, among others; and

- Require and provide training opportunities to inform stakeholders of the added value of investing in accessibility across social, economic and political spheres. Such training should be based upon the social model of disability and the wider application of accessibility, as is done in Disability Equality Training (DET).

2 LEVERAGING THE ECONOMIC POTENTIAL OF ACCESSIBILITY

Investing in accessibility can yield economic outcomes that have yet to be fully tapped into. In fact, business-oriented approaches to investing in accessibility remain unexplored and underused. While the rights of persons with disabilities are the foundational and inextricable core of the motivation for accessibility provision, exploring the economic value of inclusion is helpful in promoting the wider understanding and adoption of accessibility across different sectors. Employing an economic-focused mindset underpinned by the human rights-based approach to disability in both the process and outcome of investment allows for inclusion of persons with disabilities as well as stronger economic impacts. This includes empowering persons with disabilities themselves to play a part in economic growth and development alongside their peers.

In this regard, the following actions should be taken:

- Conduct research and cost-benefit analysis on accessibility implementation and make use of existing resources (including this report and its sources) that highlight the potential economic returns on accessibility investments;

- Conduct analysis to identify areas of investment of accessibility in relation to broader populations beyond only those with disabilities;

- Promote within government and to the business sector the potential added economic value and benefits, including reduced costs, expanded workforces and markets, and development of innovative goods and services;

- Empower and engage entrepreneurs with disabilities to play a key role in advising and implementing activities and investment in accessibility; and

- Partner with media and other stakeholders to campaign and advocate for the social and economic value of investing in accessibility.

3 EMPLOYING A WHOLE-OF-GOVERNMENT AND WHOLE-OF-SOCIETY APPROACH

It is crucial that governments operate across hierarchy and bureaucracy to invest in accessibility. This includes engagement of policymakers working across sectors including but not limited to public works, ICT, infrastructure building, education, transport, social welfare, gender, health, culture, and tourism. Central and local government officials and staff, private sector entities, persons with disabilities and their representative organizations, older persons and others who benefit from accessibility, along with accessibility experts, architects, engineers, international and domestic civil society organizations and media entities can work together to achieve impactful accessibility results.

For instance, persons with disabilities, their representative organizations and others can also address and articulate their accessibility needs and knowledge areas for improvement regarding accessibility. Governments can benefit from specific issues articulated by persons with disabilities and others and can encourage the production of accessible goods and services to the private sector. The private sector can suggest technical solutions which can lead to marketable and accessible products and services.

Building partnerships goes beyond just one consultative meeting – effective partnerships are built and strengthened through sustained and regular communications amongst different stakeholders.

In this regard, the following actions should be taken:

- Ensure involvement of all branches of government, including executive, legislative and judicial, in implementing accessibility at national and local government levels, including through establishing an accessibility coordination committee;

- Provide training and knowledge building opportunities for all stakeholders in government, focusing on how to mainstream principles of accessibility through Universal Design across all areas of work; and

- Establish partnerships with and conduct regular and sustained meetings involving the diverse array of relevant stakeholders for investing in accessibility – namely persons with disabilities and their representative organizations, inclusive of the diversity that exists among the population of persons with disabilities – to discuss coordinated actions, including but not limited to needs assessment, policy development, implementation, monitoring and evaluation.

4 ESTABLISHING AN INCLUSIVE AND COMPREHENSIVE LEGAL AND POLICY FRAMEWORK

One of the major barriers for governments to effectively promote and create accessible environments is that dimensions of accessibility are addressed separately across different laws and policies, and often with a limited target group in mind. As well, legal interventions may not be in the best interest of the beneficiary, nor have an adequate scope with which to engage all relevant stakeholders.

Furthermore, the lack of recognition of the right to access and prioritization by governments and the exclusion of the principles of accessibility, Universal Design and reasonable accommodation in legal frameworks puts up further barriers. An unbalanced or narrow approach of law and policy with regard to anti-discrimination and programme activities, along with ineffective provisions for enforcement, can also contribute to potentially exclusionary and limited legal and policy environments.

In this regard, the following actions should be taken:

- Ensure that accessibility laws and policies align with the CRPD and make efforts to ratify the CRPD;

- Ensure that accessibility laws and policies target all of society, while simultaneously recognizing the specific and additional barriers faced by persons with diverse disabilities, including often underserved groups such as persons with intellectual disabilities, and also recognizing the cultural dimension of accessibility such as through the legal recognition of sign language;

- Ensure that the principles of Universal Design, seamless connectivity, dignity and safety of persons with disabilities, and self-determination and effective and meaningful participation accompany all accessibility endeavours;

- Adopt anti-discrimination law that recognizes accessibility as a right, and the lack of provision of accessibility and reasonable accommodation as disability-based discrimination;

- Adopt public interest law as a supplement to anti-discrimination law to support claims to accessibility;

- Adopt programmatic laws that operationalize the rights set out in anti-discrimination law and accompany these with budget and time-bound targets;

- Ensure that laws and policies on accessibility cover all dimensions, including that of the built environment, transportation, ICT and services, as well as take into account the various spaces and contexts of societal life in which their application is relevant and necessary;

- Ensure that laws and programmes improve accessibility of both new and existing infrastructures, and revisit exemptions in law and policy on accessibility requirements including age, size and budget-based exemptions, among others;

- Mainstream accessibility across both disability-specific laws and policies as well as other sectoral laws and policies which are not necessarily targeted to persons with disabilities, in relation to procurement, technical standards, transportation, labour, education, reproductive health and rights, disaster risk reduction, emergency response, recreation and tourism; and

- Ensure that laws and policies to promote and ensure accessibility target both public and private entities.

5 MAKING CHANGE THROUGH ROBUST AND RESPONSIVE IMPLEMENTATION, FINANCING AND MONITORING AND EVALUATION

Translating inclusive and comprehensive laws and policies from paper to practice can be a challenge, and the inability to do so is often a result of ineffective implementation. This could include inconsistency of implementation approaches, inadequate financial allocation, poor enforcement, and lack of end-user interaction with the legal and policy tools available.

Furthermore, insufficient monitoring and evaluation of accessibility initiatives can greatly diminish the impact. Investing in accessibility is not just a tick-the-box approach in which the lowest common denominator is applied. Rather, assessing quality of action and effectiveness of outcome elicits impactful accessibility results, including through both qualitative and quantitative data collection, and in desk-based and on-site contexts.

In this regard, the following actions should be taken:

- Implement technical standards on accessibility in line with ISO or other internationally recognized standards across various dimensions of accessibility;

- Ensure that accessibility criteria are mandatory requirements in appraisal of projects across the built environment, transport, ICT and services;

- Ensure that an adequate and sustained budget for investment in accessibility exists to support implementation of all laws and policies;

- Establish funding sources to subsidize costs related to reasonable accommodation and accessibility measures undertaken by small and medium-sized enterprises;

- Apply enforcement measures that include both penalty components such as fines, and incentive components such as certifications and tax deductions;

- Ensure grievance procedures are operational, through which individuals and groups can make claims to their rights in response to accessibility-based disability discrimination;

- Establish baseline data and performance indicators, and frequency for effective monitoring and evaluation, at the onset;

- Mandate submission of monitoring and evaluation reports by responsible government entities periodically;

- Involve persons with disabilities in the above monitoring and evaluation activities; and

- Utilize accessibility audit techniques and on-site inspections to monitor and evaluate progress of implementation.

6   PROFESSIONALIZING ACCESSIBILITY SERVICE PROVISION AND SUPPORT

Too often accessibility support and services are confined to social welfare approaches in which volunteerism and charity models are relied upon for provision of service. While these models can provide value, they are not long-term, sustainable solutions, and often result in lacking consistency and quality of service. Moreover, the number of qualified personnel is often insufficient to meet demand due to the lack of industry standards.

Steps to professionalizing accessibility service provision and support include the following:

- Establish and promote training and certification programmes in support of professionalizing accessibility support services and roles.

- Standardize remunerations and labour conditions of support services and personnel, such as sign language interpreters and other support personnel.

7   SHARPENING AND EXPANDING TECHNICAL SKILLS AND ABILITIES

Effective policymaking requires in-depth and up-to-date understanding of accessibility and the associated cultural trends. This includes conceptual knowledge as well as practical and functional skills that can be employed on a daily basis in programming and to directly support beneficiaries. Furthermore, as accessible products and services develop rapidly alongside technological advancement and the digitalization of society, private sector and civil society are key partners that can contribute knowledge and insight for integration in laws, policies and programming.

In this regard, the following actions should be taken:

- Incentivize skill acquisition, such as learning sign language and other means to assist those persons with disabilities who need communication support;

- Incentivize skill and knowledge acquisition, such as on ISO accessibility standards and disability-inclusive procurement practices, and access audits; and

- Establish open communication with stakeholders from the private sector and civil society to keep abreast of new developments and trends in accessible products and services.

CONCLUSION

The risk posed by excluding accessibility from development efforts is great. With persons with disabilities continuing to face numerous barriers to participation across the built environment, transportation, ICT and services, they are at risk of being left behind. Persons with disabilities, however, are not alone in their potential to benefit from accessibility provisions – as demonstrated in this report, accessibility provides benefits for all sectors of society.

Investing in accessibility presents an opportunity for governments in Asia and the Pacific to make real progress in meeting national and regional commitments to development across various sectors. Investment in accessibility complements and aligns with existing tools and efforts to promote disability-inclusive development in the region, including the Incheon Strategy and the Beijing Declaration and Action Plan to accelerate its implementation. Moreover, the returns of investment in accessibility will have carryover impacts in achieving broader global development objectives, including those set out in the 2030 Agenda for Sustainable Development and its Sustainable Development Goals.

Most importantly, however, investing in accessibility has the potential to transform societies in Asia and the Pacific into truly inclusive ones. Investment in accessibility is a step toward ensuring that all individuals and groups can enjoy the richness of benefits brought by equitable access to and equal opportunity for participation in society.

Annex

List of ISO standards on accessibility

TABLE 1.
INFORMATION TECHNOLOGY ISO STANDARDS AIMED AT REDUCING DISABILITY GAPS

ISO STANDARD NAME	ISO STANDARD CODE	DESCRIPTION
Accessibility recommendations and guidelines for personal computer hardware	ISO/IEC 29136:2012	*This standard provides recommendations for the accessibility of personal computer hardware, to be used when planning, developing, designing, and distributing these computers. While it does not cover the behavior of, or requirements for, assistive technologies, it does address the connectivity of assistive technologies as an integrated component of interactive systems.*
Requirements, recommendations, and guidelines for software accessibility	ISO 9241-171:2008	*This standard provides ergonomics guidance and specifications for the design of accessible software for use at work, in the home, in education, and in public places. It covers issues associated with designing accessible software for people with the broadest range of physical, sensory, and cognitive abilities, including those who are temporarily disabled, and the elderly.*
Web content accessibility guidelines	ISO/IEC 40500:2012	*This standard covers a wide range of recommendations for making web content more accessible. Following the guidelines provided in this standard will make web content accessible to a wider range of people with disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity and combinations of these. Following these guidelines will also often make the web content more usable to users in general.*
Office equipment accessibility guidelines for elderly persons and persons with disabilities including printers, scanners, and copiers	ISO/IEC CD 10779	*This standard specifies accessibility guidelines to be considered when planning, developing and designing electrophotographic copying machines, page printers, and multi-function devices. These guidelines are intended to improve accessibility required when primarily older persons, persons with disabilities, and persons with temporary disabilities use office equipment.*
Accessibility guidelines for information/ communication technology (ICT) equipment and services	ISO 9241-20:2008	*This standard is intended for use by those responsible for planning, designing, developing, acquiring, and evaluating information/communication technology (ICT) equipment and services. It provides guidelines for improving the accessibility of ICT equipment and services such that they will have more extensive accessibility for use at work, in the home, and mobile and public environments. It covers issues associated with the design of equipment and services for people with a wide range of sensory, physical, and cognitive abilities, including those who are temporarily disabled, and the elderly.*

Design criteria for physical input devices	ISO 9241-410:2008	*This standard specifies criteria based on ergonomics factors for the design of physical input devices for interactive systems including keyboards, mice, pucks, joysticks, trackballs, trackpads, tablets and overlays, touch-sensitive screens, stylus and light pens, and voice- and gesture-controlled devices. It gives guidance on the design of these devices, taking into consideration the capabilities and limitations of users, and specifies generic design criteria for physical input devices, as well as specific standards for each type of device.*
General principles governing keyboard layouts	ISO/IEC 9995-1:2009	*This standard defines a framework for the layout of all alphanumeric and numeric keyboards across the widest spectrum of current and future applications using keyboards. The functions to be performed by keyboards are grouped into three categories that correspond to the main physical sections of the keyboard.*
Requirements and recommendations for interoperability with assistive technology (AT)	ISO/IEC 13066-1:2011	*This standard provides a basis for designing and evaluating interoperability (involves the ability to use assistive technology (AT) to add to or augment existing components of information technology (IT) systems) between IT and AT. It also recognizes the central role that accessibility application programming interfaces (accessibility APIs) play in aiding this interoperability.*
Accessible user interface for accessibility settings	ISO/IEC 24786:2009	*This standardspecifies requirements and recommendations for making accessibility settings accessible. This critical step will make the information technologies more accessible by ensuring that people with disabilities can adjust accessibility settings by themselves. People with disabilities (e.g., visual, hearing, physical) can experience difficulties in accessing computers and other information/communication technology (ICT) devices. Accessible user interfaces, as defined in this standard, can help them to operate computers if they can adjust accessibility settings before use. If this is not possible, some people will not be able to access these devices without help from another party.*

SOURCE: ISO (B).

TABLE 2.
ISO STANDARDS FOR ACCESSIBILITY IN THE BUILT ENVIRONMENT AND TRANSPORTATION

ISO STANDARD NAME	ISO STANDARD CODE	DESCRIPTION
Guide for addressing accessibility in standards	ISO/IEC Guide 71:2014	*Provides guidance to standards developers on addressing accessibility requirements and recommendations in standards that focus, whether directly or indirectly, on systems (i.e. products, services and built environments) used by people. To assist standards developers to define accessibility requirements and recommendations, it presents a summary of current terminology relating to accessibility, issues to consider in support of accessibility in the standards development process, a set of accessibility goals (used to identify user accessibility needs), descriptions of (and design considerations for) human abilities and characteristics, and strategies for addressing user accessibility needs and design considerations in standards.*
Building Construction - Accessibility and usability of the built environment	ISO 21542:2011	*Specifies a range of requirements and recommendations for many of the elements of construction, assemblies, components and fittings which comprise the built environment. These requirements relate to the constructional aspects of access to buildings, to circulation within buildings, to egress from buildings in the normal course of events and evacuation in the event of an emergency. It also deals with aspects of accessibility management in buildings.*
Assistive products for blind and vision-impaired persons - Tactile walking surface indicators	ISO 23599:2019	*Provides product specifications for tactile walking surface indicators (TWSIs) and recommendations for their installation in order to assist in the safe and independent mobility of blind or vision-impaired persons. Specifies two types of TWSIs: attention patterns and guiding patterns. Both types can be used indoors and outdoors throughout the built environment where there are insufficient cues for wayfinding, or at specific hazards.*
Intelligent transport systems - Public transport user information - Part 1: Standards framework for public information systems	ISO 17185-1:2014	*Defines basic framework for user information provision for surface public transport users, from the viewpoint that the surface public transport users should be provided with proper static and real-time information when it is most desired and effective. In order to realize the desirable information provision, surface public transport information has to be efficiently gathered, processed, and provided to surface public transport users in an appropriate way by using currently available regional standards.*
Ergonomics - General approach, principles and concepts	ISO 26800:2011	*Presents the general ergonomics approach and specifies basic ergonomics principles and concepts. These are applicable to the design and evaluation of tasks, jobs, products, tools, equipment, systems, organizations, services, facilities and environments, in order to make them compatible with the characteristics, the needs and values, and the abilities and limitations of people.*
Ergonomics data and guidelines for the application of ISO/IEC Guide 71 to products and services to address the needs of older persons and persons with disabilities	ISO/TR 22411:2008	*Presents ergonomics data and guidelines for applying ISO/IEC Guide 71 in addressing the needs of older persons and persons with disabilities in standards development. It provides ergonomics data and knowledge about human abilities — sensory, physical and cognitive — and allergies, as well as guidance on the accessible design of products, services and environments.*
Wheelchair containment and occupant retention systems for accessible transport vehicles designed for use by both sitting and standing passengers	ISO 10865-1:2012	*Applicable to wheelchair passenger spaces (RF-WPSs) intended for use by rearward-facing wheelchair-seated occupants, with a body mass greater than 22 kg, when travelling in accessible transport vehicles. To limit those movements of a rearward-facing wheelchair, including scooters with three or more wheels, that might result in hazardous contact with the vehicle interior or injury to other passengers.*

SOURCE: ISO (D).

TABLE 3
ISO STANDARDS FOR GRAPHICAL SYMBOLS AND SAFETY SIGNS

ISO STANDARD NAME	ISO STANDARD CODE	DESCRIPTION
Graphical symbols for use on equipment – Registered symbols	ISO 7000:2019	*Establishes the safety identification colours and design principles for safety signs and safety markings to be used in workplaces and in public areas for the purpose of accident prevention, fire protection, health hazard information and emergency evacuation. It also establishes the basic principles to be applied when developing standards containing safety signs. It is not applicable to the signalling used for guiding rail, road, river, maritime and air traffic.*
Graphical symbols – Public information symbols	ISO 7001:2007	*Specifies graphical symbols for the purposes of public information. It is generally applicable to public information symbols in all locations and all sectors where the public has access. The symbols may be used in conjunction with text to improve comprehension.*
Graphical symbols - Safety colours and safety signs - Registered safety signs	ISO 7010:2011	*Prescribes safety signs for the purposes of accident prevention, fire protection, health hazard information and emergency evacuation. It is not applicable to the signalling used for guiding rail, road, river, maritime and air traffic.*
Graphical symbols – Vocabulary	ISO 17724:2003	*Defines terms relating to graphical symbols, principally symbols for public information and use on equipment and safety signs. It does not include terms related to graphical symbols for diagrams (technical product documentation symbols).*
Water safety signs and beach safety flags – Part 1: Specifications for water safety signs used in workplaces and public areas	ISO 20712-1:2008	*Prescribes water safety signs intended for use in connection with the aquatic environment. It is intended for use by owners and operators of aquatic environments and by manufacturers of signs and equipment. However, it is not applicable to signalling used for maritime traffic. Includes water safety signs which require that supplementary text signs be used in conjunction with these water safety signs to improve comprehension.*
Water safety signs and beach safety flags – Part 2: Specifications for beach safety flags – Colour, shape, meaning and performance	ISO 20712-2:2007	*Specifies requirements for the shape and colour of beach safety flags for the management of activities on coastal and inland beaches, to be used for giving information on wind and water conditions and other hazardous conditions, and to indicate the location of swimming and other aquatic activity zones extending from the beach into the water. It is not applicable to flags for use on firing ranges or to flags for use to indicate water quality or to signalling used for maritime traffic.*
Water safety signs and beach safety flags – Part 3: Guidance for use	ISO 20712-3:2014	*Gives guidance for the selection and use of water safety signs as specified in ISO 20712-1 and beach safety flags as specified in ISO 20712-2, in aquatic environments. It provides guidance on their location, mounting positions, lighting and maintenance. It also provides guidance on the design and location of multiple signs.*
Graphical symbols – Technical guidelines for the consideration of consumers' needs	ISO/IEC Guide 74:2004	*Gives procedures for the development of graphical symbols for public information, use in safety signs and product safety labels, and use on equipment and products. Such graphical symbols can be included in consumer documentation. It does not cover road traffic signs and graphical symbols for use in technical documentation.*

SOURCE: ISO (D).

TABLE 4
ISO STANDARDS FOR DESIGN PRINCIPLES AND REQUIREMENTS FOR SYMBOLS

ISO STANDARD NAME	ISO STANDARD CODE	DESCRIPTION
Safety Signs		
Graphical symbols - Safety colours and safety signs - Part 1: Design principles for safety signs and safety markings	ISO 3864-1:2011	*Establishes the safety identification colours and design principles for safety signs and safety markings to be used in workplaces and in public areas for the purpose of accident prevention, fire protection, health hazard information and emergency evacuation. It also establishes the basic principles to be applied when developing standards containing safety signs. Itis not applicable to the signalling used for guiding rail, road, river, maritime and air traffic.*
Graphical symbols -- Safety colours and safety signs -Part 3: Design principles for graphical symbols for use in safety signs	ISO 3864-3:2012	*Gives principles, criteria and guidance for the design of graphical symbols for use in safety signs as defined in ISO 3864-1, and for the safety sign element of product safety labels as defined in ISO 3864-2.*
Graphical Symbols for use on Equipment		
Basic principles for graphical symbols for use on equipment - Part 1: Creation of graphical symbols for registration	ISO/IEC 80416-1:2008	*Provides basic principles and guidelines for the creation of graphical symbols for registration and provides the key principles and rules for the preparation of title, description and note(s).*
Basic principles for graphical symbols for use on equipment - Part 2: Form and use of arrows	ISO 80416-2:2001	*Lays down the basic principles and the proportions for arrows used to indicate various elements, forces, functions or dimensions. The arrows defined in ISO 80416-2 are used as graphical symbols or graphical symbol elements.*
Basic principles for graphical symbols for use on equipment - Part 3: Guidelines for the application of graphical symbols	ISO/IEC 80416-3:2002	*Provides guidelines for the application of graphical symbols for use on equipment in order to maintain visual clarity and overall consistency when such graphical symbols are applied.*
Basic principles for graphical symbols for use on equipment - Part 4: Guidelines for the adaptation of graphical symbols for use on screens and displays (icons)	ISO 80416-4:2005	*Provides guidelines for the adaptation of graphical symbols for use on screens and displays (icons) on a wide range of equipment, such as photocopiers, vehicle dashboards and home appliances.*
Graphical Symbols for use in Public Information		
Graphical symbols - Creation and design of public information symbols - Requirements	ISO 22727:2007	*Specifies requirements for the creation and design of public information symbols. It specifies requirements for the design of public information symbols for submission for registration as approved public information symbols, including line width, the use of graphical symbol elements and how to indicate negation. It also specifies templates to be used in the design of public information symbols. It is not applicable to safety signs, including fire safety signs, or to traffic signs for use on the public highway.*

SOURCE: ISO (D).

TABLE 5.
ISO STANDARDS FOR TEST METHODS FOR COMPREHENSIBILITY OF GRAPHICAL SYMBOLS

ISO STANDARD NAME	ISO STANDARD CODE	DESCRIPTION
Graphical symbols - Test methods -- Part 1: Methods for testing comprehensibility	ISO 9186-1:2007	*Specifies methods for testing the comprehensibility of graphical symbols. It includes the method to be used in testing the extent to which a variant of a graphical symbol communicates its intended message and the method to be used in testing which variant of a graphical symbol is judged the most comprehensible.*
Graphical symbols - Test methods - Part 2: Method for testing perceptual quality	ISO 9186-2:2008	*Specifies a method for testing the perceptual quality of graphical symbols, to verify that the elements that constitute a graphical symbol are readily identifiable by the eventual user population.*

SOURCE: ISO (D).

TABLE 6.
ISO STANDARDS FOR ACCESSIBLE TOURISM

ISO STANDARD NAME	ISO STANDARD CODE	DESCRIPTION
Tourist information offices – Tourist information reception services - Requirements	ISO 14785:2014	*Establishes minimum quality requirements for services provided by tourist information offices of any type and size, whether publicly or privately operated, in order to satisfy visitors' expectations.*
Tourism and related services – Accessible tourism for all – Requirements and recommendations	ISO/DIS 21902	*Currently under development - 2019*
Tourism and related services – Requirements and recommendations for beach operation	ISO 13009:2015	*Establishes general requirements and recommendations for beach operators that offer tourist and visitor services. It provides guidance for both beach operators and users regarding the delivery of sustainable management and planning, beach ownership, sustainable infrastructure and service provision needs, including beach safety, information and communication, cleaning and waste removal.*
Accessible design – Application of Braille on signage, equipment and appliances	ISO 17049:2013	*Specifies the fundamental requirements for Braille used on signage, equipment and appliances, including the dimensional parameters of Braille and the characteristics of materials used, and the guidelines for practical implementation.*
Assistive products for blind and vision impaired persons – Tactile walking surface indicators	ISO 23599:2019	*Provides product specifications for tactile walking surface indicators (TWSIs) and recommendations for their installation in order to assist in the safe and independent mobility of blind or vision-impaired persons. Can be used indoors and outdoors throughout the built environment where there are insufficient cues for wayfinding, or at specific hazards.*

SOURCE: ISO (D).

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An estimated 690 million persons with disabilities live in Asia and the Pacific. As this figure is expected to grow over the coming decades, the need for enhanced accessibility will increase greatly. Despite many positive steps taken to enhance accessibility of the built environment, transportation, information and communications, and services across Asia and the Pacific, there remain numerous barriers to participation for persons with disabilities, and for the broader population.

Disability at a Glance 2019: Investing in Accessibility in Asia and the Pacific — Strategic Approaches to Achieving Disability-inclusive Sustainable Development focuses on the importance of increasing investment in accessibility to narrow these gaps and build an inclusive Asia and Pacific for all.

The report lays out foundational concepts and terminologies related to disability and accessibility, and outlines the tools and approaches for successful investment in accessibility. Furthermore, it identifies drivers and added values of investment, and analyses the status of disability-inclusive development and accessibility investment across Asia and the Pacific. Finally, it provides recommendations to governments across key areas of focus to ensure that societies are built to be sustainable and inclusive.