

ECLAC SUBREGIONAL
HEADQUARTERS
FOR THE CARIBBEAN

Using universal service funds to increase access to technology for persons with disabilities in the Caribbean

Amelia Bleeker



UNITED NATIONS



SERIES

STUDIES AND PERSPECTIVES

79

**ECLAC SUBREGIONAL
HEADQUARTERS
FOR THE CARIBBEAN**

Using universal service funds to increase access to technology for persons with disabilities in the Caribbean

Amelia Bleeker



UNITED NATIONS

ECLAC

This document has been prepared by Amelia Bleeker, Associate Programme Management Officer of the Caribbean Knowledge Management Centre (CKMC), ECLAC subregional headquarters for the Caribbean.

The views expressed in this document, which has been reproduced without formal editing, are those of the author and do not necessarily reflect the views of the Organization.

United Nations publication
ISSN: 1728-5445 (electronic version)
ISSN: 1727-9917 (print version)
LC/TS.2019/59
LC/CAR/TS.2019/2
Distribution: L
Copyright © United Nations, 2019
All rights reserved
Printed at United Nations, Santiago
S.19-00752

This publication should be cited as: A. Bleeker, Using Universal Service Funds to increase access to technology for persons with disabilities in the Caribbean, *Studies and Perspectives series-ECLAC Subregional Headquarters for the Caribbean*, No. 79 (LC/TS.2019/59-LC/CAR/TS.2019/2), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC), 2019.

Applications for authorization to reproduce this work in whole or in part should be sent to the Economic Commission for Latin America and the Caribbean (ECLAC), Publications and Web Services Division, publicaciones.cepal@un.org. Member States and their governmental institutions may reproduce this work without prior authorization but are requested to mention the source and to inform ECLAC of such reproduction.

Contents

Abstract	7
Introduction	9
I. Background	13
A. Disability in the Caribbean	13
B. The Convention on the Rights of Persons with Disabilities, the 2030 Agenda for Sustainable Development and the SIDS Development Agenda	15
C. ICT service and access in the Caribbean	17
D. The role of universal service funds	18
E. Research methodology	20
II. Overall findings	23
A. Snapshot of USFs and USOs in the region	23
B. General challenges	27
1. Non-implementation of enabling legislation	27
2. Focus on universal service to the exclusion of access	28
3. Failure to use technologically-neutral language	29
4. Low fund activity levels	30
5. Lack of timely reporting	30
C. Challenges related to projects for persons with disabilities	31
1. Terminology falling short of CRPD standards	31
2. Engagement with PWDs in project allocation and design processes	33
3. Lack of project proposals targeting PWDs and their access needs	34
4. Knowledge of disability organizations on available ICTs	34
5. Inability of disability organizations to apply for USF funding	35
III. Best practices and recommendations	37

A.	Implement USF legislation after updating it to reflect technological change and modern approaches to disability	37
B.	Update the legislative and regulatory frameworks of active USFs	38
1.	Reshapes the scope of USFs to ensure both universal access and service	38
2.	Uses flexible language responsive to new forms and uses of technology	38
3.	Enables funding to be disbursed to civil society and NGOs working with persons with disabilities and other marginalised groups	38
4.	Includes a stronger mandate for persons with disabilities including an obligation to have annual targets to meet fund objectives	39
C.	Increase engagement with persons with disabilities at each stage of a project's lifespan, including the identification, appraisal and allocation processes	39
D.	Increase representation of PWDs within USFs	40
E.	Invest a fixed percentage of funds in projects to increase access to technology for persons with disabilities	41
F.	Make structural changes to ensure the timely disbursement and sustainability of USF funds	42
G.	Increase USF transparency and accountability through regular monitoring and reporting	42
H.	Seize on opportunities for national and regional cooperation and capacity building	43
I.	Accede to the Optional Protocol to the Convention on the Rights of Persons with Disabilities	44
Bibliography		45
Annexes		47
Annex 1	.....	48
Annex 2	.....	71
Annex 3	.....	72
Annex 4	.....	76
Annex 5	.....	77
Series: issues published		82
Tables		
Table 1	ECLAC Member Countries and Associate Members with USOs and USFS	24
Table 2	Existence of USFs in the Caribbean	24
Table 3	Countries with enacted but unimplemented USF legislation	25
Table 4	Countries with USF legislation containing a specific mandate for persons with disabilities	25
Table 5	Forms of technology/services eligible for funding from active USFs	26
Table 6	ICTs, including assistive technologies, to which persons with disabilities and disability organisations in the Caribbean report lacking access	27
Table 7	Disability terminology included in telecommunications legislation and regulations of non-ECTEL Caribbean countries	32
Table A1	Schedule from draft ECTEL Electronic Communications (Universal Service and Access) Order	50
Table A2	Projects for PWDS and other marginalised groups funded by Dominica's USF	52
Table A3	Projects for PWDS and other marginalised groups funded by Grenada's USF	54
Table A4	Projects for underserved groups funded by Saint Kitts and Nevis' USF	55

Table A5	Projects for PWDS and other marginalised groups funded by Saint Lucia's USF.....	56
Table A6	Projects for PWDS and other groups funded by Saint Vincent and the Grenadines' USF.....	58
Table A7	Past, current and future USF projects of NTRCs aiming to improve access to technology for PWDs.....	59
Table A8	Projects for vulnerable groups and underserved areas funded by Jamaica's USF	65
Table A9	Projects for PWDS and other underserved groups funded by Trinidad and Tobago's USF	68

Figures

Figure 1	Funds collected and disbursed by USFs in the region since they began collecting funds up to February 2019	26
----------	---	----

Boxes

Box 1	What is a disability?	14
-------	-----------------------------	----

Abstract

This study examines how Universal Service Funds (USFs) can be better utilised in Caribbean Small Island Developing States (SIDS) to increase access to technology for persons with disabilities. It presents data on disability in the region and addresses key requirements from the United Nations Convention on the Rights of Persons with Disabilities. It sets out the background, challenges and achievements of existing Caribbean USFs in addition to discussing countries that have enacted but not implemented USF legislation. The study identifies best practices and recommendations for Caribbean SIDS wishing to establish or improve an existing USF to increase access to technology for persons with disabilities in the region.

Introduction

Persons with disabilities (PWDs) are 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”.¹ They face a range of physical, social, attitudinal and institutional barriers that prevent their full and effective participation in society on an equal basis with others. Common barriers include an inaccessible physical environment, including public transport, footpaths and buildings, inadequate legal and social protections, and stigma, prejudice and discrimination. As a result, PWDs experience poorer outcomes in health, education, employment, and housing. The Caribbean is home to approximately 1.3 million persons with a disability of some kind and around 250,000 persons with a significant disability.² The number and proportion of persons with disabilities is projected to increase in coming decades, mostly due to the demographic transition and increase in chronic health conditions occurring in the region.

Information and Communications Technologies (ICTs) can break down the many barriers that prevent persons with disabilities from participating actively in society and enjoying their rights. Rapid technological progress has made ICTs central to peoples’ lives and profoundly transformed the way we communicate with each other. However, developments in technology can exacerbate existing inequalities where countries do not take appropriate measures to ensure that all persons have access to them. Research indicates that access to the internet and other ICTs is not evenly enjoyed, and that

¹ United Nations (2006), *Convention on the Rights of Persons with Disabilities and Optional Protocol (A/RES/61/106)*, New York.

² Economic Commission for Latin America and the Caribbean (ECLAC) (2018), “Disability, Human Rights and Public Policy in the Caribbean: A Situation Analysis”, *ECLAC Studies and Perspectives Series – No. 64 (LC/T/S.2017/151)* Santiago, Chile.

many groups experience a digital divide, including persons with disabilities.³ For example, while smartphones now have built-in accessibility features, such as voice recognition software, many websites and other online platforms are still inaccessible to PWDs.

The United Nations Convention on the Rights of Persons with Disabilities (CRPD) recognises that ensuring access to ICTs for persons with disabilities is an essential enabler of sustainable development, and that ICTs can remove many of the remaining barriers to the full and effective participation of persons with disabilities in society.⁴ To this end, the CRPD requires States to take appropriate measures to ensure that persons with disabilities have access to ICTs, including assistive technologies, on an equal basis with others. State Parties must take measures to the maximum of their available resources, with a view to progressively achieving the full realization of this right.

Universal Service Funds (USFs) are a mechanism that can be used to finance measures to ensure access to ICTs for persons with disabilities. USFs aim to increase access to telecommunication services through a levy on telecommunication providers. They are often used in combination with Universal Service Obligations (USO), a legal obligation placed on telecommunications providers to make telecommunications services available to substantially all consumers in a country, not just those in areas where a return on investment is guaranteed.

The Economic Commission for Latin America and the Caribbean (ECLAC) has previously found that USFs are a valuable yet under-utilized resource that can be used to fund programmes for PWDs in the Caribbean.⁵ However, USFs have been beset with various challenges across the world, such as high levels of undisbursed funds, outdated legal frameworks which limit the ability of governments to fund new technologies, low transparency levels leading to gross mismanagement, lack of institutional capacity, political interference and other indicators of poor performance. This has led experts to encourage a cautious approach to their adoption for improving access to ICTs for persons with disabilities and other marginalised groups.

Building on these lessons and ECLAC's earlier research, this study explores common challenges encountered by USFs in the Caribbean and identifies best practices and recommendations to support Caribbean governments to effectively use USFs for the benefit of persons with disabilities.

The study is divided into three main chapters, followed by five annexes. Chapter I, Background, provides statistical information on disability in the Caribbean, introduces the linkages between the 2030 Agenda for Sustainable Development, the Small Island Developing State (SIDS) Development Agenda and the CRPD, and explores key CRPD concepts. The chapter also takes a brief look at ICT infrastructure and access for persons with disabilities in the Caribbean and then introduces USFs and literature on their challenges and achievements in other parts of the world. Finally, the chapter describes the study's research methodology, which included online questionnaires and interviews with ministries and regulatory bodies responsible for telecommunications and USFs, persons with disabilities and disability organisations as well as a review of legislative and regulatory frameworks for USFs in the region.

Chapter II, Overall findings, provides a snapshot of USFs and USOs in the region, including a series of graphs and other figures breaking down key aspects of countries' arrangements. The chapter

³ ECLAC (2018a), *Information and Communications Technologies for the Inclusion and Empowerment of Persons with Disabilities in Latin America and the Caribbean* (LC/TS.2018/48), Santiago, Chile.

⁴ See also United Nations General Assembly (2017), *Information and Communications Technologies for Sustainable Development* (A/RES/72/200), New York.

⁵ ECLAC (2018a), *Information and Communications Technologies for the Inclusion and Empowerment of Persons with Disabilities in Latin America and the Caribbean* (LC/TS.2018/48), Santiago, Chile.

also presents challenges, both general and relating to projects for person with disabilities, experienced by USFs in the region.

Chapter III concludes with a series of best practices and recommendations to support governments to implement unenacted USF legislation and to better utilise existing USFs in the region generally and for the benefit of persons with disabilities.

Annex I, Country profiles: current status, issues and achievements, presents profiles for Caribbean countries that have active USFs and/or USOs or have enacted legislation enabling the establishment of a USF but not yet implemented it. Where information was available, the profiles outline the country's legislative and regulatory framework, present financial information and recent projects benefiting persons with disabilities, and discuss any challenges experienced by the USF. For countries with draft or enacted but unimplemented USF laws, the profiles outline these laws and discuss the status of any work to implement them.

Four further annexes follow, containing the two online questionnaires sent to ECLAC Member Countries and Associate Members served by the subregional headquarters for the Caribbean and persons with disabilities and organisations working with them in these countries, as well as lists of the respondents to each questionnaire.

I. Background

A. Disability in the Caribbean

Approximately 15 per cent of the world's population, over one billion persons, experience some form of disability. In the Caribbean, there are approximately 1.3 million persons with a disability of some kind and around 250,000 persons with a significant disability.⁶

The number of persons with disability in the region is projected to increase dramatically in the coming decades, largely due to the demographic transition taking place in the Caribbean and the global increase in chronic health conditions.⁷ The prevalence of disability in the Caribbean is already much higher for older persons, while statistics also show a slightly higher prevalence of women compared to men and of boys compared to girls.⁸ Persons with disabilities are also more likely to be poor, and poor people are more likely to become disabled.⁹

⁶ For information on how these estimates were reached, see ECLAC (2018), "Disability, Human Rights and Public Policy in the Caribbean: A Situation Analysis", *ECLAC Studies and Perspectives Series – No. 64* (LC/TS.2017/151) Santiago, Chile. Persons with a 'significant disability' are those who in response to the short set of questions developed by the Washington Group on Disability Statistics report that for at least one core basic activity (seeing, hearing, walking etc) they have either 'a lot of difficulty' or 'cannot do [it] at all.' This is the standard statistical measure of disability. A looser definition of 'disability' would additionally include those persons not having a 'significant disability' but who responded that they had 'some difficulty' with at least one of the core basic activities.

⁷ The demographic transition is a worldwide trend whereby countries have an increasing number and proportion of older persons in their populations due to declines in mortality and fertility and increased longevity. See ECLAC (2018), 'Inclusive social protection and demographic change: The implications of population ageing for social expenditure in the Caribbean', *Studies and Perspectives Series – No. 66* (LC/TS.2017/153). Santiago, Chile.

⁸ Ibid.

⁹ WHO (2015), "WHO global disability action plan 2014-2021: Better health for all people with disability", Switzerland.

Box 1**What is a 'disability'?**

The CRPD defines persons with disabilities (PWDs) 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.” The World Health Organisation’s (WHO) International Classification of Functioning, Disability and Health (ICF) describes disability as “an umbrella term for impairments, activity limitations and participation restrictions. It denotes the negative aspects of the interaction between an individual (with a health condition) and the individual’s contextual factors (environmental and personal factors).” Both definitions recognise that disability is an evolving, social construct resulting from the interaction between persons’ impairments and external barriers that hinder their participation in society. The Washington Group on Disability Statistics, a consultation group established under the United Nations Statistical Commission, defines PWDs as those who have a lot of difficulty with or cannot perform certain activities because of a health problem. The core basic activities assessed are seeing, hearing, walking, remembering and concentrating, self-care including dressing and washing, and communicating.

In most Caribbean countries, the only sources of statistical information regarding persons with disabilities are population and housing censuses, which usually occur every ten years. The possibility of drawing comparisons between censuses is limited by the fact that countries use different questions to collect information on disability. For example, in the past, censuses and surveys have used terms, such as ‘mental retardation’, to describe the various forms of disability. Due to the stigma attached to this language, persons with a mental impairment may decline to respond that they have a ‘mental retardation’. As a result, persons with disabilities are not always accurately accounted for and thus statistics need to be treated with caution.

While statistical limitations may hinder a full understanding of the situation of persons with disabilities in the Caribbean, it is unquestionable that many persons with disabilities face barriers that prevent their full and effective participation in society on an equal basis with others. The degree to which persons with disabilities are prevented from being active members of society depends on the type and severity of their disability, age, race, gender and socio-economic status among other factors. However, it is generally rare for public spaces and services, including schools, workplaces, and public transportation, to be designed to accommodate persons with disabilities. This is one reason why persons with disabilities experience poorer outcomes in health, education, employment, housing and other areas of life.

According to ECLAC data, the most common types of disabilities in the Caribbean are seeing and walking impairments.¹⁰ Upper-body, self-care, remembering, communicating and hearing disabilities follow as the next most common disabilities, in that order.

¹⁰ Ibid.

B. The Convention on the Rights of Persons with Disabilities, the 2030 Agenda for Sustainable Development and the SIDS Development Agenda

With the adoption of the 2030 Agenda for Sustainable Development, United Nations Member States pledged to address the needs of marginalised groups, including persons with disabilities.¹¹ Unlike its predecessor, the Millennium Development Goals (MDGs), the Agenda references and includes several targets relating to persons with disabilities.¹² The Agenda also recognises that increasing access to technology is a key facilitator of sustainable development. To this end, it includes targets related to universal and affordable access to ICTs and the internet and pledges to 'leave no-one behind'. This has special significance in the context of SIDS whose development agenda, including the SAMOA Pathway, provides an underlying framework within which international cooperation and assistance to SIDS can be operationalized to achieve sustainable development.

Adopted at the Third International Conference on Small Island Developing States in 2014, the SIDS Accelerated Modalities of Action Pathway (SAMOA Pathway) also calls for the strengthening of the longstanding cooperation and support provided by the international community in assisting small island developing states to make progress in addressing their vulnerabilities and supporting their sustainable development efforts.¹³ The SAMOA Pathway identifies a comprehensive set of priorities for SIDS, including tackling the structural and socioeconomic inequalities and multiple intersecting forms of discrimination affecting persons with disabilities, which are intended to operate in synergy with the 2030 Agenda and SDGs.

For persons with disabilities in Caribbean SIDS, these agendas provide fresh political momentum to push for the realisation of the rights contained in the United Nations Convention on the Rights of Persons with Disabilities (CRPD). Adopted in 2006, the CRPD is a human rights treaty and development tool that promotes the full participation of persons with disabilities in all spheres of life. It marks a shift in attitudes and approaches towards disability from viewing persons with disabilities as 'objects' in need of charity, medical treatment and protection to 'subjects' with rights, capable of claiming those rights and actively participating in society. There is considerable overlap between the 2030 Agenda and the CRPD as the Agenda was built upon existing international and national commitments including those contained in the CRPD.

¹¹ United Nations General Assembly (2015), *Transforming our world: the 2030 Agenda for Sustainable Development* (UN Res A/RES/70/1), New York.

¹² The seven targets are: ensuring equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities (target 4.5), building and upgrading education facilities that are child, disability and gender sensitive (target 4.a), achieving full and productive employment, decent work and equal pay for work of equal value for all women and men, including persons with disabilities (target 8.5), empowering and promoting the social, economic and political inclusion of all, irrespective of disability and other statuses (target 10.2), providing access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of persons with disabilities (target 11.2); providing universal access to safe, inclusive and accessible, green and public spaces, in particular for persons with disabilities (target 11.7), enhancing capacity-building support to developing countries, including SIDS, to increase significantly the availability of high-quality, timely and reliable data disaggregated by disability and other characteristics (target 17.18).

¹³ United Nations General Assembly (2014), *SIDS Accelerated Modalities of Action (SAMOA) Pathway* (UN Res A/RES/69/15), New York.

The Convention—which has been ratified by 14 out of 16 ECLAC Member States served by the subregional headquarters for the Caribbean¹⁴—requires States to ensure and promote the full realization of all human rights and fundamental freedoms for all persons with disabilities without discrimination of any kind. To this end, each State Party agrees to take measures to the maximum of its available resources, with a view to progressively achieving the full realization of these rights. There is also an Optional Protocol to the CRPD which provides a monitoring and individual complaints mechanism through the Committee on the Rights of Persons with Disabilities.¹⁵ However, the only Caribbean States that have acceded to the Protocol to date are Dominica and Saint Vincent and the Grenadines.¹⁶

States are required to take appropriate measures to ensure that persons with disabilities have access to ICTs, including assistive technologies, on an equal basis with others.¹⁷ This requires designing, producing and distributing accessible information and communications technologies and systems at an early stage of development, so that these technologies and systems become accessible at a minimum cost.¹⁸ The Convention recognises that ensuring access to ICTs for persons with disabilities is an essential enabler of sustainable development, and that ICTs can help to remove the remaining barriers to the full and effective participation of PWDs in society.¹⁹

In addition to accessibility, the Convention also adopts the principle of ‘reasonable accommodation’, which requires States to make necessary and appropriate modifications and adjustments to ensure that persons with disabilities may enjoy and exercise their rights and freedoms on an equal basis with others. This obligation extends to places of work and education and includes the provision of accessible ICTs and assistive technologies.

States must implement these obligations in close consultation with and by actively involving persons with disabilities, including children with disabilities, through their representative organizations, in accordance with the principle of ‘nothing about us without us’. Article 4(3) of the Convention states: “In the development and implementation of legislation and policies to implement the present Convention, and in other decision-making processes concerning issues relating to persons with disabilities, States Parties shall closely consult with and actively involve persons with disabilities, including children with disabilities, through their representative organisations.”

The WHO’s Global Disability Action plan 2014-2021 supports the implementation of measures designed to support the rights of PWDs, as enshrined in the Convention. The Action Plan has three objectives: (1) to remove barriers and improve access to health services and programmes; (2) to strengthen and extend rehabilitation, habilitation, assistive technology, assistance and support services, and community-based rehabilitation; and (3) to strengthen collection of relevant and

¹⁴ Antigua and Barbuda (2016), The Bahamas (2015), Barbados (2013), Belize (2011), Cuba (2007), Dominica (2012), Dominican Republic (2009), Grenada (2014), Guyana (2014), Haiti (2009), Jamaica (2007), Saint Vincent and the Grenadines (2010), Suriname (2017), and Trinidad and Tobago (2015).

¹⁵ United Nations (2006), *Convention on the Rights of Persons with Disabilities and Optional Protocol* (A/RES/61/106), New York.

¹⁶ The Caribbean’s 13 non-self-governing territories (NSGTs) are governed by France, the Netherlands, the United Kingdom and the United States of America, all of which have ratified the CRPD except the US. Only the UK and France have ratified the Optional Protocol. The UK has not extended the application of the Convention or its Protocol to its NSGTs, while France automatically extended the Optional Protocol to its overseas departments, Guadeloupe and Martinique.

¹⁷ CRPD, article 9(1).

¹⁸ CRPD, article 9(2)(h).

¹⁹ See also United Nations (2017), *Information and Communications Technologies for Sustainable Development* (A/RES/72/200), New York.

internationally comparable data on disability and support research on disability and related services. Action 2.5 of the Plan calls on Member States to make available appropriate assistive technologies that are safe, of good quality and affordable through financing mechanisms and programmes, including systems where persons with disabilities can rent assistive technologies. Furthermore, in 2013, CARICOM Member States reaffirmed their commitment to the rights of persons with disabilities in the Declaration of Pétion Ville.²⁰ Member States called on countries to ratify the CRPD and other international and regional disability instruments and to develop national laws to give effect to them. They further agreed to "... support the exploration and provision of the use of assisted technology, particularly information and communication technologies to enhance the access of persons with disabilities to information, education, employment and services."

Most Caribbean countries have dualist legal systems, meaning that ratified international treaties only become domestic law with separate implementing legislation. Only a few Caribbean countries, including Guyana, Jamaica, the Bahamas and Cayman Islands, have developed comprehensive legislation for persons with disabilities guaranteeing the range of rights found in the CRPD.²¹ Other countries rely on partial protections found in employment, building and education legislation or policies.

Administering powers of the Caribbean's 13 non-self-governing-territories (NSGTs) generally extend the application of ratified international treaties to their NSGTs. France, the Netherlands and the United States have monist legal systems, where treaties become domestic law without the need for implementing legislation. However, the United States has not ratified the CRPD or its Optional Protocol and the Netherlands has not ratified the Optional Protocol. France automatically extends international treaties, including the CRPD and its Optional Protocol, to its overseas departments, Guadeloupe and Martinique. The United Kingdom, by contrast, has a dualist legal system. Although it has ratified the CRPD and its Optional Protocol, it has not extended either treaty to its six Caribbean overseas territories.²² Since becoming independent from the Netherlands, Aruba, Curaçao and Sint Maarten are yet to accede to the CRPD or its Optional Protocol.

Even where Caribbean countries have legislation implementing the CRPD in domestic law, organisations working with persons with disabilities report that enforcement and awareness are generally lacking and persons with disabilities do not have access to mechanisms enabling them to make complaints and receive redress. As a result, much needs to be done before the protections in the CRPD become a living reality for persons with disabilities in the Caribbean.

C. ICT service and access in the Caribbean

Many of the protections in the CRPD recognise that access to ICTs for persons with disabilities is an essential enabler of sustainable development. However, ability to access ICTs depends on the availability of ICT infrastructure.

²⁰ CARICOM (2013), *Declaration of Pétion Ville*, 6 December 2013, Haiti.

²¹ For more information on these laws, see ECLAC (2018), "Disability, Human Rights and Public Policy in the Caribbean: A Situation Analysis", *ECLAC Studies and Perspectives Series – No. 64* (LC/TS.2017/151) Santiago, Chile, p. 14.

²² Anguilla, Bermuda, British Virgin Islands, Cayman Islands, Montserrat, and Turks and Caicos Islands. See UN Committee on the Rights of Persons with Disabilities, 'Concluding observations on the initial report of the United Kingdom of Great Britain and Northern Ireland' (CRPD/C/GBR/CO/1), 3 October 2017.

Caribbean countries already have relatively comprehensive ICT infrastructure. National networks are typically made up of a combination of fibre-optic, copper and wireless technologies.²³ Most countries are also rolling out third-generation and fourth-generation wireless technologies to support mobile broadband internet. There has been steady investment in submarine cable systems to increase broadband bandwidth and to better connect the Caribbean with the Americas. The expansion of mobile technology in the region, in conjunction with newly established wireless networks and service providers offering a range of data plans, has been a major contributor to increased internet adoption and use.

Yet in 2017, more than half of households in Latin America and the Caribbean still lacked access to the internet.²⁴ Levels of access vary between Caribbean countries, reflecting factors such as differing levels of economic development. In 2014, only 11 per cent of Haitians had internet access compared to almost 80 per cent of the population in Barbados and the Bahamas.²⁵ Quality of access is also an issue in the region, with connection speeds improving but not keeping pace with the rest of the world. At the national level, internet penetration is poorer in rural areas than urban, and rich households are more likely to have internet access than those in the poorest quintile of income distribution.²⁶

Where internet access exists, use of this technology does not always follow due to lack of affordability, skills or relevant local content. A 2019 survey found that 51 per cent of the Caribbean population are using the internet.²⁷ The disparity between availability and use particularly affects persons with disabilities and other marginalised groups.²⁸ Internet use by persons with disabilities in the Caribbean lags behind that of persons without disabilities, even after accounting for age differences of persons with and without disabilities. Similarly, while internet access figures show parity among men and women, the use of internet remains unequal, with men eight percentage points ahead of women in some countries.²⁹ Due to the intersecting forms of exclusion they face, the gap is even larger for women with disabilities.³⁰

D. The role of universal service funds

As mentioned earlier, the CRPD requires State Parties to take measures to the maximum of their available resources, with a view to progressively achieve the full realization of the rights it contains. In line with the CRPD, the WHO Global Disability Action Plan calls on countries to make available appropriate assistive technologies that are safe, of good quality and affordable through financing mechanisms and programmes. Universal Service Funds (USFs) are a mechanism that can be used to finance projects to ensure access to ICTs for persons with disabilities.

²³ Internet Society (2017) [online], 'Unleashing the Internet in the Caribbean: Removing Barriers to Connectivity and Stimulating Better Access in the Region', p. 33 <https://www.internetsociety.org/wp-content/uploads/2017/08/ISOC_Unleashing_Internet_in_Caribbean_20170221.pdf> [20 November 2018].

²⁴ ECLAC (2017), *State of broadband in Latin America and the Caribbean 2017* (LC/TS.2018/11), Santiago.

²⁵ Internet Society (2017).

²⁶ ECLAC (2017).

²⁷ We are Social (2019), 'Digital 2019: Turks and Caicos Islands', (online) <date of reference: 1 July 2019> <<https://datareportal.com/reports/digital-2019-turks-and-caicos-islands>>.

²⁸ ECLAC (2018), *Information and communications technologies for the inclusion and empowerment of persons with disabilities in Latin America and the Caribbean* (LC/TS.2018/48), Santiago.

²⁹ ECLAC (2017).

³⁰ See, for example, O'Donnell, A. and Sweetman, C. (2018) 'Introduction: Gender, Development and ICTs' in *Gender & Development*, vol. 26(2), p. 217-229. The authors state: "Technology mirrors the societies that create it, and access to (and effective use of) technologies is affected by intersecting spectrums of exclusion including gender, ethnicity, age, social class, geography, and disability."

USFs aim to increase access to telecommunication services through projects funded by legally-mandated contributions from telecommunication providers. Traditionally, USFs have been used to expand telephone and broadband networks into geographical areas that private telecommunication companies would otherwise view as unattractive for investment. However, advocates for PWDs have encouraged a reshape of these funds towards ensuring both universal service and access. Universal access recognises that not only do remote, disadvantaged and vulnerable populations require an available connection to telecommunications, but that they must also be made accessible to persons with disabilities and other marginalised groups by providing necessary skills, equipment and support.

Some countries have a Universal Service Obligation (USO) instead of or in conjunction with a USF. USOs place an obligation on telecommunications providers to make telecommunications services available to virtually all consumers in a country, not just those in areas where a return on investment is guaranteed. This is of particular importance in Caribbean SIDS, many of which are made up of one or more islands spread over a large distance. Populations in small or outlying islands can experience poorer quality, availability and affordability of telecommunications services.

USFs, including where they are used in conjunction with a USO, are a valuable yet under-utilized resource that can be used to fund programmes for PWDs in the Caribbean.³¹ As described in country profiles in Annex I, 21 Caribbean countries either have active USFs and/or USOs in place or have enacted legislation enabling the establishment of a USF but not yet implemented it. However, while many countries reference digital inclusion in USF regulations or laws, this does not necessarily translate into concrete policies addressing critical requirements for successful USFs or implementation of projects. Across the globe, nearly 28 per cent of low- and middle-income countries do not have either a USF or one that is active.³² The remaining countries either have no mechanism in place to provide universal service coverage and funding or use other mechanisms, such as licence conditions, subsidies, and private-public partnerships (PPPs).

A study of the Economic and Social Commission for Asia and the Pacific (ESCAP) shows that the effectiveness of USFs in the Asia-Pacific region has been limited, due to weaknesses in their design, structure and implementation.³³ Among the challenges observed were low fund disbursement rates, misalignment between fund objectives and use of funds, and limited success deploying broadband in rural and remote areas. Countries with USFs targeting the expansion of broadband and internet have not overall experienced better results in developing their broadband and internet infrastructure than countries without such a fund. At the same time, the study identifies examples of countries that have effectively used USFs to connect rural and underserved communities. It concludes that there is no one size fits all approach to USFs in the Asia-Pacific region as “every country...has a unique set of challenges related to governance, geography, market development, foreign investment, leadership, rule of law and other unforeseen circumstances.”

³¹ ECLAC (2018a), *Information and Communications Technologies for the Inclusion and Empowerment of Persons with Disabilities in Latin America and the Caribbean (LC/TS.2018/48)*, Santiago, Chile.

³² Thakur, D. and Potter, L. (2018), *Universal Service and Access Funds: An untapped resource to Close the Gender Digital Divide*, Washington DC, Web Foundation.

³³ Economic and Social Commission for Asia and the Pacific (ESCAP) (2017), “The Impact of Universal Service Funds on Fixed-Broadband Deployment and Internet Adoption in Asia and the Pacific”, *Asia-Pacific Information Superhighway (AP-IS) Working Paper Series*, [online] [date of reference: 17 April 2019] <[https://www.unescap.org/sites/default/files/Universal per cent20Access per cent20and per cent20Service per cent20Funds.pdf](https://www.unescap.org/sites/default/files/Universal%20Access%20and%20Service%20Funds.pdf)>.

Similarly, the Global System for Mobile Communication (GSMA) encourages a cautious approach to the wholesale adoption of USFs for improving access to ICTs for persons with disabilities and other marginalised groups.³⁴ Of the 64 USFs profiled around the world, more than a third were yet to disburse any funds and many USFs received levies exceeding their capacity to create and spend the money collected on projects. Other common issues included unsuitable legal frameworks, political interference, poorly-designed projects incapable of meeting their targets, and lack of reporting and transparency.

GSMA's study also profiles a variety of operational USFs and finds that some USFs have achieved improvements in service for underserved segments of the population. Colombia's USF is cited as an example of best practice with a financially autonomous structure, transparent public bidding process and projects being implemented in a timely manner. The study profiled one Caribbean USF, the Dominican Republic's Fondo de Desarrollo de las Telecomunicaciones (FDT) and found that it had achieved some improvements in telecommunications service to disadvantaged population groups through a focus on access to education and training.

Overall, GSMA concludes that USFs do not appear to be the most appropriate mechanism for providing universal access and service and furthering social and economic development. It recommends exploring alternatives, such as the imposition of license conditions on operators, the establishment of new plans or funds that are separate from the existing USFs, and private/public partnerships.

E. Research methodology

This study used a combination of approaches and sources to determine the status, achievements and challenges of USFs in the region and to examine ways in which USFs can be used to increase access to technology for persons with disabilities.

First, ECLAC conducted two online questionnaires using an online tool, Verint. One questionnaire was sent to ministries and regulatory bodies responsible for telecommunications and/or USFs in each Member Country and Associate Member served by ECLAC subregional headquarters for the Caribbean. The aim of the questionnaire was to gather up-to-date information on the existence, operation, achievements and effectiveness of USOs and USFs in Caribbean countries and territories. The questionnaire also aimed to identify potential opportunities for ECLAC to provide technical assistance to governments in the region to create and operate USFs in a way which benefits PWDs. The Caribbean Telecommunications Union (CTU) and the Caribbean Association of National Telecommunications Organizations (CANTO) assisted ECLAC in identifying relevant government representatives and other contacts in each country.

11 out of the 16 ECLAC Member Countries served by the subregional headquarters for the Caribbean completed the questionnaire. 2 of the 13 Associate Members also completed the questionnaire. A list of the respondents is available at Annex II. A copy of the online questionnaire, excluding branching and conditional visibility, can be found in Annex III.

Second, a separate questionnaire was sent to more than 30 persons with disabilities and organisations working with persons with disabilities in Caribbean countries where contacts could be located. It was aimed at gathering information on the unmet technological needs of PWDs in the region, the effectiveness of USFs from the perspective of PWDs and how disability organisations are using USF

³⁴ GSMA (2013), *Universal Service Fund Study* [online] [date of reference: 17 April 2019] <https://www.gsma.com/publicpolicy/wp-content/uploads/2016/09/GSMA2013_Report_SurveyOfUniversalServiceFunds.pdf>

funds. 12 PWDs and organisations responded to the online questionnaire, which included the questions found in Annex IV. A list of the respondents to this questionnaire is available at Annex V.

Third, telephone interviews were conducted with administrators and managers of USFs and organisations working with PWDs in a selection of Caribbean countries, including Grenada, Saint Lucia, Saint Kitts and Nevis, Saint Vincent and the Grenadines, and Trinidad and Tobago. The interviews were used to gain further insights on the answers provided in the questionnaires and to fill in any gaps or clarify understandings.

Finally, the author of the study also assessed the legislative and regulatory frameworks for USOs and USFs found in the region. In many cases, legislation and regulations could be found using a google search. In other instances, government representatives provided ECLAC with the relevant documents.

In the following section, the study presents its overall findings, including a snapshot of USFs and USOs in the region and the challenges, both general and relating to projects for person with disabilities, experienced by USFs in the region.

II. Overall findings

A. Snapshot of USFs and USOs in the region

²¹ Caribbean countries either have active USFs and/or USOs in place or have enacted legislation enabling the establishment of a USF but not yet implemented it. Outlines of the legislative and regulatory frameworks of these countries' USFs, along with active USFs' financial information, projects for persons with disabilities and associated challenges can be found in Annex I, Country profiles: current status, issues and achievements.

10 Caribbean countries have both a USF and a USO, while Cuba has a USO alone. A further 10 countries have enacted legislation enabling the establishment of a USF but have not implemented it. Antigua and Barbuda has drafted a telecommunications bill providing for a USO and a USF, but the bill has stalled due to industry concerns about the proposed USF levy. Of the 10 countries with unimplemented USF legislation, 5 of these countries' legislative instruments contain a specific mandate for persons with disabilities.

Of the 10 countries with USFs and USOs, 5 of these countries—Dominica, Grenada, Saint Lucia, Saint Kitts and Nevis and Saint Vincent and the Grenadines—belong to the Eastern Caribbean Telecommunications Authority (ECTEL), whose founding treaty requires Contracting States to establish these mechanisms. These countries have adopted ECTEL's model USF legislation and regulations, which contain a specific mandate to provide universal telecommunications service to 'the disabled and physically challenged'. ECTEL is reaching the end of a review process, which will result in significant changes to its universal service framework. This includes extending the scope of USFs to 'Universal Service and Access Funds' (USAFs), enabling them to deliver both universal service and universal access. The other 5 countries—Dominican Republic, Puerto Rico, Jamaica, Trinidad and Tobago, and United States Virgin Islands—have active USFs but only Jamaica and Trinidad and Tobago have arrangements in place to ensure universal service and access to telecommunications for persons with disabilities.

Table 1
ECLAC Member Countries and Associate Members with USOs and USFS
(✓ indicates the country has the mechanism, X indicates the country does not have the mechanism)

Country	USO	USF
Anguilla	X	X
Antigua and Barbuda	X	X
Aruba	Information unavailable	Information unavailable
The Bahamas	X	X
Barbados	X	X
Bermuda	X	X
Belize	X	X
British Virgin Islands	Information unavailable	Information unavailable
Cayman Islands	X	X
Cuba	✓	X
Curaçao	Information unavailable	Information unavailable
Guadeloupe	Information unavailable	Information unavailable
Dominica	✓	✓
Dominican Republic	✓	✓
Grenada	✓	✓
Guyana	X	X
Haiti	Information unavailable	Information unavailable
Jamaica	✓	✓
Martinique	Information unavailable	Information unavailable
Montserrat	X	X
Puerto Rico	✓	✓ (2 – one local and one federal)
Saint Kitts and Nevis	✓	✓
Saint Lucia	✓	✓
Saint Vincent and the Grenadines	✓	✓
Sint Maarten	Information unavailable	Information unavailable
Suriname	X	X
Trinidad and Tobago	✓	✓
Turks and Caicos Islands	X	X
United States Virgin Islands	✓	✓ (2 – one local and one federal)

Source: Prepared by the author.

Table 2
Existence of USFs in the Caribbean

Category	Number of countries	Percentage of countries
USF	10	35 per cent
No USF	12	41 per cent
No information available	7	24 per cent

Source: Prepared by the author.

Table 3
Countries with enacted but unimplemented USF legislation

Country	Legislation/Regulations	Is implementation work taking place?	Explanation
Anguilla	Universal Service and Public Telecommunications Regulations 2014	Not known	Information unavailable
The Bahamas	Communications Act 2009	Not known	Information unavailable
Barbados	Telecommunications Act 2001	Under consideration	The Telecommunications Unit is currently considering establishing a USF
Belize	Telecommunications 2002	Under consideration	The Public Utilities Commission is considering putting in place a USF
Bermuda	Electronic Communications Act 2011	Under consideration	The Regulatory Authority of Bermuda is in the early stages of designing USO and USF mechanisms
Cayman Islands	Information and Communications Technology Law 2017	Not known	Information unavailable
Guyana	Telecommunications Act 2016	Yes	The Ministry of Public Telecommunications is in the process of establishing a USF and USO
Montserrat	Info-Communications Act 2009	No	The Montserrat Info-Communications Authority (MICA) has determined that neither a USO nor a USF are realistic or necessary at this time
Suriname	Wet Telecommunicatievoorzieningen (S.B. 2004 no. 151)	No	The Telecommunications Authority Suriname does not currently consider a USF necessary
Turks and Caicos Islands	Universal Service and Public Telecommunications Regulations 2005	Not known	Information unavailable

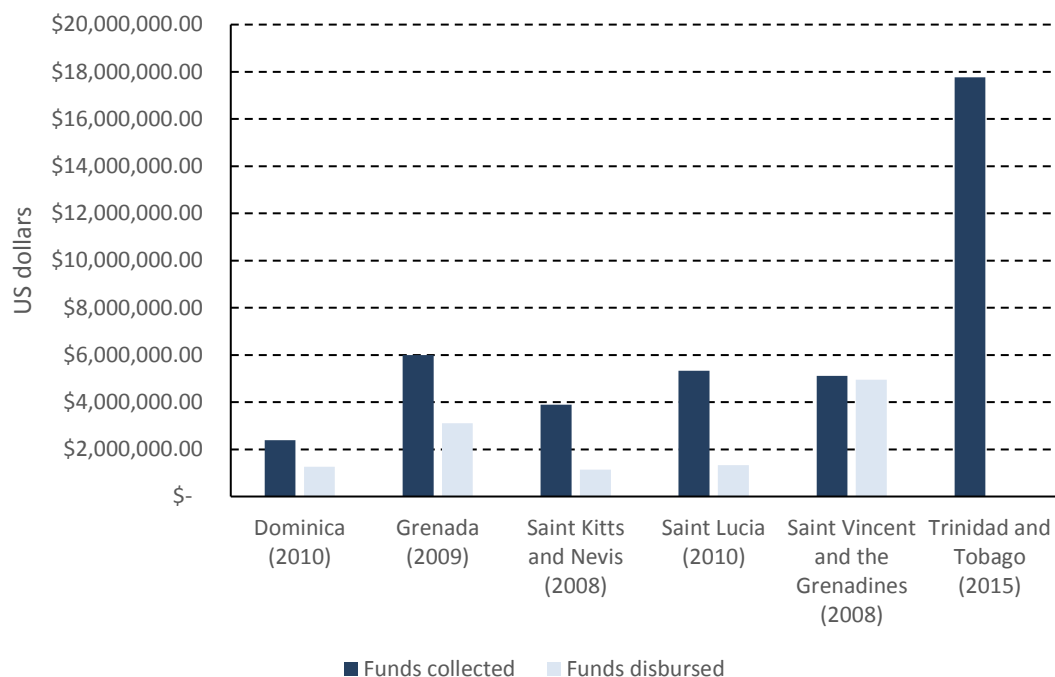
Source: Prepared by the author.

Table 4
Countries with USF legislation containing a specific mandate for persons with disabilities

Legislation enacted and implemented	Dominica Grenada Jamaica Saint Kitts and Nevis Saint Lucia Saint Vincent and the Grenadines Trinidad and Tobago
Legislation enacted but not implemented	Anguilla Barbados Belize Guyana Turks and Caicos Islands

Source: Prepared by the author.

Figure 1
Funds collected and disbursed by USFs in the region since they began collecting funds up to February 2019
(Dolars)



Source: Prepared by the author.

Table 5
Forms of technology/services eligible for funding from active USFs

	ECTEL Member States	Dominican Republic	Jamaica	Puerto Rico	Trinidad and Tobago	United States Virgin Islands
Fixed-line services	✓	Information unavailable	✓	✓	✓	✓
Dial-up internet	✓	Information unavailable	X	Information unavailable	✓	Information unavailable
Wireless and broadband technology	✓	✓	✓ - limited to schools, public libraries, post offices, and other target groups	✓	✓	✓
New and emerging ICTs	✓	Information unavailable	X	Information unavailable	X	Information unavailable
Telecentres and other initiatives for people to learn ICT skills/receive support	✓	✓	✓	Information unavailable	✓	Information unavailable
Equipment to enable people to make use of ICTs	Some ✓/some X - some ECTEL Member States interpret their regulations to include equipment, but there is currently no explicit mandate. ECTEL's review is addressing this.	✓	✓ - limited to students	✓	✓ - limited to PWDs	Information unavailable

Source: Prepared by the author.

Table 6
ICTs, including assistive technologies, to which persons with disabilities and disability organisations in the Caribbean report lacking access

Software	Text to voice: JAWS (screen reader) and Zoom text (screen magnifier) software Voice to text: Dragon NaturallySpeaking (speech recognition) software
Hardware	Satellite and wireless technology
Equipment	Smartphones Laptops, tablets and desktop computers 3D printers Braille embossers and displays Tactile image enhancer Internet and left- and right-hand keyboards Projectors Smartboards Cameras Augmentative communication devices Electric wheelchairs
Training, facilities and other support	JAWS and Zoom text training Smartphone use training Assistive technologies training Training for common software like Word/Excel Fully equipped computer labs for ICT training

Source: Prepared by the author.

B. General challenges

1. Non-implementation of enabling legislation

At least ten Caribbean countries have enacted legislation allowing the establishment of USOs and/or USFs but are yet to implement the enabling provisions. In the case of Suriname, the Telecommunications Authority Suriname (TAS) reports that it does not currently consider a USF or USO necessary because licence conditions on telecommunications providers are instead being used to provide service to the country's interior. Similarly, the Montserrat Info-Communications Authority has determined that neither a USO nor USF are realistic or necessary at this time due to the island's small size and population. Barbados, Belize and Bermuda are considering establishing USOs and/or USFs, while Guyana is in the process of establishing both a USF and USO. It is unclear whether Anguilla, the Bahamas, Cayman Islands, or Turks and Caicos Islands plan to establish either mechanism.

Failure to implement legislative frameworks for USFs can occur when a government enacts the requisite legislation, but a subsequent government does not deem a USF to be a priority or puts another mechanism in place to provide universal telecommunications service. A variety of other mechanisms are possible to provide universal service coverage and funding, including licence conditions, subsidies, access deficit charges and private-public partnerships (PPPs). As stated above, Suriname has enacted USF legislation but considers it unnecessary to put a USF in place as, when it grants mobile concessions to telecommunications providers, the licence includes a condition that the provider must ensure access to certain geographical areas at affordable prices.

While this study aims to share best practices and recommendations for universal service funds, other models can be used in conjunction with or instead of USFs to deliver universal service. PPPs

have been used in many countries to foster investment in universal broadband networks.³⁵ In some cases, they are used in conjunction with USFs to provide funding for universal service initiatives. This is a common approach in the Caribbean where USF levies are collected from private telecommunication providers who then bid for universal service projects funded by such levies. The SAMOA Pathway emphasises the importance of successful partnerships for SIDS, and there are many partnerships being led in the Caribbean by regional organisations. National and regional partnerships between public, private and civil society actors are increasingly being explored by USFs, for example, where they seek to identify new funding sources.³⁶

Where Caribbean countries do wish to embark on the process of using enabling provisions to establish a USF, attention should be paid to building on lessons from other USF frameworks in the region. In particular, if a country intends to establish a USF long after enabling legislation was enacted, it is important that the legislation is first reviewed, and amended if necessary, to ensure it reflects current technological trends, can keep pace with changing uses of technology and aims to deliver universal access in addition to service. The legislation should also include a policy of digital inclusion for persons with disabilities and other groups who experience a digital divide in the country in question.

Where universal service legislation lies dormant for many years without being implemented or a bill stalls for a long period in the legislative process, its language and aims can become incompatible with the needs of target groups. An example is Antigua and Barbuda's Telecommunications Bill 2016, whose passage through the legislative process has been delayed due to industry concerns about the USF levy. The Bill's definition of 'universal service' only allows "the provision of services to enable a differently-abled user to make and receive a call". Therefore, funding is not available for services to enable persons with disabilities to use the internet and other emerging technologies. The internet is both a source of information and social inclusion for persons with disabilities, and it is not possible in the digital age to participate fully in society without access to it. If Antigua and Barbuda's Parliament eventually enacts the Telecommunications Bill, it should first amend it to reflect PWDs' current technological needs.

2. Focus on universal service to the exclusion of access

Universal service legislation in the Caribbean has traditionally focused on providing universal service to telecommunications as opposed to universal access. This reflects USFs' traditional mandate to provide a connection to telecommunications networks and to reimburse telecommunications providers for the requirement to provide universal service. Advocates for PWDs and other marginalised groups are, however, encouraging a reshape of USFs to provide both universal service and access.

Universal access recognises that not only do marginalised groups require a connection to telecommunications services, but these services must also be made accessible through the provision of skills, equipment and support. While universal service is a necessary precondition for universal access, the digital divide cannot be closed for marginalised groups unless measures are also put in place to ensure access to telecommunications.

An illustration of this can be found in the current Telecommunications Acts of ECTEL Member States. The definition of 'universal service' includes the provision of "...telecommunications services to the disabled and physically challenged" and "...other service by which people access

³⁵ International Telecommunications Union (ITU) (2013), "Developing successful public-private partnerships to foster investment in universal broadband networks", *Broadband Series*, [online] [date of reference: 17 April 2019] <<http://www.itu.int/ITU-D/treg/publications/SuccessfulPPPs.pdf>>

³⁶ See, for example, the country profile for Saint Vincent and the Grenadines above.

efficient, affordable and modern telecommunications.” Some National Telecommunications Regulatory Commissions (NTRCs) of the ECTEL Member States interpret these phrases widely to include the provision of equipment to enable persons with disabilities and other groups to make use of ICTs. Other NTRCs have adopted a narrow interpretation concluding that it is not within their remit to fund projects for assistive devices and other equipment to allow persons with disabilities to make effective use of telecommunications networks.

ECTEL Member States agree that ‘universal service’ should include equipment to allow people to make effective use of telecommunications and this change will likely be made explicit in ECTEL’s new legislative and regulatory framework scheduled to be introduced in 2019. The draft Electronic Communications Bill requires the Minister, on the recommendation of ECTEL, to specify “the electronic communications service, equipment, geographic area, population group or institution to which universal service and access applies”. ECTEL has released a draft Electronic Communications (Universal Service and Access) Order which includes ‘electronic communications access devices’ and ‘infrastructure and equipment relevant to a USAF project’. This change will give NTRCs a clear mandate to provide equipment to enable people in certain geographic areas, population groups and institutions to access and make effective use of ICTs. (For more details, see ‘ECTEL framework and review process’ in Annex I.)

3. Failure to use technologically-neutral language

Another significant challenge for USFs in the subregion resulting from their legislative and regulatory frameworks is language and concepts that have not kept pace with the development and changing uses of technology and changing attitudes and approaches to disability. The need to include modern approaches to disability in USF legislation will be addressed in the following section on challenges specifically related to projects for persons with disabilities.

As far as changing uses of technology are concerned, USFs report that the types of technology and services supported by their universal service legislation do not match their populations’ needs. While legislative changes are slow, the rate of technological change is rapid and often exceeds governments’ capacity to adapt to new technologies. In many cases, USF legislation focuses on providing access to fixed-line telephone networks and dial-up internet without mention of broadband and wireless internet access. Yet in 2017, more than half of households in the Caribbean still lacked access to the internet.³⁷

In 2012, Jamaica’s Telecommunications Act was amended to extend the scope of the universal service obligation, among other things. The 2000 Act focused on providing “connection to the public voice network” and only extended the obligation to promote internet access to schools, public libraries and post offices and “to the extent technically feasible and in so far as the necessary resources are available.” Under the amended legislation, the USF must now also “pursue strategies to increase access to high capacity networks and the dissemination of information and communications technology services in un-served and under-served areas of Jamaica’ and ‘provide Internet access devices and applications for the training of students in the use of the Internet and other information and communications technology services...”

While these amendments are a step in the right direction, the mandate to provide internet access devices and training applications should be extended beyond students to other groups that experience the digital divide, including persons with disabilities. Where legislation has not been drafted flexibly to adapt to changing uses of technology and users’ needs, countries are encouraged

³⁷ ECLAC (2017), *State of broadband in Latin America and the Caribbean 2017* (LC/TS.2018/11), Santiago. This statistic also includes Latin American countries.

to review and amend it where necessary. Furthermore, given the pace at which technological changes occur in the digital age, this legislation should be reviewed periodically on a five- or ten-year basis.

4. Low fund activity levels

Some Caribbean USFs experience difficulties creating enough projects each year to adequately utilise the funds they collect. This issue is not unique to the Caribbean: USFs on the African continent also struggle with the problem of collecting but not spending funds. In 2018, an estimated USD 408 million sat undisbursed in USFs across 37 African countries.³⁸

A handful of USF funds in the Caribbean have used below 50 per cent of their funds or are yet to use any funds at all (see figure 5 above). USFs in the region do not always consider this a problem. One USF reported that it is necessary to look beyond the amount of funds collected and disbursed for a true indication of a USF's activity levels. It commented that, for the most part, undisbursed funds have been already been committed to or earmarked for future projects.

Another USF reported that it is important to always have a certain level of funds available, as telecommunications providers do not always pay their legally-mandated contributions on time, and having a reserve enables it to propose future projects with confidence. In the case of Trinidad and Tobago, the USF began collecting funds in 2015 and it has two projects underway for which funds will be disbursed for the first time in 2019.

Since it began collecting funds in 2010, Saint Kitts and Nevis' USF has only disbursed 29 per cent of funds. The NTRC acknowledges that this is problematic but states that it is a result of the current ECTEL framework's focus on universal service rather than access. According to the USF, Saint Kitts and Nevis has already achieved reasonable levels of telecommunications service, but access is lacking. ECTEL's new framework, due to be introduced in 2019, will extend the scope of ECTEL USFs from universal service to universal service and access funds. This will allow the NTRC to create access projects and utilize its surplus funds.

However, the new ECTEL framework will also increase contributions from telecommunications providers from 1 per cent of gross annual revenues to 2 per cent. Although a wider array of projects will be possible with a mandate to provide universal service and access, some NTRCs may struggle to approve enough projects to use the increased funds in a timely manner.

5. Lack of timely reporting

All USFs in the region have statutory requirements to monitor, track and report on projects to which they have allocated funds. Given the large amount of funds collected from telecommunications providers and other sources, it is vital that USFs are transparent and accountable to Parliament, telecommunications providers and the public at large. This, in turn, creates public confidence in fund management and encourages timely payments from fund contributors.

While it is important for USFs to operate without political interference, ministers are generally accountable to parliament for USF's efficiency and effectiveness. Where money is being collected and not being spent, USFs as public sector organisations need to assure Parliament that they are nonetheless benefiting the public and managing their funds appropriately.

INDOTEL, the Dominican Republic's USF regulator, publishes an annual Memoria Institucional, which contains a detailed account of the fund's management, projects, spending and other financial information. It is up to date with its reporting obligations and the 2018 Memoria

³⁸ Thakur, D. and Potter, L. (2018), *Universal Service and Access Funds: An untapped resource to Close the Gender Digital Divide*. Washington DC: Web Foundation.

Institucional can be found on its website. Furthermore, Saint Vincent and the Grenadines' NTRC has up to date annual reports available on its website.

However, several other Caribbean USFs are lagging in their reporting obligations. Jamaica's Telecommunications (Amendment) Act 2012 requires the USF to produce annual reports but its most recent annual report is for 2013/2014 and it is awaiting ministerial approval to make its 2014/15, 2015/16 and 2016/17 reports public.

Similarly, Trinidad and Tobago's Telecommunications Authority (TATT) is required to publish an annual Universal Service Fund Accounting Report containing an account of the collection and disbursement of funds from the USF and a biennial Universal Service Implementation Report with an outline of current initiatives, proposed budget and a progress report on initiatives receiving funding. TATT informs that it has produced biennial reports for 2015/2016 and 2017/2018 and that these will be published soon.

USF legislation and regulations of ECTEL Member States require them to produce annual reports, including audited financial statements and details of activities and awards of contracts. These reports are submitted to the Minister, who lays them before Parliament. Saint Lucia has published its annual reports up to October 2015-September 2016 on its website. The last annual reports publicly available for Dominica and Grenada date back to 2013, although Grenada informs that it submits an annual report to the Minister each year. Saint Kitts and Nevis reports that it has not produced any annual reports but plans to publish its first in 2019.

USFs' failure to meet reporting obligations does not appear to result from a lack of personnel or expertise to produce reports. One possible reason is that USFs do not always recognise the importance of regular reporting for creating public and stakeholder confidence in fund management. For example, one USF reported that it did not consider it necessary to produce annual reports as, although the fund was collecting levies, it did not have many projects underway.

C. Challenges related to projects for persons with disabilities

1. Terminology falling short of CRPD standards

A review of legislative and regulatory frameworks of active USFs in the Caribbean shows that most countries make specific reference to persons with disabilities. However, the language used is often based on out-moded or narrow attitudes and approaches towards persons with disabilities and disability issues.

The definition of disability included in USF legislation or regulations can have significant practical implications. If drafted too narrowly, it can exclude categories of persons with disabilities from being considered for and accessing USF funding. If the definition includes outmoded or non-inclusive language, it reinforces a view of persons with disabilities as 'objects' in need of charity and USF administrators may be less inclined to include persons with disabilities in decision-making processes concerning them.

The CRPD offers a definition of 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". This fluid definition approaches disability as an interaction between impairments and social and environmental barriers and emphasises removing the barriers that prevent persons from disabilities from being active members of society.

ECTEL's Treaty requires Member States to provide universal telecommunications service to 'the disabled and physically challenged'. The Telecommunications Acts of each ECTEL Member State

allows licences to telecommunications providers to be granted on the condition that they provide service “to the blind, deaf, physically and mentally handicapped and other disadvantaged persons.” These broad phrases can be contrasted with the language used in the USF regulations of each ECTEL Member State, which refer to ‘the physically challenged’ as a target group for universal service interventions and exclude other categories of disability.

In a 2015 response to ECTEL consultations on its Members’ USFs, Grenada’s NTRC recommended that the term ‘disabilities’ should be included and defined in USF regulations. It further recommended that a percentage of funds should be allocated annually for projects targeting PWDS.

These recommendations have not been adopted in the draft Electronic Communications Bill put forth by ECTEL resulting from its review of Contracting States’ universal service frameworks. This Bill includes an overall objective of meeting the needs of ‘disabled users’. Similarly, the draft Electronic Communications (Universal Service and Access Fund) Regulations refer to ‘the disabled’ as a possible target group in annual fund operating plans. However, in working towards universal access and service, the Bill states that NTRCs must only ensure the reasonable availability and affordability of a basic and advanced electronic communications service to, among other groups, ‘the physically challenged’. Furthermore, the draft Electronic Communications (Universal Service and Access) Order only extends universal service and access to ‘the physically challenged’.

The term ‘disabled users’ is broader than ‘the physically challenged’, with the latter excluding persons with mental, intellectual and sensory impairments. As a result, it is unclear whether NTRCs should promote reasonable availability and affordability of electronic communications service for all categories of persons with disabilities or solely ‘the physically challenged’. Where possible, ECTEL should amend the bill, regulations and order to replace the terms ‘disabled users’ and ‘the physically challenged’ with the CRPD’s language of ‘persons with disabilities’ before Member States enact these instruments.

A range of other terminology is used to refer to persons with disabilities in telecommunications legislation and regulations in non-ECTEL Caribbean countries:

Table 7
Disability terminology included in telecommunications legislation and regulations
of non-ECTEL Caribbean countries

Country	Terminology	Source
Anguilla	‘Disabled users’	Universal Service and Public Telecommunications Regulations 2014
Antigua and Barbuda	‘Differently-abled user’	Draft Telecommunications Bill 2016
Barbados	‘Disabled persons’	Telecommunications Act 2001
Belize	‘Users including those with disabilities’	Telecommunications Act 2002
Guyana	‘Persons who are blind or otherwise differently-abled’	Telecommunications Act 2016
Jamaica	‘Disabled persons’	Telecommunication Act 2012
Trinidad and Tobago	‘Persons with disabilities’ ‘Disability’ is defined as: (a) total or partial loss of a bodily function; (b) total or partial loss of a part of the body; (c) malfunction of a part of the body including mental or psychological disease or disorder; or (d) malformation or disfigurement of part of the body or any restriction or lack, resulting from an impairment of ability to perform an activity in the manner or within the range considered normal for a human being.	Telecommunications (Universal Service) Regulations 2015

Country	Terminology	Source
Turks and Caicos Islands	'Disabled users'	Universal Service and Public Telecommunications Regulations 2005

Source: Prepared by the author.

For the most part, these frameworks use terminology broad enough to include persons with physical, mental, intellectual and sensory impairments. Only Trinidad and Tobago's Regulations adopt the CRPD language of 'person with disabilities'. However, these Regulations also include a detailed definition of disability at odds with the CRPD, as it focuses heavily on a person's loss of bodily function and neglects to recognise the social and environmental barriers that exclude persons with disabilities from participating fully in society. This 'medical' model of disability is being phased out of usage in disability legislation and policies in many countries, due to increasing recognition that disabilities result from a complex interplay between an impairment and environmental factors.

Furthermore, the definition may not be broad enough to include all categories of disability within the CRPD definition e.g. learning difficulties that cannot be classified as mental or psychological diseases or disorders.

2. Engagement with PWDs in project allocation and design processes

Persons with disabilities and organisations working with them in Caribbean countries are in many cases unaware that their countries have USOs or USFs. ECLAC conducted a questionnaire to analyse whether persons with disabilities and organisations serving them are benefiting from USFs. When asked "Do you know whether your country has a Universal Service Fund (USF)?", several persons with disabilities and organisations serving them in countries with USFs answered "No, it doesn't have a USF" or "I'm not sure if my country has a USF". Most of the persons with disabilities and organisations also indicated that persons with disabilities in their country have unmet technological needs and would benefit from ICT equipment, training and facilities.

The Jamaican Council for Persons with Disabilities (JCPD) has received funding from its country's USF for a project to provide technological devices to enhance communication with the PWDs it supports. However, it believes the USF needs to improve its engagement with stakeholders as many organisations working with PWDs are still not aware of the existence of the USF and new technologies that could transform the lives of their members. JCPD recommends that, before project allocation begins, a public campaign should be launched to provide information on the services available through the USF and that persons with disabilities should be consulted on their technological needs.

In recent years, Jamaica has encountered challenges using the USF for projects to improve access to technology for PWDs due to increased interest in declining USF funds resulting from reduced international calling. However, consultations have begun aimed at identifying options to improve access to telecommunications tools and services for PWDs. In line with the JCPD's recommendations, the USF should ensure that this process is inclusive of a broad range of disability organisations and persons with disabilities in Jamaica.

Trinidad and Tobago established a USF in 2015 and TATT will initiate its first universal service initiative for persons with disabilities in 2019. Similarly, some persons with disabilities and organisations working with them in Trinidad and Tobago report that their country does not have a USF, that they do not know if their country has a USF or that they have only recently become aware of the USF. TATT hopes that its first project for PWDs will bring awareness to the existence of the USF as well as to the availability of assistive devices under this project.

In the early stages of the project, TATT met with some of the country's disability organisations and the government focal point for disability issues, the Ministry of Social Development and Family Services, to work on the project's design and to secure their support. As a result of this process, TATT will work closely with the Ministry of Social Development, including using a database of persons receiving a government disability grant, to identify PWDs eligible for assistive devices. Furthermore, TATT also received several proposals for future universal service initiatives from disability organisations.

3. Lack of project targeting PWDs and their access needs

USFs in the Caribbean have traditionally focused on projects to provide telecommunications services to underserved communities, certain geographic areas, or the entire population on the basis that the benefits of these projects will also trickle down to persons with disabilities and other marginalised groups. However, persons with disabilities are in many cases unable to make use of telecommunication services without additional training, equipment and support. Without projects specifically designed to increase access to technology for persons with disabilities, the digital divide between persons with and without disabilities is therefore likely to grow wider.

This raises two issues: not only is there a lack of project proposals specifically targeting persons with disabilities, but there is also a lack of focus on their special access needs. To fund projects focusing on PWDs' access needs, USFs require an enabling legal and regulatory framework that both allows them to target persons with disabilities and to pursue projects to achieve universal access to telecommunications (as opposed to service).

Seven out of ten active USFs in the region have a specific mandate to increase access to technology for persons with disabilities. However, in some cases, this mandate has not resulted in a single project for this group. Jamaica reports that it has not yet used its USF specifically for a project to improve access to technology for PWDs due to increased and competing interests for USF funds. Trinidad and Tobago took five years to create its first project for persons with disabilities but worked closely with disability organisations and the government focal point for disabilities to design the project and has developed strong relationships with them as a result.

ECTEL Member States also report difficulties creating projects for persons with disabilities. Saint Kitts and Nevis' regulations require the NTRC to ensure the reasonable availability and affordability of basic and advanced telecommunications services to 'the physically challenged'. However, since its formation in 2010, the USF has not created any projects to increase telecommunications service for PWDs. It recently received its first project proposals from disability organisations after contacting them directly about a project call.

While USFs are generally empowered to target projects to PWDs, not all legal frameworks allow projects focusing on target groups' access needs. ECTEL's framework currently focuses on universal service, without explicit mention of universal access. For NTRCs who read the regulations strictly, this has prevented them from providing persons with disabilities with assistive devices, training and other forms of support to achieve universal access. However, ECTEL's new draft framework requires NTRCs to achieve universal service and universal access. It also includes clear language granting NTRCs the power to provide access devices to 'the physically challenged' (but not the broader category of 'persons with disabilities').

4. Knowledge of disability organisations on available ICTs

ECTEL Member States report that PWDs and the organisations supporting them often have limited knowledge of technologies available to transform the lives of PWDs and, as a result, NTRCs face difficulties identifying projects aimed at this group.

The current ECTEL regulations allow any interested party, including organisations working with persons with disabilities, to make project proposals to National Telecommunications Regulatory Commissions (NTRCs). NTRCs also engage in dialogue with such organisations during the process of appraising project proposals. As currently drafted, ECTEL's new legislative and regulatory framework will continue to allow civil society and NGOs to make project proposals but the framework also gives NTRCs a new power to grant funding to such organisations and entrepreneurial start-ups.

The limited knowledge of disability organisations regarding assistive technologies has consequences at each stage of the project approval process. Firstly, NTRCs report that they receive only a small amount of proposals aiming to increase access to technology for PWDs. For example, although there are approximately ten active disability organisations in Grenada, the NTRC has only received a handful of proposals from these groups since the first project call in 2010. When disability organisations do respond to project calls, they tend to propose projects based on current ICT equipment they are using, as opposed to focusing on emerging technologies with transformational power for PWDs.

Secondly, NTRCs find that they are unable to seek informed guidance from organisations supporting PWDs at the stage of appraising project proposals. While Saint Vincent and the Grenadines will only have its first project for PWDs this year, the NTRC has sought to counter this issue for other target groups by designing its own projects in house and maintaining high level of expertise on available ICTs within the NTRC. Technical staff attend technology shows and ITU conferences and subscribe to industry publications on emerging technologies for target groups.

Grenada's NTRC sends its personnel to trainings hosted by ITU to increase their knowledge of the latest technology for PWDs. For one of its disability projects, it engaged a consultant to identify emerging technologies with the greatest benefit for Grenada's PWDs. This NTRC argues that training or workshops on emerging technologies for PWDs should also be provided to disability organisations, so they can get up to speed on these technologies and provide more informed project proposals.

Another aspect to this issue is that, although most USFs have a legal mandate to improve access to technology for persons with disabilities, they rarely have a person with disability on staff or a staff member designated to focus on this mandate. While using consultants and sending staff to ICT shows and conferences to stay current on latest technologies are both positive steps, appointing a staff member as a focal point on disability would help to mainstream disability in the USFs' operations, identify projects for PWDs and ensure their interests are represented.

5. Inability of disability organisations to apply for USF funding

Most USFs in the subregion restrict eligibility for funding to licensed telecommunications providers as their legislation approaches funding as compensation for the requirement on providers to achieve universal service.

However, telecommunications providers are not the only type of organisation with the expertise to execute universal service and access projects. For example, while a telecommunications provider will normally be best-equipped to provide fixed-line or broadband service, a community organisation, start-up company or NGO may be better suited to develop local web content and applications, build telecentres and provide ICT training and support to persons with disabilities. Most legislative frameworks require telecommunications providers to receive project funding and, if necessary, sub-contract consultants, experts, organisations or other bodies with the expertise to deliver the project. However, enabling USFs to award funds directly to these third parties and carry out projects could create cost-savings and lead to better outcomes for persons with disabilities.

Although still in draft, ECTEL's new legislative and regulatory framework allows non-licensees to bid for fund projects where permitted in the bidding document. Accompanying this change, ECTEL USFs will also be reshaped as universal service and access funds (USAFs) and NTRCs will be given an explicit mandate to provide 'electronic communications access devices' and 'infrastructure and equipment relevant to a USAF project' to 'the physically challenged'. These changes mean that disability organisations can bid for projects to provide universal access to electronic communications, such as provision of access devices and support to use them.

III. Best practices and recommendations

Based on the foregoing challenges, we propose a number of best practices and recommendations for increasing the effectiveness of USFs in the Caribbean as well as better utilising them to increase access to technology for persons with disabilities. They respond to the specific challenges raised by USF regulatory bodies, telecommunications providers, persons with disabilities and organisations serving them in the Caribbean as well as findings from analysis of USFs' legal and regulatory frameworks and interviews and other information provided by stakeholders.

A. Implement USF legislation after updating it to reflect technological change and modern approaches to disability

At least ten Caribbean countries have enacted legislation enabling the creation of USOs and/or USFs but are yet to establish these mechanisms (see figure 3 above, 'Countries with enacted but unimplemented USF legislation'). Given that none of these countries have achieved universal telecommunications service or access, it is recommended that they place the establishment of a USF on the government's workplan as a matter of priority or investigate other mechanisms that can be used to provide universal telecommunications service.

Where establishing a USF is the preferred option, countries are encouraged to first review their unimplemented legislation to ensure it reflects modern approaches to disability as found in the CRPD and can adapt to new and changing uses of technology. Many of the enacted but unimplemented laws were drafted before the adoption of the CRPD in 2006 and, as a result, do not use the Convention's definition of 'person with disabilities' or adequately reflect the requirement on State Parties to take appropriate measures to ensure that persons with disabilities have access to ICTs, including assistive technologies, on an equal basis with others.

These legislative instruments have also not kept pace with the rapid technological change that has occurred in recent decades. For example, Turks and Caicos Islands' 2005 regulations require service providers to ensure that disabled end users can enjoy access to and affordability of public

telephone services equivalent to that enjoyed by other end users. However, Caribbean-based disability organisations report that the most significant digital divide experienced by persons with disabilities in the region is lack of access to broadband and other internet services. In their view, internet access, training and equipment offers the most potential for enabling persons with disabilities to participate in workplaces, education and other spheres of public life. USF legislation therefore needs to move beyond ensuring telephone service to persons with disabilities and bridge the digital divide for internet access and other newer technologies.

B. Update the legislative and regulatory frameworks of active USFs

There is good evidence that Caribbean USFs can produce positive results and are worth pursuing if devised carefully with a focus on their design, structure and implementation. Beyond their initial design, legal and regulatory frameworks for USFs should also be periodically updated to ensure that they remain responsive to developments in and changing uses of technologies and the needs of target groups.

Caribbean telecommunications experts have expressed their support for model USF legislation as a means to harmonise regional USF frameworks and facilitate joint solutions to challenges encountered by Caribbean USFs. A regional specialise, such as CARICOM, could lead a project to develop model USF legislation, as part of its efforts to harmonise regional ICT legislation and strengthen the CARICOM Single Market and Economy (CSME). An outdated ITU framework already exists, which could be updated as appropriate for the Caribbean context.

Whether updating their individual legal frameworks or working with other Caribbean countries to develop model USF legislation, countries should ensure that new or amended legislation:

1. Reshapes the scope of USFs to ensure both universal access and service

Universal access specialise that persons with disabilities and other specialise groups require ICT skills, equipment, and support to gain access to ICTs on an equal footing with others. As part of its ongoing review process, ECTEL proposes to expand the scope of Member States' USFs to achieving universal access as well as service. The revised framework, therefore, provides a precedent for other Caribbean countries wanting to move beyond providing a connection to technology to ensuring the provision of necessary skills, equipment and support for target groups to effectively use it.

2. Uses flexible language responsive to new forms and uses of technology

One way to ensure that USFs can respond to emerging technologies and new service and coverage requirements is to use technologically-neutral language. For example, the definition of 'universal service' in the current Telecommunications Acts of ECTEL Member States includes "...other service by which people access efficient, affordable and modern telecommunications". If drafted suitably, a catch-all phrase of this nature can capture new technologies and the needs of target groups as they emerge.

3. Enables funding to be disbursed to civil society and NGOs working with persons with disabilities and other marginalised groups

Most USFs are only permitted to disburse funds to telecommunications providers, reflecting the traditional mandate of USFs to provide a connection to telecommunications networks and to reimburse telecommunications providers for the requirement to provide universal service.

With the reshaping of USFs to also include universal access, it is necessary for USFs to gain the ability to disburse funds to organisations that specialise in developing local content and providing ICT equipment, training and support to target groups, such as PWDs. Furthermore, due to the

small size of their telecommunication markets, Caribbean SIDS often have a small number of Telecommunications providers, limiting the volume of projects a USF can approve. Expanding the pool of eligible bidders therefore increases the number of projects that can be implemented simultaneously.

As drafted, ECTEL's new regulatory regime promotes funding grants to ICT entrepreneurial start-ups and allows NTRCs to disburse funds to non-telecommunications providers, such as community groups.

4. Includes a stronger mandate for persons with disabilities, including an obligation to have annual targets to meet fund objectives

While most USFs in the subregion contain a specific mandate for persons with disabilities in their legislative and regulatory frameworks, this does not always translate to concrete objectives and targets to meet the needs of this group. To close the digital divide for persons with disabilities in the Caribbean, time-bound targets relating to this group should be pursued, in line with fund objectives.

As drafted, ECTEL's new Electronic Communications (Universal Service and Access Fund) Regulations will require NTRCs to have an annual fund operating plan, including priority goals, a summary market assessment and budget estimates, in addition to their existing annual reporting requirements. NTRCs should ensure they develop priority goals specifically related to projects for PWDs.

C. Increase engagement with persons with disabilities at each stage of a project's lifespan, including the identification, appraisal and allocation processes

The CRPD requires States Parties to closely consult with and actively involve persons with disabilities in the development and implementation of legislation and policies, and in other decision-making processes concerning them. However, many Caribbean persons with disabilities and organisations supporting them are unaware that USFs exist in their countries, and that many of these USFs have a specific mandate to increase access to technology for PWDs.

USFs, particularly newer ones, can raise public awareness and increase their visibility through public education campaigns aimed at persons with disabilities and other target groups. While project calls must be open to the public and use a transparent participatory process with clearly-defined selection criteria, USFs can also invite project proposals from groups working with PWDs by contacting them directly and engaging in dialogue about the needs of their members.

Many USFs advertise projects calls on the internet and radio and in newspapers, but members of the disabled community are not always able to engage with these mediums or access online information. Project proposals from disability organisations would be increased if USFs directly invited local groups to share input on their members' needs and worthwhile projects. Trinidad and Tobago has experienced positive results engaging with disability organisations on project design, and, in the process, received several ideas for future projects. Although Saint Kitts and Nevis' NTRC has put out project calls twice a year since 2010, it only received proposals from disability organisations recently after writing to them directly. Furthermore, not all persons with disabilities are registered with organisations for PWDs, so USFs' communications strategies should extend their reach beyond these organisations.

USFs can help improve the quality of proposals received from PWDs and their representative organisations by organising trainings and workshops on drafting project proposals. Organisations working with PWDs have indicated that building their capacity to draft project proposals is critical to

increase the number of proposals targeting PWDs. These organisations have also expressed interest in training on the latest technologies available for persons with disabilities, on the basis that they could include these technologies in project proposals to USFs. These capacity building initiatives would also provide an informal forum for USFs to collect ideas for future projects.

Furthermore, project implementation could be enhanced if USFs offered project management training to successful bidders in order to explain implementation and reporting requirements and improve the prospects of a project's success.

While project approval processes differ between Caribbean USFs, project management training is not generally included. ECTEL's process, for example, is that the USF enters into a service contract with the successful bidder, which includes payment milestones, reporting requirements and sanctions for non-compliance. The USF monitors the project to ensure the contractor remains in compliance with the service contract by reviewing periodic project reports and conducting on-site inspections of the project where necessary.

Offering project management training would be especially valuable when awarding contracts to non-traditional bidders, such as community organisations and entrepreneurial start-ups. As discussed above, some USFs are in the process of developing their legal frameworks to allow project awards to non-telecommunication providers. For organisations carrying out USF projects for the first time who do not have extensive project management experience, training in this area will help them to manage the project plan, predict and manage risks, and maintain progress.

D. Increase representation of PWDs within USFs

In addition to actively engaging disability organisations and government focal points on disability, USFs can also look at their internal mechanisms, including employment practices, for ways to increase the number of project proposals targeting PWDs.

None of the USFs interviewed in the Caribbean have a staff member with a disability or a person appointed to ensure the mandate to improve access to technology for PWDs is achieved. Having a person with a disability on staff or a staff member designated to champion and stay up-to-date on the ICT needs of PWDs and identify projects for them would increase the visibility of disability and influence the selection, design and implementation of projects. The same is also true for reducing the digital divide and increasing the impact of USFs for other groups targeted by USFs, including women and youth.

USFs can consider putting diversity policies in place to increase representation of persons with disabilities and other target groups across the organisation. Some USFs may not have the scope to employ a new member of staff and could instead appoint an existing staff member as a focal point on disability to keep the USF up-to-date on the ICT needs of PWDs, connect with disability organisations and PWDs in the country, and advocate for PWDs in the project selection and allocation processes. In addition, USFs can use external experts on the local ICT needs of PWDs to inform the selection, design and implementation of projects. This method has produced favourable results for Grenada's USF. Where possible, USFs should endeavour to engage consultants that identify as persons with disabilities. The Jamaican Council for Persons with Disabilities (JCPD) also put forward a suggestion that each USF form a stakeholder advocacy committee, including representatives for persons with disabilities, to guide the project appraisal and allocation processes.

To facilitate these measures, USFs should consider making reasonable accommodations to the workplace supportive of persons with different types of disabilities. The CRPD requires Contracting States to make necessary and appropriate modifications and adjustments to ensure that persons with disabilities may enjoy and exercise of their rights and freedoms on an equal basis with

others. This obligation extends to workplaces and includes the provision of accessible ICTs and assistive technologies.

Where a Caribbean country has not ratified the CRPD, it may nonetheless have building laws or standards that require new buildings to be accessible for persons with disabilities. Regional standards also exist, such as the building code of the Organisation of Eastern Caribbean States (OECS), which includes accessibility guidelines for persons with disabilities. However, standards are usually non-mandatory and where laws are in place they often lack enforcement.

At a minimum, making reasonable accommodations for persons with disabilities at the premises of USF bodies requires incorporating universal design features, for example providing wheelchair access to the building for persons with walking impairments and elevators with tactile buttons and audio systems for persons with seeing and hearing impairments. Workstations can be fitted with assistive technologies on a case-by-case basis. Implementing these accommodations will have the additional benefit of enabling USFs to invite members of disability organisations with accessibility requirements to their premises for stakeholder engagement and project meetings.

E. Invest a fixed percentage of funds in projects to increase access to technology for persons with disabilities

As discussed above, most Caribbean USFs have a mandate to improve access to technology for persons with disabilities but, without specific targets, this does not always result in projects for this group. For example, Saint Kitts and Nevis' regulations require the NTRC to ensure the reasonable availability and affordability of basic and advanced telecommunications services to the 'physically challenged'. However, since its formation in 2010, the USF has not created any projects to increase telecommunications service for PWDs.

Along with annual targets, requiring USFs to use a fixed percentage or allocation of fund revenues for projects targeting persons with disabilities is another way of ensuring that USFs in the Caribbean actively pursue such projects. The rules would need to be flexible enough to allow USFs to execute large projects using more than the specified percentage or allocation in any given year, but with safeguards to ensure they are not circumvented. Similarly, the rules should enable continual funding for long-term projects, as opposed to the usual restriction that funding be used for specific, time-limited projects.

For most USFs, a percentage of funds will be more appropriate than a fixed allocation given that USF revenues fluctuate each year and are affected by other variables, such as late payments from telecommunications providers. However, in all cases, the percentage or allocation of funds should be needs-based to ensure that USFs will be able to create sufficient projects to use the allocation each year and that funds are being allocated fairly where they can make the most impact.

A participatory process with persons with disabilities and each disability organisation operating in the country in addition to other interested stakeholders should be used to determine an appropriate percentage or allocation of funds. Furthermore, most USFs already have guidelines on how projects should be identified and appraised. New guidelines will likely be necessary to determine how the allocation or percentage of funds for projects for PWDs should be managed, including regular public reporting requirements and other safeguards to prevent abuse.

F. Make structural changes to ensure the timely disbursement and sustainability of USF funds

Several USFs in the Caribbean struggle to create enough projects to utilise the funds they collect each year. Jamaica's USF, on the other hand, is faced with declining revenues due to the types of telecommunications services on which its USF levy is collected. Both issues—a failure to disburse USF funds in a timely manner and an inability to collect adequate funds—point to underlying problems with the fund's legal framework, structure or administrative practices.

For example, some ECTEL NTRCs report not being able to adequately utilise funds because their USFs are currently limited to providing universal service and are restricted from using funds to achieve universal access. A revised framework will be introduced in 2019, which as currently drafted widens the scope of these USFs to Universal Service and Access Funds (USAFs). Other important structural changes will be made to aspects of the common ECTEL framework that have previously constrained NTRCs, including allowing funds to be disbursed to non-telecommunications providers, such as community-based organisations. Trinidad and Tobago's USF legislation contains an innovative provision allowing TATT to provide relief to telecommunications providers where the total contribution to the USF in any financial year exceeds the annual cost of implementation of the Universal Service initiatives scheduled for implementation in that year.

Jamaica reports that its USF has struggled to create projects for PWDs because of competing interests for declining and limited revenues. The Fund is financed in part through a levy on international calls, which have been declining due to changes in technology, including increased use of WhatsApp and Facebook for calling. This USF should therefore consider amending its legal framework to create a sustainable financing structure that can adapt to changing uses of technology. For example, contributions from telecommunications providers could be based on a percentage of gross annual revenues, rather than linked to any particular telecommunications service.

USFs that are failing to utilise funds should in the first instance consider whether their underlying legal frameworks and management structures support the timely disbursement of funds and realisation of the fund's aims. Faced with declining revenues, USFs can also consider the sustainability of their underlying financial models. Legal and regulatory frameworks should be adapted to remove any shortcomings, drawing on the recommendations in this study.

G. Increase USF transparency and accountability through regular monitoring and reporting

Caribbean USFs are generally required to produce annual or biennial reports on their activities and use of funds. However, some USFs have never produced a report and others are several years behind in meeting this obligation. Some USFs report annually to a minister who lays the documents before Parliament, but these reports are not subsequently made publicly available on USF websites. This is a missed opportunity for public engagement and transparency.

Given the significant amount of money that USFs collect and the obligation to use these public funds to achieve the aims of the USF, regular reporting is vital for creating confidence in fund management and allocation. Annual reports provide assurance to parliament, telecommunications providers, and the public that USFs are adding value for money and are in the public interest. By making information available about use of funds and fund performance, regular reporting also deters waste, fraud and other mismanagement.

Furthermore, telecommunications providers are understandably reluctant to pay into USFs when it is unclear how the funds are being managed. Annual reports also help to make USFs more visible to the public, thereby promoting fund objectives.

USFs should publish annual reports on their websites to make them easily accessible to the public and ensure that they have effective internal mechanisms, including delegation of responsibilities, for the fulfilment of annual reporting requirements.

H. Seize on opportunities for national and regional cooperation and capacity building

Due to their small size and vulnerabilities, Caribbean SIDS face many capacity restraints that make cooperation imperative. The SAMOA Pathway encourages SIDS to establish national and regional ICT platforms and information dissemination hubs to facilitate information exchange and cooperation, and to act at the national and regional levels to attract more public and private investment for developing ICT infrastructure.³⁹ USFs can benefit from cooperation in a range of areas, including regional infrastructure projects, 43pecialized43n of laws and regulatory frameworks, finding joint solutions to issues such sustainability of financing and lack of stakeholder engagement, capacity building, and education and awareness raising.

National and regional cooperation already play an important role in the operation of Caribbean USFs. At the national level, USF regulatory bodies depend on strong relationships with the telecommunication providers from whom they collect levies and rely on to carry out projects in order to deliver fund aims. As highlighted above, USF transparency, adhering to fund objectives and regular reporting are essential to maintain these relationships and ensure the smooth implementation of projects.

An example of regional cooperation in the realm of telecommunications is the Eastern Caribbean Telecommunications Authority. Through ECTEL, the five Member States have 43pecialized their telecommunications markets, increased competition and developed their joint ICT infrastructure. ECTEL's ongoing review will result in key changes to the countries' USF frameworks, including promoting grant funds for entrepreneurial start-ups. Among other things, ICT start-ups can develop local content and applications to assist groups requiring 43pecialized ICT services.

In line with the SAMOA Pathway, USFs in the subregion are also beginning to explore new opportunities for regional and international collaboration and investment. In 2019, Saint Vincent and the Grenadines' NTRC will apply for funding for the first time from regional and international organisations, such as the World Bank, European Union and Caribbean Development Bank (CDB), in order to generate funds to expand current projects and work on new initiatives, such as regional projects collaborating with other NTRCs. Developing additional funding sources can ensure self-sufficiency in the event of falling or inadequate USF revenues, and promotes innovation through working with new funding partners.

As suggested above, Caribbean countries could work together to create model USF legislation in order to harmonise regional USF frameworks. Countries in the region have also expressed support for creating a common regional space where countries could discuss and find solutions to challenges experienced by USFs in the region. This initiative could be spearheaded by CARICOM, in conjunction with developing model USF legislation, as part of an effort to harmonise

³⁹ United Nations General Assembly (2014), *SIDS Accelerated Modalities of Action (SAMOA) Pathway* (UN Res A/RES/69/15), New York.

the supply of telecommunications services across the region and strengthen the CARICOM Single Market and Economy.

I. Accede to the Optional Protocol to the Convention on the Rights of Persons with Disabilities

The Optional Protocol to the CRPD establishes an individual complaints mechanism for persons with disabilities who allege that their rights under the CRPD have been denied. This mechanism enables persons with disabilities in countries that have ratified or acceded to the Optional Protocol to take individual or group complaints to the Committee on the Rights of Persons with Disabilities (CRPD Committee). The Protocol also contains an inquiry procedure, allowing individuals or organisations to bring a complaint to the CRPD Committee alleging “grave or systematic violations by a State Party of rights set forth in the Convention”.⁴⁰

While the CRPD has been ratified by 14 out of 16 ECLAC Member States served by the subregional headquarters for the Caribbean, only Dominica and Saint Vincent and the Grenadines have acceded to the Optional Protocol. Furthermore, from the Caribbean’s 13 non-self-governing territories (NSGTs) governed by France, the Netherlands, the United Kingdom and the United States of America, only France has extended the Optional Protocol to its overseas territories, Guadeloupe and Martinique.

In the Caribbean, persons with disabilities have limited recourse if they believe their rights have been violated. Even where a country has legislation implementing the CRPD in domestic law, enforcement and awareness are generally lacking and persons with disabilities do not have access to mechanisms enabling them to make complaints and receive redress. Accession to the Optional Protocol offers persons with disabilities an additional avenue of complaint where mechanisms at the domestic level are lacking and is therefore an important step to advance the rights of persons with disabilities in the Caribbean.

Beyond this, accession to the Optional Protocol offers countries an opportunity to simultaneously improve their national legal guarantees and strengthen domestic institutions and avenues for redress. Where countries are falling short of their obligation to ensure that persons with disabilities have access to ICTs, persons with disabilities and civil society groups can then work alongside the government to improve the situation before resorting to the procedures in the Optional Protocol.

Caribbean countries are urged to prioritise their accession to the Optional Protocol to the CRPD, following the example of Dominica and Saint Vincent and the Grenadines. NSGTs can also call on their administering powers to extend the Optional Protocol to them, and at the same time provide necessary support to strengthen national mechanisms.

⁴⁰ Article 6 of the Optional Protocol to the Convention on the Rights of Persons with Disabilities, (2006) UNTS 2518, 283, UN Doc. A/61/611.

Bibliography

- Alliance for Affordable Internet (2017), *República Dominicana: Resumen del Informe de Asequibilidad 2017*, [online] [date of reference: 17 April 2019] <http://a4ai.org/wp-content/uploads/2017/12/A4AI-2017-Informe-de-Asequibilidad_Republica-Dominicana.pdf>
- Caribbean Community (CARICOM) (2013), Declaration of Pétion Ville, 6 December 2013, Haiti.
- Economic Commission for Latin America and the Caribbean (ECLAC) (2017), *State of broadband in Latin America and the Caribbean 2017* (LC/TS.2018/11), Santiago, Chile.
- _____(2018), "Disability, Human Rights and Public Policy in the Caribbean: A Situation Analysis", *ECLAC Studies and Perspectives Series – No. 64* (LC/TS.2017/151) Santiago, Chile.
- _____(2018a), *Information and Communications Technologies for the Inclusion and Empowerment of Persons with Disabilities in Latin America and the Caribbean* (LC/TS.2018/48), Santiago, Chile.
- _____(2018b), "Inclusive social protection and demographic change: The implications of population ageing for social expenditure in the Caribbean", *Studies and Perspectives Series – No. 66* (LC/TS.2017/153), Santiago, Chile.
- Economic and Social Commission for Asia and the Pacific (ESCAP) (2017), "The Impact of Universal Service Funds on Fixed-Broadband Deployment and Internet Adoption in Asia and the Pacific", *Asia-Pacific Information Superhighway (AP-IS) Working Paper Series*, [online] [date of reference: 17 April 2019] <[https://www.unescap.org/sites/default/files/Universal per cent20Access per cent20and per cent20Service per cent20Funds.pdf](https://www.unescap.org/sites/default/files/Universal%20per%20cent%20Access%20and%20per%20cent%20Service%20Funds.pdf)>.
- El Vocero (2019), "Rosselló announces restoration of the Universal Service Fund", 22 February 2019, [online] [date of reference: 17 April 2019] <https://www.elvocero.com/gobierno/rossell-anuncia-restablecimiento-del-fondo-de-servicio-universal/article_7467d7d2-36do-11e9-a3db-a3ba028074e6.html>
- Global System for Mobile Communication (GSMA) (2013), *Universal Service Fund Study* [online] [date of reference: 17 April 2019] <https://www.gsma.com/publicpolicy/wp-content/uploads/2016/09/GSMA2013_Report_SurveyOfUniversalServiceFunds.pdf>
- Instituto Dominicano de las Telecomunicaciones (INDOTEL) (2018), *Memoria Institucional 2018*, [online] [date of reference: 17 April 2019] <<https://indotel.gob.do/media/143187/memoria-2018-final-pdf.pdf>>

- Internet Society (2017) [online], 'Unleashing the Internet in the Caribbean: Removing Barriers to Connectivity and Stimulating Better Access in the Region', p. 33 <https://www.internetsociety.org/wp-content/uploads/2017/08/ISOC_Unleashing_Internet_in_Caribbean_20170221.pdf> [20 November 2018].
- International Telecommunications Union (ITU) (2013), "Developing successful public-private partnerships to foster investment in universal broadband networks", *Broadband Series*, [online] [date of reference: 17 April 2019] <<http://www.itu.int/ITU-D/treg/publications/SuccessfulPPPs.pdf>>
- O'Donnell, A. and Sweetman, C. (2018) 'Introduction: Gender, Development and ICTs' in *Gender & Development*, vol. 26(2), p. 217-229.
- TeleGeography (2016), "Govt's new telecoms bill would ultimately force up retails prices, expert says; ABTD sets up spectrum management regime", 19 February 2016, [online] [date of reference: 17 April 2019] <<https://www.telegeography.com/products/commsupdate/articles/2016/02/19/govts-new-telecoms-bill-would-ultimately-force-up-retails-prices-expert-says-abtd-sets-up-spectrum-management-regime/>>.
- Thakur, D. and Potter, L. (2018), *Universal Service and Access Funds: An untapped resource to Close the Gender Digital Divide*, Washington DC, Web Foundation.
- United Nations (2006), *Convention on the Rights of Persons with Disabilities and Optional Protocol* (UN RES A/RES/61/106), New York.
- _____(2014), *SIDS Accelerated Modalities of Action (SAMOA) Pathway* (UN Res A/RES/69/15), New York.
- _____(2015), *Transforming our world: the 2030 Agenda for Sustainable Development* (UN Res A/RES/70/1), New York.
- _____(2017), *Information and Communications Technologies for Sustainable Development* (UN Res A/RES/72/200), New York.
- Washington Group on Disability Statistics (2019), 'Analytic Guidelines: Creating Disability Identifiers Using the Washington Group Short Set (WG-SS) SPSS Syntax', 18 January 2019 [online] [date of reference: 13 June 2019] <<http://www.washingtongroup-disability.com/wp-content/uploads/2016/12/WG-Documents-5A-Analytic-Guidelines-for-the-Washington-Group-Short-Set-SPSS.pdf>>
- We are Social (2019), 'Digital 2019: Turks and Caicos Islands', (online) <date of reference: 1 July 2019> <<https://datareportal.com/reports/digital-2019-turks-and-caicos-islands>>.
- World Health Organization, (2015), "WHO global disability action plan 2014-2021: Better health for all people with disability", Switzerland.

Annexes

Annex 1

Country profiles: current status, issues and achievements

Twenty-one Caribbean countries either have active USFs and/or USOs in place or have enacted legislation enabling the establishment of a USF but not yet implemented it.

This annex first sets out the arrangements of the five Member States of the Eastern Caribbean Telecommunications Authority (ECTEL) – Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines – whose founding treaty requires them to establish a USF. ECTEL began a review of its legislation and regulations in 2015, which will result in significant changes to Member States' USF frameworks. The profiles set out the legislative and regulatory framework and financial information of each National Telecommunications Regulatory Commission (NTRC), as well as past, current and future projects aiming to improve access to technology for persons with disabilities. This is followed by a comparison of NTRCs' projects for PWDs.

Country profiles are also presented for non-ECTEL countries that either have active USFs and/or USOs in place or have enacted legislation enabling the establishment of a USF but not yet implemented it. Where information was available, the profiles outline the country's legislative and regulatory framework, present financial information and recent projects benefiting persons with disabilities, and discuss any challenges experienced by the USF. For countries with draft or enacted but unimplemented USF laws, the profiles outline these laws and discuss the status of any work to implement them.

A. ECTEL Member States

1. ECTEL framework and review process

The Commonwealth of Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines are the five Eastern Caribbean States who comprise ECTEL. Established in 2000, ECTEL is a regulatory body for telecommunications with three components: a Council of Ministers, a regional Directorate and a NTRC in each Member State.

Article 12 of the Treaty establishing ECTEL requires each Member State to establish a Universal Service Fund 'for the purpose of promoting the widest possible access to telecommunications at an affordable cost to the people of the Contracting States'. Each Member State also agrees to promote 'the objective of universal service so that the largest possible number of persons may share in the freedom to communicate over an efficient and modern telecommunications network at affordable prices'. The Treaty defines 'universal service' as including:

- (a) Public voice telephony to the population of a Contracting State;
- (b) Internet access to the population of a Contracting State;
- (c) Telecommunications services to schools, hospitals and similar institutions and to the disabled and physically challenged;
- (d) The promotion of telecommunications services so as to ensure that as wide a range of people as possible share in the freedom to communicate by having access to efficient and modern telecommunications at an affordable cost.

Stemming from the above, each ECTEL Member State has a specific mandate to provide universal access to telecommunication services for 'the disabled and physically challenged'. In addition to its Treaty, ECTEL also published a sample Telecommunications Act (2000),

Telecommunications (Universal Service) Regulations (2008) and a Telecommunications (Universal Service Fund) Order (2008), which were adopted by all ECTEL Member States.

The sample regulations provide that two of the USF objectives are to “ensure the reasonable availability and affordability of basic and advanced telecommunications services, including voice telephony and Internet access, as well as broadband connectivity... to the physically challenged” and to “provide support for the introduction and expansion of telecommunications services to ...organizations serving public needs”. They also set out rules for project calls, procurement and implementation and requirements for fund administration and annual reporting.

In 2018, ECTEL Member States signed the Protocol Amending the Treaty Establishing the Eastern Caribbean Telecommunications Authority. The Protocol was the result of ECTEL’s recent review process and acts as a prerequisite for the introduction of a new Electronic Communications Bill and a raft of orders and regulations. ECTEL began a review of its legislation and regulations in 2015 to respond to changes in the region’s telecommunications markets. This required a reorientation towards electronic communications and harmonising the number and type of market players and convergence between services, networks and technologies.

After carrying out a consultation with Member States, telecommunications providers and other interested stakeholders, ECTEL decided to repeal and replace the current legislative and regulatory framework with a raft of new legislation, regulations and orders, including:

- Electronic Communications Bill;
- Electronic Communications (Universal Service and Access) Order;
- Electronic Communications (Universal Service and Access Fund Contribution) Order; and
- Electronic Communications (Universal Service and Access Fund) Regulations.

The Electronic Communications Bill, which will replace the telecommunications legislation of each Member State, makes several significant changes. These include:

- Extending the scope of the legislation from telecommunications to all electronic communications;⁴¹
- Extending the scope of USFs to provide both universal service and universal access and renaming USFs as ‘Universal Service and Access Funds’ (‘USAF’) to reflect this change;
- Requiring providers and contributors to the USAF to provide audited financial statements;
- Introducing a penalty for licensees who fail to contribute to their country’s USAF;
- New obligations on NTRCs in relation to fund management, including a duty to ‘identify appropriate targets for moving toward universal service and access nationwide within a reasonable time frame’;
- Supporting the development of locally relevant information, content and applications; and
- Promoting grant funds for ICT entrepreneurial start-ups.

In working towards universal service and access, NTRCs are required to give special focus to rural, under-served and maritime areas. They must also ensure the reasonable availability and affordability of a basic and advanced electronic communications service over both wired and wireless networks to ‘the physically challenged’, among other groups. The draft bill includes the general aim of meeting the needs of ‘disabled users’.

⁴¹ ‘Electronic communications’ is defined in the draft bill as ‘any type of transmission and receipt of a symbol, signal, writing, image and sound, or any sort of communication on a line, by radio optical, wire, or other electromagnetic system.’ This includes any telecommunication and other means of communications in an electronic form.

However, the use of two different terms in the bill to refer to persons with disabilities without further explanation or definition lacks clarity. It is unclear whether the drafters of the bill intend the term 'disabled users' to only include 'the physically challenged' and whether NTRCs should promote universal service and access for all 'disabled users' or only 'the physically challenged'.

In response to the 2015 consultation, Grenada's NTRC proposed some changes to ECTEL's legislative and regulatory framework for the benefit of persons with disabilities. It suggested that persons with disabilities be included as a distinct element in the USF regulations and that the term 'disability' should be defined. It also suggested that an annual allocation of a funds should be dedicated to projects for persons with disabilities to ensure that there is always a project for this group afoot. However, ECTEL responded that it does not believe that it is necessary to define 'disabilities' in the USF Regulations but that the nationally used and accepted definition should also apply to the USF.

The draft bill states that 'universal service and access' is the widespread provision of an electronic communications service or equipment that allows access to electronic communications for the geographic areas, population groups and institutions specified by the Minister responsible for electronic communication in each Member State. ECTEL has released a draft Electronic Communications (Universal Service and Access) Order, which sets out the suggested electronic communications service, institutions, equipment, geographic areas, and population groups to which universal service and access should apply. They are set out in the following table:

Table A1
Schedule from draft ECTEL Electronic Communications (Universal Service and Access) Order

Electronic Communications Service	Public voice telephony Internet access
Geographic area	Rural areas Under-served areas Maritime areas Indigenous communities Public parks and other similar public areas
Population group	Physically challenged Elderly
Institutions	Schools Health facilities Public safety agencies
Equipment	Electronic communications access devices Infrastructure and equipment relevant to a USAF project
Ancillary services	Power Security Training in use of ICTs Content development

Source: ECTEL, 2018.

The Order makes explicit reference to 'electronic communications access devices' and 'infrastructure and equipment relevant to a USAF project', which will be welcomed by ECTEL states as giving a clear mandate to provide equipment to enable people to make use of ICTs.

However, like the draft Electronic Communications Bill, the Order only extends universal service and access to 'the physically challenged'. It thus excludes various categories of persons with disabilities from its ambit, including those with mental, intellectual or sensory impairments. This casts doubt for NTRCs as to whether they should promote universal service and access for all persons with disabilities. Given that one of the general aims of the draft bill is meeting the needs of 'disabled users',

NTRCs are encouraged to do so. However, this difference in language casts some doubt on whether NTRCs have a clear mandate to provide universal access and service to the whole disabled community.

ECTEL States currently set telecommunications providers' contribution rates at 0.25 per cent of gross annual revenue to the USF in the first year of a licence; 0.5 per cent in the second year; and 1.0 per cent in the third year and every other year of a licence. The draft Electronic Communications (Universal Service and Access Fund Contribution) Order will increase the contribution to 2 per cent of gross annual revenue after three years for an electronic communications provider operating for more than three years and after six years for new providers.

Current universal service regulations will also be replaced with new Electronic Communications (Universal Service and Access Fund) Regulations, which make important changes to ECTEL's universal service and access regime. These include:

- An obligation for NTRCs to have an annual fund operating plan, including priority goals, a summary market assessment and budget estimates;
- A detailed new process for project proposals and procurement, including giving NTRCs the power to divide projects into 'lots';⁴² and
- Allowing non-licensees, such as community groups and NGOs, to bid for fund projects where the bidding document permits it.

Interestingly, the draft Regulations make a minor reference to 'the disabled' when they state that annual fund operating plans may include general or specific goals. NTRCs may seek to "focus attention narrowly on a particular development target, such as a school or the disabled, or whether it will be open to a broader range of potential projects during the upcoming year." If the opportunity arises, the draft bill and Order should be amended by ECTEL for consistency with the language used in the Regulations before States give them effect in domestic law.

The following sections introduce provisions relating to PWDs in the legislative frameworks of each ECTEL Member State' USF along with USF activity and recent projects benefiting PWDs and other marginalised groups.

2. Dominica

In accordance with the ECTEL Treaty, section 44 of Dominica's Telecommunications Act 2000 requires the government to establish a Universal Service Fund. The Act allows the Minister of Telecommunications, on the recommendation of ECTEL, to impose a Universal Service Obligation (USO) on telecommunications providers as a condition of their licence. Under the Act, 'universal service' includes the provision of:

- public voice telephony;
- internet access;
- telecommunications services to schools, hospitals and similar institutions, and the disabled and physically challenged; or
- other service by which people access efficient, affordable and modern telecommunications.

Dominica set up a Universal Service Fund pursuant to the Telecommunications (Universal Service Fund) Regulations 2009 and started collecting funds in April 2010. The Regulations include a similar

⁴² Draft regulation 26(1) states where the splitting up or division of a project into separate lots or segments is possible, the Commission may divide the project for the award of the separate part or lot to a bidder.

definition of 'universal service' as the Act. One notable difference is the removal of the word 'disabled' from the Regulations, so the NTRC must only provide "telecommunications services to schools, hospitals and similar institutions, and the physically challenged' rather than 'the disabled and physically challenged". This change in wording has the potential to exclude some persons with disabilities from USF funding, as not all persons with disabilities are 'physically challenged' but may instead have intellectual impairments, for example.

The Regulations task the NTRC with ensuring "the reasonable availability and affordability of basic and advanced telecommunications services, including voice telephony and Internet access, as well as broadband connectivity" for the community, households and individuals as well as "the physically challenged, elderly, and indigent communities." The NTRC must, among other things, also "provide support for the introduction and expansion of telecommunications services to schools, health facilities and other organizations serving public needs."

According to ECTEL's Telecommunications Universal Service Guidelines, both telecommunications providers and 'other interested parties' may make proposals for projects to the NTRC, but funds can only be disbursed to telecommunications providers. Dominica's NTRC has encountered challenges identifying projects for PWDs because PWDs and organisations supporting them are often unaware of the latest ICT resources available. This results in limited proposals from organisations working with PWDs. Another issue is that PWDs are unable to provide guidance on ICTs during the process of appraising project proposals. This makes it more difficult for the USF to identify technologies best suited to improving the lives of this target population.

In keeping with ECTEL's model regulations, licenced telecommunication providers must contribute 1 per cent of their gross annual revenues to the USF in the third year and every other year of their licence.⁴³ As of February 2019, Dominica's Fund had collected USD 2,389,203 of which 53 per cent or USD 1,266,595 has been disbursed. The Fund collected USD 280,917 in 2017, none of which had been disbursed as at February 2019. PWDs and other marginalised groups have, however, benefited from a range of recent projects, as set out in the following table:

Table A2
Projects for PWDS and other marginalised groups funded by Dominica's USF

Commencement	Project	Project description	Funds allocated
February 2012	Dominica Association of People Living with Disabilities	Provision of hardware and software including Job Access with Speech (JAWS)	USD 56,000
February 2012	Youth Skills Training Centres	Establishment of telecenters aimed at youth	USD 158,000
September 2015	Alpha Center, School for People with Mental Disabilities	Provision of ICT hardware and software to assist learning process	USD 35,764
December 2015	Kalinago Territory Computer Facility	Establishment of a computer lab for the indigenous people of the Kalinago Territory	USD 12,882
May 2017	Public libraries	Establishment of computer labs at rural libraries	USD 24,411

Source: Dominica NTRC, 2019.

⁴³ Dominica's Telecommunications (Universal Service Fund Contribution) Order 2009. Providers must contribute 0.25 per cent of gross annual revenue to the USF in the first year of a licence and 0.5 per cent in the second year.

Dominica's Act requires the NTRC to submit an annual report to the Minister containing: a) an assessment of the state of telecommunications and its impact and significance for the development of Dominica; b) a description of the activities undertaken by the Commission including recommendations made in respect of licences and frequency authorisations; c) actions taken to promote the Treaty including the implementation of the recommendations, policies and guidelines of ECTEL; d) a financial report of the Commission; and e) such other matters as are prescribed. The Minister must then lay the report before Parliament. However, the last available report on the NTRC's website is for 2013.

3. Grenada

Grenada's legislative and regulatory framework for its Universal Service Fund consists of the Telecommunications Act 2000, Telecommunications (Universal Service Fund) Regulations 2009 and Telecommunications (Universal Service Fund Contribution) Order 2016. This framework is nearly identical to other ECTEL Member States, due to their broadscale adoption of sample legislation and regulations put forth by ECTEL in 2007.

Like Dominica's legislation, the Minister responsible for telecommunications in Grenada may impose a Universal Service Obligation (USO) on telecommunication providers as a condition of their licence. Under the Regulations, 'the physically challenged, elderly, and indigent communities' as well as communities, households and individuals in Grenada are entitled to "the reasonable availability and affordability of basic and advanced telecommunications services, including voice telephony and Internet access, as well as broadband connectivity".

Grenada's NTRC must also "provide support for the introduction and expansion of telecommunications services to schools, health facilities and other organizations serving public needs", "encourage efficient access to and use of telecommunication networks and services throughout Grenada" and "promote technological innovation in the telecommunications sector."

These Regulations also require the NTRC to consult with public and industry stakeholders to determine appropriate socio-economic criteria to identify geographic areas, population groups, institutions and organisation that may be eligible to benefit from funding. Under the Regulations, the NTRC makes a public call for project proposals. It meets with applicants and all stakeholders for selected projects before implementation begins.

Despite this, Grenada's NTRC has encountered issues identifying projects to increase access to technology to PWDs due to lack of knowledge on the part of organisations working with PWDs about the latest technology available for PWD. This makes it difficult for such organisations to respond to calls for projects. Although Grenada has approximately ten active organisations working with disability, they have only received a handful of proposals from these groups since the first project call in 2010. In the NTRC's experience, when disability organisations do respond to project calls, they propose projects based on current ICT equipment they are using, and not on the emerging technologies that can transform the lives of PWDs.

The NTRC's personnel have attended ITU trainings to increase their knowledge of the latest technology for PWDs and, for one of its projects, the NTRC engaged a consultant to identify emerging technologies with the greatest benefit for Grenada's PWDs. The NTRC argues that training or workshops on emerging technologies for PWDs should also be provided to disability organisations, so they can get up to speed on these technologies and provide more informed project proposals.

The USF started collecting funds in 2009 after Grenada brought the necessary regulations into effect. As of February 2019, Grenada's USF had collected approximately XCD 16,200,000

(USD 5,994,589) overall,⁴⁴ of which approximately 52 per cent or XCD 8,400,000 (USD 3,108,292) has been disbursed. The Fund collected XCD 2,300,000 (USD 851,076) in 2018. From this amount, XCD 800,000 (USD 296,027) or 35 per cent has been disbursed. Although almost half of the funds collected by the USF are yet to be disbursed, NTRC confirmed that most of the remaining funds have already been committed to future projects.

As illustrated in the following table, PWDs and other marginalised groups have benefited from a range of recent projects:

Table A3
Projects for PWDS and other marginalised groups funded by Grenada's USF

Period	Project	Project description	Funds allocated
2012–2015	ICT equipment and broadband internet for PWDs	Provision of assistive technologies and devices to ten organisations serving PWDs	XCD 421,000 (USD 155,784)
2012–2017	Women & Girls in ICT	Training courses on the use of technology and sessions on online protection for children	XCD 77,000 (USD 28,493)
2017–2020	Solar Powered ICT Centre with equipment for PWDs	ICT centre which includes equipment for PWDs to enable access to ICTs and training	XCD 697,000 (USD 257,912)
2019–2020	ICT enhancement for PWDs	Provide an array of ICT equipment and devices for PWDs through 10 organisations serving PWDs in Grenada.	XCD 350,000 (USD 129,512)

Source: Grenada NTRC, 2019.

Like Dominica, Grenada's Act requires the NTRC to submit an annual report to the Minister, including a description of the activities undertaken by the NTRC, actions taken to promote the Treaty, and a financial report, among other things. The Minister tables such reports before Parliament within 28 days of receipt. The NTRC reports that it submits a report to the Minister each year as required by the Act. However, the last available USF report on the NTRC's website is for 2011, while the latest NTRC Annual Report available is for 2013.

4. Saint Kitts and Nevis

In accordance with Article 12 of the Treaty establishing ECTEL, Saint Kitts and Nevis created a Universal Service Fund in 2008. It has adopted the ECTEL legislative and regulatory framework, including the Telecommunications Act 2000, Telecommunications (Universal Service Fund) Regulations 2008, and Telecommunications (Universal Service Fund Contribution) Order 2008.

The Act allows the Minister responsible for communications, on the recommendation of ECTEL, to include a USO as a condition in the licenses of telecommunications providers. This is accompanied by a requirement to establish a USF to which every telecommunications provider must contribute.

The USF began to collect money in 2010 (retroactive from 2008) and had accrued XCD 10,521,610 (USD 3,893,331) as of February 2019. Of this amount, only XCD 3,062,449 (USD 1,133,203) or 29 per cent had been disbursed at that time. In 2017 and 2018, XCD 1,194,435 (USD 441,979) was collected, none of which had been disbursed by February 2019. According to the NTRC, the lack of fund activity is due to the focus of its legislation on universal service rather than access. Saint Kitts and Nevis has already achieved reasonable levels of telecommunications service, but

⁴⁴ USD conversions using exchange rates on 2 April 2019 (amounts rounded up to nearest dollar).

access is lacking. ECTEL's new legislation will allow the NTRC to create access projects and utilize its surplus funds.

The new framework will also increase contributions from telecommunications providers from 1 of gross revenues to 2 per cent. The NTRC commented that it may experience difficulties approving enough projects to disburse the increased amount of funds in a timely manner, but that the new mandate to provide access in addition to service will allow it more scope to carry out projects appropriate for Saint Kitts and Nevis.

The NTRC also looks forward to other changes to be introduced by the new ECTEL framework, including the ability to grant funding to non-licensees. Saint Kitts and Nevis only has two telecommunications providers, which has limited the volume of projects the NTRC can approve. The new framework will expand the pool of eligible bidders and will make it possible for the NTRC to have more projects underway at any given time.

Furthermore, the NTRC has experienced issues collecting timely payments from telecommunications providers. Penalties in the new ECTEL framework for providers that do not contribute to their country's USAF could provide an incentive for providers to pay on time, although the NTRC commented that providers will be more reluctant to pay with contributions being increased to 2 per cent.

The current Regulations require the NTRC to ensure to 'the physically challenged, elderly and indigent communities' the reasonable availability and affordability of basic and advanced telecommunications services, including internet access, telephone and broadband. Despite this, the NTRC reported that the Fund has not been used for any projects to increase access to telecommunications for PWDs. While it puts out project calls twice a year in newspapers and on the radio, it only received proposals from organisations for persons with disabilities for the first time in 2019 after writing to them directly. The Board is yet to approve either of the proposals, but it is possible that at least one will be implemented this year after it is considered against the NTRCs' project allocation criteria.

Since 2010, the NTRC has approved two projects, neither of which relate specifically to PWDs and one of which has been completed:

Table A4
Projects for underserved groups funded by Saint Kitts and Nevis' USF

Period	Project	Project description	Funds allocated
2013-2018	Internet in schools	Providing all high schools in Saint Kitts and Nevis with WiFi, broadband and landline connections	USD 1,256,022
2019-2024	WiFi in Nevis community centres	Provision of WiFi to community centres in Nevis	USD 92,508

Source: Saint Kitts and Nevis' NTRC, 2019.

Saint Kitts and Nevis is required under its Regulations to produce an annual report containing audited financial statements, and details of fund activities and awards of contracts but it reports that it has not published any to date. The NTRC plans to produce its first report in 2019.

5. Saint Lucia

Saint Lucia shares the legislative and regulatory framework of ECTEL's other members for its Universal Service Fund. This includes a Telecommunications Act 2000, Telecommunications

(Universal Service Fund) Regulations 2008, and Telecommunications (Universal Service Fund Contribution) Order 2009.

Like other ECTEL States, Saint Lucia's Act allows the Minister responsible for telecommunications to impose a USO on telecommunications providers as a condition of their licence. Licences granted under the Act may include as a condition the provision of services to 'the blind, deaf, physically and medically handicapped and other disadvantaged persons. The Act further requires the creation of a USF to which every telecommunication provider must contribute.

Under the Act, 'universal service' includes the provision of telecommunications services to 'the disabled and physically challenged'. The definition of 'universal service' under the Regulations is, however, narrower, using the term 'physically challenged'. Similarly, the Regulations require the NTRC to ensure the reasonable availability and affordability of basic and advanced telecommunications services to 'the physically challenged, elderly, and indigent communities.'

Since it began collecting funds in 2010, the USF has collected on average XCD 1,800,000 (USD 666,058) annually of which approximately 25 per cent has been disbursed. From the disbursed funds, approximately 25 per cent has been used for projects aimed at PWDs and other marginalised groups:

Table A5
Projects for PWDS and other marginalised groups funded by Saint Lucia's USF

Period	Project	Project description	Estimated funds allocated
Nov 2013 – Oct 2018	Soufriere Community Access Centre Project	Provision of equipment and related services for establishing internet access at the centre	XCD 400,000 – 500,000 (USD 148,013 – 185,016)
May 2014 – April 2019	Payphones in Rural Communities and Public Institutions Project	Installation of payphones in rural communities and public institutions	XCD 200,000 – 300,000 (USD 74,007 – 111,010)
Dec 2014 – Nov 2019	Babonneau Library Project	Internet access and web-enabled training facility for the library	XCD 400,000 – 500,000 (USD 148,013 – 185,016)
March 2015 – Feb 2020	Ciceron Secondary School Project	Supply of equipment and related services for the establishment of internet access at the school	XCD 800,000 – 900,000 (USD 296,026 – 333,029)
Dec 2015 – Nov 2020	Libraries and Community Access Centres Project	Supply and installation of equipment and related services for establishing internet access at libraries and community access centres across St. Lucia	XCD 1,000,000 – 2,000,000 (USD 370,032 – 740,064)
June 2016 – May 2021	The Holy Family Children's Home Project	Supply and installation of broadband equipment and related services for the establishment of internet access at the home	XCD 7,000 – 8,000 (USD 2,591 – 2,961)
Sep 2016 – August 2021	Sir Arthur Lewis Community College – Southern Campus Project	Supply and installation of broadband equipment and related services for the college	XCD 80,000 – 90,000 (USD 29,603 – 33,303)
Oct 2016 – Sep 2021	Differently Abled Project	Improving internet access for the differently abled throughout St. Lucia	XCD 600,000 – 700,000 (USD 222,020 – 259,021)
5-year period with start date TBD	Upton Gardens Girls Centre	Supply and installation of equipment and related services for establishing internet access at UGGC	TBD
5-year period with start date TBD	Boys Training Centre	Supply and installation of equipment and related services for establishing internet access at the Boys Training Centre	TBD

Period	Project	Project description	Estimated funds allocated
5-year period with start date TBD	National Skills Development Centre	Supply and installation of equipment and related services for establishing internet access at NSDCs	TBD

Source: Saint Lucia's NTRC, 2019.

While Saint Lucia has only disbursed a small portion of its funds, the NTRC reports that it has either committed outstanding funds to projects or has plans in place for these funds. Therefore, it believes the current levy on telecommunications is appropriate and that funds are being disbursed in a timely manner. The NTRC does not develop its own project proposals, therefore it heavily relies on public feedback following awareness campaigns and consultation drives.

Saint Lucia's USF will be affected by ECTEL's ongoing revision of its legislative and regulatory framework. The NTRC expressed a wish to have a broader definition of 'universal service' in the sample regulations to include telecommunications access in addition to service, based on its experience with project implementation. While it currently interprets the ECTEL Treaty and its regulations to include both universal access and service, an amendment to the wording would provide an explicit mandate for the NTRC to provide access devices, such as tablets, smartphones and whiteboards, to persons with disabilities.

Furthermore, Saint Lucia's NTRC has experienced some difficulties collecting legally-mandated contributions from telecommunications providers. As a result, it also asked ECTEL to introduce penalties for providers that do not make contributions.

Like Saint Kitts and Nevis, Saint Lucia's NTRC is required to produce an annual report containing audited financial statements, and details of fund activities and awards of contracts. The latest annual report published on its website is for October 2015 to September 2016.

6. Saint Vincent and the Grenadines

Saint Vincent and the Grenadines set up a Universal Service Fund in 2008 in accordance with its obligations under the ECTEL Treaty. The Fund's framework can be found in the Telecommunications Act 2001, Telecommunications (Universal Service Fund) Regulations 2008, and Telecommunications (Universal Service Fund Contribution) Order 2008. In January 2009, the NTRC also published its own Telecommunications Universal Service Guidelines.

According to the Guidelines, one of the objectives and criteria for use of the Fund is supporting projects which promote and facilitate the use of telecommunications services by 'individuals with special needs', using specialised equipment, software and protocols. Target objectives for the Fund include customised facilities in all public locations and in homes for 'persons who are physically challenged' as well as telecommunications services at affordable prices for the 'indigent'.

The NTRC accepts projects proposals from telecommunications service providers and other interested parties, but at present funds may only be paid out to telecommunications service providers. After publishing a list of projects for funding, the Commission invites bidders to participate in a bidding process. In selecting the winning bidder, the Commission may use independent evaluators to examine and evaluate the bids. All projects have a five-year lifespan and are generally renewed for a further five years with necessary modifications or changes in focus.

The annual contributions received from telecommunication providers range from 0.25 per cent of gross revenue for the first year of a license, 0.5 per cent of gross revenue for the second year, 1 per cent for the third year, 1.5 per cent for the fourth year, 1.75 per cent for the fifth year and 2 per

cent for the sixth and each subsequent year of its licence and throughout the remaining period of the license.

From the time it began collecting funds in 2008 to February 2019, the USF had collected XCD 13,833,293 (USD 5,118,758) of which it had disbursed 97 per cent or XCD 13,359,347 (USD 4,943,383). In 2018, the Fund collected XCD 1,747,544 (USD 646,647) of which 37 per cent or XCD 273,598 (USD 471,272) had been disbursed as at February 2019. For the first time, the NTRC reports that it is applying for funding from external agencies, such as the World Bank, European Union and Caribbean Development Bank. This has become necessary as the contributions it receives from telecommunications providers (2 per cent of gross annual revenues) do not generate adequate funds to expand current projects or work on new initiatives, such as regional projects collaborating with other NTRCs.

Compared to other ECTEL members, Saint Vincent and the Grenadines has a strong history of disbursing USF funds. The NTRC credits this to its proactiveness in instigating projects. Rather than waiting on project calls to create new projects, Saint Vincent and the Grenadines is continually talking to stakeholders and receiving project proposals from the community. It also designs projects in house without waiting on external input. This is made possible by high levels of expertise within the NTRC maintained by staff attending conferences and subscribing to industry publications on emerging technologies.

While the NTRC actively instigates projects, limited use has been made of funds for projects targeted at PWDs. The NTRC's initial focus on the USF was to provide universal access to the internet in Saint Vincent and the Grenadines. Now that this been achieved, the NTRC will enter a second phase of targeting groups such as PWDs. The NTRC has also reported challenges using funds for projects to increase technology for PWDs because the ECTEL framework did not allow it to procure specialised terminal equipment. ECTEL's revised legislative and regulatory framework should solve this issue by increasing the scope of universal service to also include access.

In 2019, the NTRC will launch a project to provide home assistive devices to PWDs and older persons. However, according to the NTRC, these groups have indirectly benefited from a range of projects aimed at the general population, as described in the table that follows:

Table A6
Projects for PWDS and other groups funded by Saint Vincent and the Grenadines' USF

Period	Project	Project description	Funds allocated
2011–2016	Internet project	Provide WIFI service at all tourism sites island wide	XCD 427,000 (USD 158,004)
2012–ongoing	Community centre project	Install small telecentres in rural locations	XCD 127,000 (USD 46,995)
2012–ongoing	Maritime project	Provide emergency communications coverage of our seaspace in line with GMDSS standards	XCD 445,000 (USD 164,665)
2012–ongoing	Schools project	Provide WIFI service at all private and public schools as well as special needs schools	XCD 4,555,000 (USD 1,685,496)
2014–ongoing	Smart project	Provide subsidised internet at a cost of USD 4 per month to 340 low income households for a period of 2 years	XCD 163,000 (USD 60,316)
2015–ongoing	Health and police project	Provide WIFI service and computers to all health clinics and police stations island wide	XCD 711,000 (USD 263,093)

Period	Project	Project description	Funds allocated
2017–ongoing	Payphone and WIFI project	Provision of WIFI services at strategic locations in Saint Vincent and the Grenadines	XCD 1,337,000 (USD 494,733)
2019–TBD	Assistive devices for older persons and persons with disabilities	Provision of assistive devices, including home panic buttons, to older persons, persons with disabilities and other at need groups	TBD

Source: Saint Vincent and the Grenadines' NTRC, 2019.

As an ECTEL Member State, Saint Vincent and the Grenadines is required to produce annual reports containing audited financial statements, and details of fund activities and awards of contracts. It is the only NTRC with up to date annual reports publicly available on its website.

7. Comparison of ECTEL Member States' projects for PWDs

All NTRCs, with the exception of Saint Kitts and Nevis, have either completed, are implementing, or have approved for implementation at least one project specifically aiming to improve access to technology for PWDs. While Saint Kitts and Nevis is yet to approve a project, it reports that it received two project proposals in 2019 for projects for PWDs, which are currently being considered against the fund's project allocation criteria. Saint Vincent and the Grenadines' first project for PWDs will begin implementation in 2019. However, the amount of funds that it will be allocated is yet to be determined.

From the five NTRCs, Grenada has allocated the most funds to projects for PWDs in absolute terms and as a percentage of overall funds collected. It has had three projects aimed at PWDs – one completed, two ongoing - to which it cumulatively allocated USD 543,208. This represents 9.06 per cent of overall funds collected since 2009. Other NTRCs have allocated between 0-5 per cent of overall funds to projects for PWDs. As set out in the following table, most projects have focused on providing assistive technologies to PWDs through local organisations serving PWDs or community ICT facilities:

Table A7
Past, current and future USF projects of NTRCs aiming to improve access to technology for PWDs

NTRC	Time period or commencement date	Project beneficiary	Description	Fund allocation	Percentage of overall funds
Dominica	February 2012	Dominica Association of People Living with Disabilities	Provision of assistive hardware and software	USD 56,000	2.34 per cent
	September 2015	Alpha Center, School for People with Mental Disabilities	Provision of ICT hardware and software to assist learning process	USD 35,764	1.5 per cent
Grenada	2012–2015	ICT equipment and broadband internet for PWDs	Provision of assistive technologies and devices to ten organisations serving PWDs	XCD 421,000 (USD 155,784)	2.6 per cent
	2017–2020	Solar powered ICT centre equipped for PWDs	ICT centre including equipment for PWDs to enable access to ICTs and training	XCD 697,000 (USD 257,912)	4.3 per cent
	2019–2020	ICT enhancement for PWDs	Provide PWDs with ICT equipment and devices through ten organisations serving PWDs	XCD 350,000 (USD 129,512)	2.16 per cent

NTRC	Time period or commencement date	Project beneficiary	Description	Fund allocation	Percentage of overall funds
Saint Lucia	2016–2021	Differently-abled Project	Improving internet access for PWDs throughout St. Lucia	XCD 600,000–700,000 (USD 222,020–259,021)	Approx. 4-5 per cent
Saint Vincent and the Grenadines	2019–TBD	Assistive devices for older persons and PWDs	Provision of assistive devices to older persons, PWDs and other at need groups	TBD	TBD

Source: ECTEL NTRCs.

B. Non-ECTEL countries

1. Introduction

This section presents profiles for 17 non-ECTEL Caribbean countries that either have active USFs and/or USOs in place (6 countries), have drafted but not yet enacted a bill enabling the establishment of a USF (1 country), or have enacted legislation enabling the establishment of a USF but have not set up this mechanism (10 countries).

The length of each profile varies based on whether the country in question could be contacted for information and whether it has established a USF i.e. short profiles were only possible for countries with legislation that is yet to result in the creation of a USF. Where a country's telecommunications representatives could not be contacted, its profile is based on desk research using publicly available information and resources and has not been verified by that country.

2. Anguilla

In 2014, Anguilla made regulations called the Universal Service and Public Telecommunications Regulations, which provide for a USF and a USO. The Regulations are almost identical to those with the same name made in 2005 by Turks and Caicos Islands, another non-self-governing-territory (NSGT) of the United Kingdom. However, to date, Anguilla has not established the mechanisms provided for in the Regulations.

The Regulations allow Anguilla's Public Utilities Commission to designate universal service providers and to establish a cost-sharing mechanism called the Universal Service Fund to apportion the cost of fulfilling universal service obligations.

Persons with disabilities receive special attention in the Regulations. The Commission may impose obligations on service providers, after consultation with representatives of disabled users and the service providers, to ensure that disabled end users can enjoy access to and affordability of public telephone services, including access to directory inquiry, operator assisted information and emergency services, equivalent to that enjoyed by other end users.

'Low income and other special users' are also singled out in the Regulations as requiring assistance to achieve universal service. The Commission may require a universal service provider to provide special rates and telecommunications packages that depart from those provided under normal commercial conditions. This is to ensure low income and other special users are not prevented from having access to or using a public telephone service or other universal services. It is unclear whether persons with disabilities would be considered 'other special users'.

While the Governor may add services to the list, 'universal services' are:

- access to the public telephone service,

- the maintenance of public payphones,
- free internet access for public libraries and public schools,
- access to emergency numbers free of charge,
- the provision of a free telephone directory,
- the provision of a directory inquiry service, and
- the provision to low income and other special users of public telephone, public payphone, free telephone directory and a directory inquiry service.

It is unclear whether Anguilla will bring the Regulations into operation. If it does decide to do so, the definition of 'universal service' should ideally be amended to include affordable internet access for the whole population and to incorporate emerging technologies as well as ancillary equipment, support and other services to enable disabled users, low income and other special users to access the internet and other technology.

3. Antigua and Barbuda

In 2016, Antigua and Barbuda drafted a modern telecommunications bill containing a USO and providing for the establishment of a USF, but this bill is yet to become law. The country's current telecommunications legislation, dating to 1951, does not require telecommunications providers to provide universal service to consumers.

If passed, the new law would require licenced providers to pay prescribed contributions not exceeding 3 per cent of a provider's annual turnover to the USF. The bill defines universal service as 'a high quality public telephone service, including a free telephone directory for subscribers, operator assisted information services, broadband internet service, free emergency telecommunications service and the provision of services to enable a differently-abled user to make and receive a call.'

The Bill also sets up a National Telecommunications Regulatory Commission, which would have the task of imposing obligations on licensees to 'ensure the provision of universal service to a differently-abled end-user equivalent to that enjoyed by another end-user.' The term 'differently-abled' is not defined.

According to media reports, the passage of the Bill has been delayed as telecommunications providers object to the imposition of a universal service levy characterising it as an unduly burdensome tax on providers that will drive up prices for consumers.⁴⁵

As well as addressing these sector concerns, lawmakers should consider amending the Bill to introduce a broad definition of 'differently-abled' in line with the CRPD and to allow the provision of services to differently-abled users to enable them to use the internet in addition to making and receiving calls.

4. The Bahamas

The Communications Act 2009 includes a USO and allows the Utilities Regulation and Competition Authority (URCA) to establish a USF. URCA may determine that a licenced network or carriage services provider is required to meet all or some universal service obligations included in the Act. Such

⁴⁵ TeleGeography, "Govt's new telecoms bill would ultimately force up retails prices, expert says; ABTD sets up spectrum management regime", 19 February 2016, [online] [date of reference: 17 April 2019] <<https://www.telegeography.com/products/commsupdate/articles/2016/02/19/govts-new-telecoms-bill-would-ultimately-force-up-retails-prices-expert-says-abtd-sets-up-spectrum-management-regime/>>

a licensee is then entitled to apply for funding from the USF. A framework, including regulations for the establishment of the fund, was drafted in 2013, but it is yet to be brought into effect.

The Act allows the Minister to update the list of universal service obligations. As drafted, the list currently includes:

- affordable basic telephony services to all populated areas;
- affordable basic dial-up internet services to all populated areas;
- basic dial-up internet services to specified institutions;
- affordable public access to pay apparatus; and
- affordable basic television services to all populated areas and specified institutions.

Persons with disabilities are absent from the draft regulations. However, the Regulations designate 'specified institutions' as beneficiaries of universal service obligations. This includes 'community centers registered with URCA'. For the avoidance of doubt, the framework states that 'community centers' include organizations that represent or provide specialized services to the differently abled and shall include but is not limited to Bahamas Alliance for the Blind and Visually Impaired, Bahamas Association of the Physically Disabled, and Training Centre for the Disabled.

The Act's list of universal service obligations requires updating to reflect current uses of technology, including affordable wireless and broadband internet services to all populated areas. While making this amendment, the Minister is also encouraged to include as a USO equipment, training, support and other services to make communications accessible to persons with disabilities.

5. Barbados

The Telecommunications Act 2001 provides for both a USO and USF in Barbados but, to date, neither have been established. The government's Telecommunications Unit is, however, currently considering establishing a USF as provided for in the Act.

The Act's universal service policy aims at "ensuring that every resident and every business enterprise of Barbados has access to reliable, affordable telecommunications services throughout Barbados on an equitable basis". One of the aims of the USO is to "provide appropriate telecommunications equipment to disabled persons to ensure access by those persons to the basic telecommunications service". Basic telecommunications service is defined as "...the ability to access dial tone in order to make telephone calls to other end-users", thus excluding internet access. The Act also provides for a USF to give effect to the universal service obligation. It imposes an 'access deficit charge' on telecommunication providers deemed to be 'Universal Service Carriers'.

The definition of 'basic telecommunications service' included in the Act requires updating to include wireless and broadband internet access and emerging technologies. If the Telecommunications Unit eventually establishes a USF, this will enable the mechanism to better serve the needs of persons with disabilities.

6. Belize

Belize's Telecommunications Act 2002 contains provisions enabling the establishment of both a USO and USF. However, neither the obligation nor the fund has been put in place. 'Universal service' is defined in the Act as "a telecommunication service determined by the [Public Utilities Commission (PUC)] as being a service to be provided by the licensee to an area, to areas, or sector not served or adequately served by the telecommunication service."

Section 33 contains a narrowly drafted USO requiring PUC to develop annual objectives "with the purpose of ensuring that the public telecommunication service, in particular basic telephone

service, is accessible to the widest number of users." The focus of the obligation on basic telephone services is out of step with developments in technology and its usage that have taken place since 2002, in particular the rise of the internet.

Furthermore, section 34 states that PUC may impose a licence condition requiring provision of universal service "to the widest users including those with disabilities or in a specified area or region, to the extent technically feasible and economically reasonable." To facilitate this, the PUC "may establish a fund into which providers of telecommunications services (public and private) shall pay any fees the PUC may prescribe as universal access development fees [emphasis added]." Licensees are then compensated in return for meeting the universal service obligation.

PUC reports that it is considering putting in place a USF as envisaged by section 34 of the Act but this is yet to take place.

7. Bermuda

The Electronic Communications Act 2011 allows the Minister responsible for telecommunications to make policies and regulations to establish a USO and a USF. It also requires the Regulatory Authority of Bermuda to assist the Minister in formulating and implementing any general universal service policies and regulations.

The Regulatory Authority informs that the Minister has requested it to initiate this work and it is in the early stages of designing USO and USF mechanisms.

The Act does not include any specific mention of persons with disabilities. However, the Minister may make policies or regulations designating particular types or groups of users as eligible for certain universal services pursuant to 'social tariffs'. A social tariff is designed to assist a defined group or groups of disadvantaged users or persons with special needs to achieve universal service, including through the provision of special services or facilities.

8. Cayman Islands

Cayman Islands enacted the legislative provisions necessary to set up a USF in its 2017 Information and Communications Technology Law. However, the fund is yet to be established. The law allows the Utility Regulation and Competition Office to set up a USF to compensate any ICT service or network provider who is required to provide universal service.

'Universal service' is defined as including:

- public voice telephony services together with free calls to emergency services and directory assistance, and
- internet access together with free internet access for educational or health facilities.

Cabinet may, on the recommendation of the Office, make regulations specifying other categories of universal service. No mention is made of persons or groups, such as person with disabilities, who may require special assistance to achieve universal service.

9. Cuba

The Telecommunications Company of Cuba (ETECSA) has an exclusive concession until 2036 for the provision of national and international telecommunication services. Decree 321 of 2013 includes an 'Obligaciones de Servicio Universal' requiring ETECSA to guarantee universal telecommunications service in Cuba.

The Decree defines 'Universal Telecommunications Service' as a guarantee to all society, to telecommunications of a minimum quality and at an affordable price for the education, health, information, entertainment and economic and social development of the country, regardless

of geographical location. The focus is on telephone connectivity, but the obligation extends to other telecommunications.

The Ministry of Communications is tasked with ensuring that ETECSA fulfils the universal service obligation and has produced indicators for ETECSA to measure its progress towards achieving universal service. In 2018, ETECSA began rolling out 3G internet access in Cuba, but it is unclear whether this type of internet service falls within the ambit of the USO and whether persons with disabilities are benefiting from this and other universal service initiatives.

10. Dominican Republic

In 1998, the Dominican Republic established a USF, the Fondo de Desarrollo de las Telecomunicaciones (FDT), or Telecommunications Development Fund. An independent regulator, Instituto Dominicano de las Telecomunicaciones (INDOTEL), regulates and administers it.

The FDT is financed through a two per cent levy on gross income of public telecommunications services providers. It aims to provide universal access to broadband services, achieve an internet penetration rate of 40 per cent of the population, and a penetration rate for personal computer users of at least 50 per cent. Funds have been used to subsidize infrastructure and telecommunications services in marginalized areas, including the financing of WIFI network initiatives, the deployment of rural broadband and the creation of hundreds of tele-centres for the community.

According to INDOTEL's 2018 institutional report, the FDT spent RD\$ 13,923,303.59 (USD 274,834) on projects in 2018, including on community telecentres, ICT training centres, a digital inclusion program and WiFi networks. At year end, the FDT had a reserve of RD\$ 1,242,293,138.33 (USD 24,521,712).⁴⁶

In 2013, GSMA reported that the FDT has achieved some improvements in the telecommunications service provided to the underserved and disadvantaged sectors of the country with a focus on access to education and ancillary services such as training.⁴⁷ It also noted that, unlike many USFs across the world, the funds can be used for the deployment of broadband. However, the FDT has also attracted criticism for a lack of transparency when selecting projects to receive financial support.⁴⁸

11. Co-operative Republic of Guyana

In 2016, Guyana enacted a Telecommunications Act to open the telecommunications market up to competition. This legislation also aims to extend existing telecommunications networks and services into un-served and under-served areas through a universal access and services programme. The Ministry of Public Telecommunications informs ECLAC that it is in the process of constructing the Act's Universality Fund and universal service and access obligations.

'Universal access' is defined as "the reasonable availability of telecommunications networks and telecommunications services on either a private or a shared, public basis to individuals, bodies corporate and other persons within a given community". The legislation also seeks to achieve 'universal service' defined as "the ubiquitous delivery, accessibility and affordability of telecommunications services to persons throughout a geographical area, with no practical impediments to subscription and usage". When determining which services are subject to universal

⁴⁶ INDOTEL, *Memoria Institucional 2018*, [online] [date of reference: 17 April 2019] <<https://indotel.gob.do/media/143187/memoria-2018-final-pdf.pdf>>

⁴⁷ GSMA (2013), *Universal Service Fund Study* [online] [date of reference: 17 April 2019] <https://www.gsma.com/publicpolicy/wp-content/uploads/2016/09/GSMA2013_Report_SurveyOfUniversalServiceFunds.pdf>

⁴⁸ Alliance for Affordable Internet, *República Dominicana: Resumen del Informe de Asequibilidad 2017*, [online] [date of reference: 17 April 2019] <<http://a4ai.org/wp-content/uploads/2017/12/A4AI-2017-Informe-de-Asequibilidad-Republica-Dominicana.pdf>>

service and access requirements, the Minister responsible for telecommunications may make “special arrangements for persons who are blind or otherwise differently-abled”.

The Act also includes a ‘Universality Fund’ to fund the delivery of universal access and service. It will receive contributions from operators of telecommunications networks, providers of telecommunication services, and other telecommunications undertakings on a transparent and non-discriminatory basis.

12. Jamaica

Jamaica has a highly-developed Universal Service Fund, which was established in 2005 and which was operated by the Universal Access Fund Company Limited (UAF). This arrangement was replaced in 2012 with the enactment of the Telecommunications Act 2012. The new fund is operated by a government agency called the Universal Service Fund, which is geared at facilitating the provision of universal access to the information superhighway and accelerating the deployment of broadband services island-wide.

Under the Act, licensees pay a USO levy into a fund, managed by a Board of Management of the Universal Service Fund, “to support the implementation of the obligation to provide universal service”. The Fund is financed through a levy of USD 0.3 per minute on international calls to Jamaica, terminated to fixed lines and USD 0.2 on calls to mobile lines, and 3 percent of the value of the a range of products and services provided by domestic carriers and service providers.⁴⁹ One of the Fund’s aims is to support ICT programmes that specifically target vulnerable groups, including low-income households, the elderly, the youth and disabled persons.

The Office of Utilities Regulation reports that the USF has encountered challenges developing projects to improve access to technology for PWDs due to increased and competing interests for limited and declining funds. Revenues have been declining due to changes in technology, including increased use of WhatsApp and Facebook for calling, that have resulted in reduced international calls from Jamaica. However, consultations have begun aimed at identifying options to improve access to telecommunications tools and services for PWDs.

As of February 2019, the balance of the USF was JMD 13,883,750,000 (USD 110,680,856). In 2017 and 2018, the USF collected JMD 1,159,160,000 and disbursed JMD 1,174,520,000. Recent projects of the USF targeting vulnerable groups and underserved areas include:

Table A8
Projects for vulnerable groups and underserved areas funded by Jamaica’s USF

Period	Project	Project description	Funds allocated
April 2017 – March 2018	Community Access Points (CAPs)	Establishment of over 300 CAP sites to bring ICTs to underserved areas in Jamaica. These locations enable citizens to use the Internet at minimal or no cost.	JMD 71,653,243.18 (USD 528,029)
Information unavailable	USF-Connect-JA Free Public Wi-Fi project	Establishment of seven free public Wi-Fi hotspots	JMD 124,000,000 (USD 913,780)
Information unavailable	Broadband network	Creation of Jamaica’s largest public broadband network linking education institutions, post offices, public libraries, health sector and the Jamaica Constabulary Force (JCF)	Information unavailable

Source: Office of Utilities Regulation, 2019.

⁴⁹ Telecommunications (Spectrum Regulatory Fees) Regulations 2003.

The Telecommunications (Amendment) Act 2012 introduced a requirement for the USF to produce annual reports. As of March 2019, the most recent annual report available is for 2013/2014. The USF's website states that it is awaiting approval from the Ministry of Science, Energy and Technology to make its annual reports for 2014/15, 2015/16 and 2016/17 public.

13. Montserrat

In 2009, Montserrat enacted an Info-Communications Act, which integrated the telecommunications, information technology and broadcast industries and established a comprehensive legal framework for a competitive info-communications market.

The Act includes provisions for a USO and a USF, but the Montserrat Info-Communications Authority (MICA) has determined that neither a USO nor a USF are realistic or necessary at this time. Due to a volcanic eruption in 1995, half of Montserrat's population left the island and a large part of the island remains a volcanic exclusion zone. As part of Montserrat's National ICT Policy, Strategy and Implementation Plan 2012-2016, MICA carried out a study on the feasibility of a universal service fund. It concluded that there are few or no individuals lacking access to ICTs and that the island's two telecommunications providers are providing satisfactory access to all services considering the small population size and restricted geographic use of the island.

As a result, MICA does not envisage establishing a USO or USF soon. However, if dynamics shift, it reports that it may in the future consider establishing a USF as envisaged by section 27 of the Act.

14. Puerto Rico

Puerto Rico has two USFs - one local and one federal. The Telecommunications Regulatory Board of Puerto Rico provides subsidies through the local 'Fondo de Servicio Universal' for telephone services to persons of limited economic resources. Under the so-called 'Lifeline' program, one person per low-income household is eligible to receive a monthly subsidy towards a landline or mobile telephone service.

This local program was suspended in 2014 due to insufficient funds. According to media reports, it was reinstated in 2019 using both local and federal USF funds at which time over 400,000 Puerto Ricans from a population of 3.2 million were eligible for it.⁵⁰

The USA has long provided funding for telecommunications in Puerto Rico through its federal Universal Service Fund. In the wake of Hurricane Maria, the US Federal Communications Commission (FCC) set up the 'Uniendo a Puerto Rico' or Bringing Puerto Rico Together Fund aiming to restore telecommunications access and to support extended broadband across the island.

The FCC made USD 750 million of funding available to carriers in Puerto Rico, including an immediate injection of USD 51.2 million for restoration efforts in 2018. With regard to the remainder, the FCC proposes that approximately USD 444.5 million will be made available over a 10-year term

⁵⁰ El Vocero, "Rosselló announces restoration of the Universal Service Fund", 22 February 2019, [online] [date of reference: 17 April 2019] <https://www.elvocero.com/gobierno/rossell-anuncia-restablecimiento-del-fondo-de-servicio-universal/article_7467d7d2-36d0-11e9-a3db-a3ba028074e6.html>

for fixed voice and broadband and that about USD 254 million will be made available over a 3-year term for 4G mobile voice and broadband.

15. Suriname

The Government of Suriname created the Telecommunications Authority Suriname (TAS) in 1998 to regulate and supervise telecommunications common carriers and service providers. In 2004, Suriname introduced new telecommunications legislation including a universal service policy and providing for a USF, the 'Universele Dienstverleningsfonds', to fund the policy.⁵¹

These provisions have not been brought into effect. TAS considers it unnecessary to put a USF in place at this time as, when it grants mobile concessions to telecommunications providers, the licence stipulates that the provider must ensure access to certain geographical areas at affordable prices. This, however, applies only to mobile concessions and excludes other telecommunication services, such as broadband internet access.

16. Trinidad and Tobago

The Telecommunications Act 2001 includes a USO and a provision enabling the Telecommunications Authority of Trinidad and Tobago (TATT) to set up a USF. In 2015, regulations were made establishing the USF and rules for its administration, the Telecommunications (Universal Service) Regulations 2015.

Pursuant to these Regulations, TATT has set up a Universal Service Committee, which reports to TATT's Board, to select, execute and monitor the implementation of 'mandatory' and 'contractual' universal service initiatives. One of the Committee's functions is to identify 'underserved communities and population groups' in Trinidad and Tobago in need of access to affordable basic telecommunications services. The Committee invites concessionaires and relevant Ministries and stakeholder groups to identify proposals for projects to be considered as Contractual Universal Service initiatives.

'Concessionaires', namely operators of public telecommunications networks and providers of public telecommunications services, are required to contribute 0.5 per cent of gross revenues for domestic telecommunications services or operation of domestic telecommunications network facilities, and 1 per cent of gross revenues for international telecommunications service or operation of international telecommunications network facilities to the Fund. TATT can only pay funds for Mandatory and Contractual Universal Service Initiatives to concessionaires.

The 2015 Regulations have recently been amended to, among other things, include a definition of 'universal access' as the ability of the entire population to access affordable basic telecommunications services either on an individual or shared basis, as far as reasonably practicable. The Regulations allow TATT to provide relief to contributors from the obligation to contribute to the USF where the total contribution to the USF in any financial year exceeds the annual cost of implementation of the Universal Service initiatives scheduled for implementation in that year.⁵²

TATT reports that the Telecommunications Act 2001 is in the process of being amended to also require contributions from broadcasters, in addition to operators of public telecommunications networks and providers of public telecommunications services. This means that broadcasters will be required to carry out Mandatory Universal Service Initiatives and pay into the fund.

⁵¹ See Articles 40-43 of the 'Wet van 11 November 2004, houdende regels met betrekking tot voorzieningen voor telecommunicatie (Wet Telecommunicatievoorzieningen) (S.B. 2004 no. 151)'.

⁵² See Regulation 7(c) of the 2015 Telecommunications (Universal Service) Regulations.

'Basic telecommunications services' include:

- Voice Telecommunications Services, including call origination and termination,
- Access to Emergency Services,
- Directory Assistance,
- Free Itemised Billing, and
- Internet Service Provision at throughputs.

One of the Mandatory Universal Service Initiatives in the Regulations is the 'special provision of approved assistive technology for persons with disabilities to support use of basic telecommunications services.' 'Disability' is defined as:

- total or partial loss of a bodily function;
- total or partial loss of a part of the body;
- malfunction of a part of the body including mental or psychological disease or disorder; or
- malformation or disfigurement of part of the body or any restriction or lack, resulting from an impairment of ability to perform an activity in the manner or within the range considered normal for a human being.

From 2015 to September 2018, the USF collected TTD 120,693,273 (USD 17,760,893). As of September 2018, an additional TTD 50,708,491 (USD 7,485,295) was due from concessionaires. In March 2019, no funds had been disbursed. However, the USF has three projects underway for which funds will be disbursed during 2019. The projects stand to benefit persons with disabilities and other underserved groups, as set out in the following table:

Table A9
Projects for PWDS and other underserved groups funded by Trinidad and Tobago's USF

Period	Project	Project description	Funds allocated
2019–2021	Provision of assistive devices for PWDs	The provision of subsidised assistive devices for PwDs (seeing and hearing impaired in the first instance) to ensure that telecommunications services are more affordable to PwDs and to enhance their quality of life and independence. Every person receiving a disability grant from the Ministry of Social Development will be eligible to receive a subsidised mobile handset.	TBD
2019–2021	National free WiFi initiative	Three phases: Implementation of free WiFi on 13 public buses throughout T&T (already completed) Deployment of free public WiFi coverage at various locations throughout T&T Creation of hotspots at other selected locations such as public offices at various Ministries	TBD
2019–2020	Broadband infrastructure for underserved communities	Provision of broadband infrastructure to one underserved community in Trinidad, Brasso Venado, and one in Tobago, Parlatuvier.	TBD

Source: TATT, 2019.

TATT advised that it has liaised closely with non-governmental organisations working with persons with disabilities on its project to provide assistive devices to this group. As a result, it has significant buy-in from stakeholders and has been able to fine-tune the project based on their feedback.

Furthermore, TATT reports that its main difficulty in executing projects to increase access to technology for persons with disabilities is gaining support from stakeholders whose involvement is also necessary for project implementation.

The Telecommunications (Universal Service) Regulations 2015 require TATT to publish a Universal Implementation Report on a biennial basis. TATT informs that it has produced reports for 2015/2016 and 2017/2018 and these will soon be published.

17. Turks and Caicos Islands

Turks and Caicos Islands made regulations in 2005, the Universal Service and Public Telecommunications Regulations, to establish a USO and a USF, but these Regulations are yet to be brought into operation. Anguilla made Regulations with the same name in 2014 modelled on those of the Turks and Caicos Islands.

The Regulations allow the Turks and Caicos Islands' Telecommunications Commission to designate universal service providers and to establish a cost-sharing mechanism called the Universal Service Fund to apportion the cost of fulfilling universal service obligations.

The Commission may impose obligations on service providers, after consultation with representatives of disabled users and the service providers, to ensure that disabled end users can enjoy access to and affordability of public telephone services, including access to directory inquiry, operator assisted information and emergency services, equivalent to that enjoyed by other end users.

'Low income and other special users' also receive a dedicated provision in the Regulations. The Commission may require a universal service provider to provide special rates and telecommunications packages that depart from those provided under normal commercial conditions. This is to ensure such users are not prevented from having access to or using a public telephone service or other universal services. It is unclear whether persons with disabilities would be deemed to be 'other special users'.

While the Governor may add services to the list, 'universal services' are:

- access to the public telephone service,
- the maintenance of public payphones,
- free internet access for public libraries and public schools,
- access to emergency numbers free of charge,
- the provision of a free telephone directory,
- the provision of a directory inquiry service, and
- the provision of public telephone, public payphone, free telephone directory and directory inquiry service to low income and other special users.

It is unclear if Turks and Caicos Islands will establish a USO or USF. If this is to occur, the Regulations should first be amended to include internet access for the whole population, the provision of internet access and other forms of telecommunications to disabled, low income and special users, and equipment, services and training to enable such users to make use of these forms of technology.

18. United States Virgin Islands

Like Puerto Rico, the United States Virgin Islands (USVI) has in place a USO and two USFs - one local and one federal. The US-based Federal Communications Commission (FCC) runs the federal USF

program called the Connect USVI Fund. USVI also has a local USF program, which is regulated by the locally-based Public Services Commission (PSC).

The Connect USVI Fund was established following Hurricanes Irma and Maria with an immediate injection of USD 13 million to restore voice and broadband service. The US pledged a further USD 186.5 million over a 10-year term for fixed broadband and about USD 4.4 million over a 3-year term for 4G LTE mobile voice and broadband. Only providers with an existing fixed network and providing broadband services prior to the hurricanes are eligible for this funding. Before the 2017 hurricane season, the FCC already directed USD 16 million each year to fixed services in the U.S. Virgin Islands, along with USD 67,000 each year to mobile services.

The PSC reports that the rules for both the USO and two USFs are well-established and implementation by the carriers is monitored closely both by the FCC and PSC.

Annex 2

Respondents to questionnaire sent to ministries and regulatory bodies responsible for telecommunications and/or USFs

Country	Name of official	Position of official	Organisation
ECLAC MEMBER STATES			
Barbados	Clifford Bostic	Chief Telecommunications Officer	Telecommunications Unit
Belize	Sharolyn Dougal	Licensing Administrator	Public Utilities Commission
Dominica	Urania Williams	Universal Service Fund Administrator	National Telecommunications Regulatory Commission
Grenada	Christa Burke-Medford	Universal Service Fund Administrator	National Telecommunications Regulatory Commission
Guyana	Jamie Skeete	Coordinator Web Services	Ministry of Public Telecommunications
Jamaica	Fay Samuels	Regulatory Analyst	Office of Utilities Regulation
Saint Kitts and Nevis	Sonia Hamilton	Universal Service Fund Administrator	National Telecommunications Regulatory Commission
Saint Lucia	Shana Willie-Matoorah Sandra Jones	Director Universal Service Fund Administrator	National Telecommunications Regulatory Commission
Saint Vincent and the Grenadines	Natoya Cassius Apollo Knights	USF Project Assistant Director	National Telecommunications Regulatory Commission
Suriname	Haidy Akoeba	Economic Lead Officer	Telecommunication Authority Suriname
Trinidad and Tobago	Annie Baldeo Peter Mootoosingh	Executive Officer, Economics Market Analyst	Telecommunications Authority of Trinidad and Tobago
ECLAC ASSOCIATE MEMBERS			
Montserrat	Clifton Riley	Executive Manager	Montserrat Info-Communications Authority
United States Virgin Islands	Joss Springette	General Counsel	Public Services Commission

Source: Prepared by the author.

Annex 3

Online questionnaire sent to ministries and regulatory bodies responsible for telecommunications and/or USFs (excluding branching and conditional visibility)

Respondent's details

Respondent's name: _____
 Respondent's position: _____
 Organisation: _____
 Email address: _____
 Telephone number: _____

(End of Page 1)

Does your country have one or more of the following (select all that apply):

- Universal Service Fund (USF)
 Universal Service Obligation (USO)
 None of the above

Note: Universal service is the principle that all people, regardless of their financial resources or geographic location, should have access to telecommunication services. **Universal Service Obligations (USOs)** place an obligation on telecommunications providers to make telecommunication services available to substantially all people in a country, not just those where a return on investment is guaranteed. **Universal Service Funds (USFs)** build on this concept by creating a levy on telecommunications services for a fund to support projects to ensure universal service.

(End of Page 2)

What is the name of the legislation and/or regulations creating the USF?

When was the USF established?

What is the name of any policies and/or other documents establishing the ways in which the USF can be used?

When did the USF start to collect funds?

How much money has been collected overall by the USF to date?

How much money has been disbursed by the USF to date?

What is the current balance of the USF?

How much money was collected by the USF in 2018 (or the last year when money was collected)?

Amount of money

\$ _____

Year

\$ _____

How much of the money collected during that year has been disbursed?

Does your country's USF framework do any of the following (select all that apply):

(NOTE: **Universal service** is the principle that all people, regardless of their financial resources or geographic location, should have access to telecommunication services. **Universal access** goes further to recognize that not only do remote, disadvantaged and marginalized groups require a connection to telecommunications networks, but they also need the skills, equipment and support to be able to make use of them.)

- Aim to provide *universal service* to telecommunications
- Aim to ensure *universal access* to telecommunications
- Allow funding for fixed-line services
- Allow funding for dial-up internet
- Allow funding for wireless and broadband technology
- Allow funding for new and emerging ICTs
- Allow funding for telecentres and/or other initiatives for people to learn skills and receive support to use ICTs
- Allow funding for equipment to enable people to make use of ICTs
- Establish a purpose-built body to administer USF funding
- Require a national telecommunications regulatory body to administer funding
- Allow civil society and non-governmental organisations (NGOs) to apply for USF funding
- Limit eligibility for USF funding to licensed telecommunications providers
- Restrict distribution of USF funds to specific time-limited projects
- Enable funding to be disbursed for on-going support to organisations or groups

Does your country's USF framework require the body that administers USF funds to (select all that apply):

(NOTE: Marginalized groups include but are not limited to youth, women, persons with disabilities, minorities, indigenous people, LGBTI people and older people.)

- Consult with the focal point in government on disability issues regarding funding allocation
- Otherwise ensure the active participation and input of persons with disabilities regarding funding allocation
- Consult with the focal point in government for other marginalized groups regarding funding allocation
- Otherwise ensure the active participation and input of other marginalized groups regarding funding allocation
- Monitor, track and report on projects to which it has allocated funds

Please specify the name of the focal point

Please describe the mechanism in place to ensure the active participation and input of persons with disabilities regarding funding allocation

Please specify the name(s) of the focal point(s)

Please describe the mechanism in place to ensure the active participation and input of other marginalized groups regarding funding allocation

Does your country's USF framework require a percentage of USF funding to be used to make ICTs accessible to any of the following (select all that apply):

(NOTE: Marginalized groups include but are not limited to youth, women, minorities, indigenous people, LGBTI people and older people.)

- Persons with disabilities
- Marginalized groups
- Women
- LGBTI people
- Minorities
- Indigenous people
- Youth
- Older people
- Other _____

Where applicable, specify the percentage of USF funding that your country's USF framework requires to be spent on the following groups:

- Persons with disabilities _____
- Marginalised groups _____
- Women _____
- LGBTI people _____
- Minorities _____
- Indigenous people _____
- Youth _____
- Older people _____
- Other _____

What are the ten most recent projects for PWDs and/or other marginalised groups that USF funds have been disbursed for?

	Name	Description	Monetary value (USD)
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

What challenges have been encountered using your country's USF for projects to improve access to ICTs for PWDs and/or other marginalised groups?

(End of Page 3)

What is the name of the legislation and/or regulations establishing the USO?

When was the USO established?

What is the name of any policies and/or other documents establishing the requirements of the USO?

Does the USO require telecommunications providers to improve access to ICTs for any of the following groups:

- Persons with disabilities (PWDs)
- Marginalised groups
- Women
- Youth
- Minorities
- Indigenous people
- LGBTI people
- Older people
- Other _____
- None of the above

Please give reason(s) why the USO does not require telecommunications providers to improve access to ICTs for PWDs and/or other marginalized groups.

**Do you consider the USO to be operating effectively to improve access to ICTs for PWDs and other marginalized groups?
Please give reasons.**

Does your country have any other mechanisms in place to ensure universal access to ICTs? Please describe any mechanisms in place.

(End of Page 4)

Is your country considering putting in place a USF and/or USO?

- Yes, a USF
 Yes, a USO
 No

Please give the reason(s) why it is not considered necessary to put in place a USF.

Please give the reason(s) why it is not considered necessary to put in place a USF or USO.

**Does your country have any other mechanisms in place to ensure universal access to telecommunication services and/or ICTs?
Please describe any mechanisms in place.**

(End of Page 5)

Does your country require technical assistance to support the establishment or improvement of an existing USO or USF?

- Yes, we require assistance for a USO
 Yes, we require assistance for a USF
 No
 Not sure

Please indicate what support would be beneficial.

- Drafting legislative and/or regulatory framework
 Drafting associated policies and/or other documents
 Amending legislative/regulatory framework, and/or policies to improve funding to PWDs or other marginalized groups
 Other _____

Do you have any other information on your country's USF and/or USO arrangements that may be relevant to this study?

(End of Page 6)

Annex 4

Respondents to questionnaire sent to PWDs and disability organisations in Caribbean countries

Country	Name	Position	Organisation
Barbados	Roseanna Tudor	Operations Manager	Barbados Council for the Disabled
Barbados	Colbert Ashby	President	Barbados National Organisation for the Disabled
Belize	Roxanne Marin	President	Belize Assembly for Persons with Diverse Abilities
Dominica	Nathalie Murphy	Executive Director	Dominica Association of Persons with Disabilities Inc.
Guyana	Ganesh Singh	CSEC Programme Coordinator and ICT instructor	Guyana Society for the Blind
Jamaica	Gloria Goffe	Executive Director	Combined Disabilities Association
Jamaica	Christine Hendricks	Principal Social Worker and Executive Director	Jamaica Council for Persons with Disabilities
Saint Lucia	Debora McLean	Administration and Projects Officer	Saint Lucia Blind Welfare Association
Saint Lucia	Matthew St Paul	Person with disability	
Trinidad and Tobago	Jacqui Leotaud	President	Consortium of Disability Organisations
Trinidad and Tobago	Dr. Beverly Beckles	Chief Executive Officer	National Centre for Persons with Disabilities
Trinidad and Tobago	Charlene Ford	Person with disability and President	Trinidad and Tobago Association for Differently Abled Persons

Source: Prepared by the author.

Annex 5

Online questionnaire sent to persons with disabilities and disability organisations (excluding branching and conditional visibility)

Your details

Name: _____
 Position: _____
 Organisation: _____
 Email: _____
 Telephone: _____

Some terms used in the questionnaire:

- **Information and Communication Technologies (ICTs)** are tools used to produce, store, process, distribute and exchange information. Common examples are telephones, computers, software, satellite and wireless technology, and the internet. The term also includes assistive technologies and specially-developed ICTs for persons with disabilities, such as screen readers, voice recognition software, braille keyboards, mobile apps and touchscreens
- **Persons with Disabilities (PWDs)** are defined in the UN Convention on the Rights of 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.
- **Universal service** is the principle that all people, regardless of their financial resources, geographic location or other characteristics, should have access to telecommunication services.
- **Universal Service Obligations (USOs)** place an obligation on telecommunications providers to make telecommunications services available to substantially all people in a country, not just those in areas where a return on investment is guaranteed.
- **Universal Service Funds (USFs)** build on the USO concept by creating a small levy on telecommunications services for a fund to support projects to ensure universal service.

(End of Page 1)

The UN Convention on the Rights of Persons with Disabilities defines PWDs 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.

What definition of disability does your organisation use?

Do you consider your organization's definition of disability to be adequate?

- Yes
 No

What types of disabilities does your organisation provide support for (select all that apply)?

- Hearing
 Seeing
 Mobility or dexterity
 Behavioural
 Intellectual
 Other _____

What age groups does your organisation provide support to (select all that apply)?

- 0-5 years old
 5-14 years old
 14-25 years old
 25-50 years old
 50 - older

What genders does your organisation provide support to (select all that apply)?

- Female
 Male
 Other _____

Do PWDs receiving support from your organisation belong to the following marginalized groups (select all that apply)?

- Youth
- Women
- Older persons
- Indigenous people
- LGBTI people (lesbian, gay, bisexual, transgender, and intersex)
- Religious and ethnic minorities
- Other _____

How many PWDs did your organisation provide support to last year (select one)?

- 0-50
- 50-100
- 100-250
- 250-500
- 500-1000
- 1000 or more

(End of Page 2)

What services or support does your organisation offer to PWDs (select all that apply)?

- Information and referrals to social services
- Advocacy and awareness-raising
- Education
- Skills training
- Equipment and facilities
- Transportation
- Support meetings and social activities
- Support for parents, carers and families
- Counselling and mental health services
- Nursing, physiotherapy and other health care
- Legal support
- Home modifications
- Other _____

Does your organisation provide PWDs with ICT training or facilities or assistive technologies (select one)?

- Yes
- No

Please specify what ICT training or facilities or assistive technologies your organisation provide to PWDs.

	Yes	No
Yes, we provide assistive technology	<input type="checkbox"/>	<input type="checkbox"/>
Yes, we provide ICT training	<input type="checkbox"/>	<input type="checkbox"/>
Yes, we provide ICT facilities	<input type="checkbox"/>	<input type="checkbox"/>

If yes, please describe:

- Yes, we provide assistive technology _____
- Yes, we provide ICT training _____
- Yes, we provide ICT facilities _____

If yes, is it free of cost?

	Yes	No
Assistive technology	<input type="checkbox"/>	<input type="checkbox"/>
ICT training	<input type="checkbox"/>	<input type="checkbox"/>
ICT facilities	<input type="checkbox"/>	<input type="checkbox"/>

If yes, is it adequate and fit for purpose?

	Yes	No
Assistive technology	<input type="checkbox"/>	<input type="checkbox"/>
ICT training	<input type="checkbox"/>	<input type="checkbox"/>
ICT facilities	<input type="checkbox"/>	<input type="checkbox"/>

Does your organization receive any funding to provide PWDs with ICT training or facilities or assistive technologies?

- Yes
- No

Who does your organisation receive funding from to provide PWDs with ICT training or facilities or assistive technologies (select all that apply)?

- National government
- Foreign government
- International or regional organisation
- Local private donor
- International private donor
- Local charity
- International charity
- Other (please specify) _____

Are there any ICTs that PWDs at your organisation would benefit from using but currently lack access to?

- Yes
- No
- Maybe

Please list the ICTs that PWDs at your organisation would benefit from using but lack access to

(End of Page 3)

Do you know whether your country has a Universal Service Fund (USF)?

(Note: Universal Service Funds (USFs) create a small levy on telecommunications services for a fund to support projects to ensure universal service. Universal service is the principle that all people, regardless of their financial resources, geographic location or other characteristics, should have access to telecommunication services.)

- Yes, it has a USF
- No, it doesn't have a USF
- I'm not sure if my country has a USF

Has your organisation ever applied for funding from the USF?

- Yes
- No

What did your organisation apply for funding for?

Project name

1 _____

2 _____

3 _____

Year of application

1 _____

2 _____

3 _____

Project description, including aims and time period

1 _____

2 _____

3 _____

How much funding did you apply for?

1 _____

2 _____

3 _____

Was the application successful?

	Yes	No	Yet to be determined
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Why has your organisation not applied for USF funding?

Please indicate whether you agree with the following statement: USF funds are being fairly allocated to ICT projects for PWDs

- Strongly agree
- Agree
- Neither agree or disagree
- Disagree
- Strongly disagree

What changes could be made to the USF to better support ICT projects for PWDs?

Are you aware of any other government funding or other support in your country to increase access to ICTs for PWDs?

- Yes
- No
- Not sure

Please describe what government funding or other support is available in your country to increase access to ICTs for PWDs

Do you think PWDs in your country would benefit from a USF?

- Yes
- No
- Maybe

Would your organisation apply for USF funding if a USF was created?

- Yes
- No
- Maybe

List the ICT training, equipment or facilities, assistive technologies, or projects that your organisation would apply for USF funding for

ICT training	_____

ICT equipment	_____

ICT facilities	_____

Assistive technologies	_____

ICT projects	_____

Are you aware of any government funding or other support available in your country to increase access to ICTs for PWDs?

- Yes
- No

Please describe the government funding or other support available in your country to increase access to ICTs for PWDs

(End of Page 4)

Do you consider your government to be taking adequate measures to ensure to PWDs access, on an equal basis with persons without disabilities, to ICTs?

- Yes
- No
- Not sure

Describe any measures the government has or will be taking to ensure PWDs access, on an equal basis with persons without disabilities, to ICTs

Describe any measures the government should be taking to improve ICT access for PWDs

Do you have any other information that may be relevant regarding USFs and increasing access to ICTs for PWDs?

(End of Page 5)



UNITED NATIONS

Series

ECLAC

Studies and Perspectives-The Caribbean

Issues published

A complete list as well as pdf files are available at
www.eclac.org/publicaciones

79. Using universal service funds to increase access to technology for persons with disabilities in the Caribbean. LC/TS.2019/59, LC/CAR/TS.2019/2, 2019.
78. An economic analysis of flooding in the Caribbean – the case of Jamaica and Trinidad and Tobago. no. LC/TS.2019/55, LC/CAR/TS.2019/1, 2019.
77. Economic Survey of the Caribbean 2018. LC/TS.2019/9, LC/CAR/TS.2018/5, 2019.
76. Implementation of the Montevideo Consensus on Population and Development in the Caribbean: A review of the period 2013-2018. LC/TS.2019/8, LC/CAR/TS.2018/4, 2019.
75. Mainstreaming disaster risk management strategies in development instruments (II): Policy briefs for Barbados, Guyana, Saint Lucia, Suriname, and Trinidad and Tobago. LC/TS.2019/7, LC/CAR/TS.2018/3, 2019.
74. Preliminary overview of the economies of the Caribbean 2017-2018. LC/TS.2019/6, LC/CAR/TS.2018/2, 2019.
73. Review of the Regional Coordinating Mechanism for the implementation of the sustainable development agenda in the small island developing States of the Caribbean. LC/TS.2017/160, LC/CAR/TS.2017/21, 2017.
72. A study on the creative industry as a pillar of sustained growth and diversification. LC/TS.2017/159, LC/CAR/TS.2017/20, 2017.
71. Mechanisms to accelerate the implementation of the Sustainable Development Goals in the Caribbean. LC/TS.2017/158, LC/CAR/TS.2017/19, 2017.
70. Caribbean development report. LC/TS.2017/157, LC/CAR/TS.2017/18, 2017.

STUDIES AND PERSPECTIVES

Issues published:

79. Using universal service funds to increase access to technology for persons with disabilities in the Caribbean
Amelia Bleeker
78. An economic analysis of flooding in the Caribbean – the case of Jamaica and Trinidad and Tobago
Luciana Fontes de Meira
Willard Phillips
77. Economic Survey of the Caribbean 2018
Sheldon McLean
Dillon Alleyne
Michael Hendrickson
Machel Pantin
Nyasha Skerrette
Don Charles
Maharouf Oyolola
Hidenobu Tokuda
76. Implementation of the Montevideo Consensus on Population and Development in the Caribbean: a review of the period 2013-2018
Francis Jones
Catarina Camarinhas
Lydia Rosa Gény