



UNIVERSAL SERVICE FUND STUDY

CONDUCTED ON BEHALF OF THE GSM ASSOCIATION

APRIL 2013

REPORT PREPARED FOR GSMA BY LADCOMM CORPORATION

NOTICE FROM LADCOMM CORPORATION

The report is provided exclusively for the GSMA's use under the terms of the Contract. No party other than the GSMA is entitled to rely on the report for any purpose whatsoever and LADCOMM accepts no responsibility or liability to any party in respect of the report or any of its contents.

The information contained in the report has been obtained from a number of third party sources that are clearly referenced in the appropriate sections. In some instances, figures provided have been clearly identified as estimates. Although LADCOMM has done its best to verify and corroborate the information contained in this report, the information or circumstances may have changed since the report material was gathered. Further, any results from the analysis contained in the report are reliant on the information available at the time of writing the report and should not be relied upon in subsequent periods.

Accordingly, no representation or warranty, express or implied, is given and no responsibility or liability is or will be accepted by or on behalf of LADCOMM or by any of its partners, employees or agents or any other person as to the accuracy, completeness or correctness of the information contained in this document or any oral information made available and any such liability is expressly disclaimed.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	7
INTRODUCTION AND GENERAL OVERVIEW	8
2.1 What Is a Universal Service Fund (USF).....	8
2.2 Study Objective	9
2.3 Scope of Work.....	10
2.3.1 Introduction	10
2.3.2 Deliverables	10
2.4 Study Methodology	11
OVERVIEW OF USF'S.....	12
3.1 Introduction.....	12
3.2 USF Overview Tables.....	13
3.2.1 Africa.....	13
3.2.2 Asia Pacific	50
3.2.3 Europe	67
3.2.4 Latin America.....	79
3.2.5 Middle East	90
3.2.6 North America.....	95
3.3 Recap of Fund Information Tables	99
3.3.1 Comments and Observations regarding the USF Overview.....	99
3.3.2 Summary of USF Financial Activity.....	101
3.3.3 Putting the Lack of Disbursements in Perspective.....	104
DEEP DIVE ANALYSES	105
4.1 Africa.....	105
4.1.1 ECOWAS.....	105
4.1.1.1 Universal Service/Access Legal Framework and Scope	105
4.1.1.2 Funding Mechanism	108
4.1.1.3 What has the ECOWAS Act achieved so far.....	109
4.1.2 AUSAFA.....	109
4.1.3 Morocco	110
4.1.3.1 Country overview.....	110
4.1.3.2 Current status of telecom market	110
4.1.3.3 Fund background	111
4.1.3.4 Current status of the fund	112
4.1.3.5 What the fund has achieved to date.....	113
4.1.3.6 Other elements of interest	114

4.1.4	Mozambique	115
4.1.4.1	Country overview	115
4.1.4.2	Current status of telecom market	115
4.1.4.3	Fund background	116
4.1.4.4	Current status of the fund	117
4.1.4.5	What the fund has achieved to date	117
4.1.4.6	Other elements of interest	118
4.1.5	Nigeria	119
4.1.5.1	Country overview	119
4.1.5.2	Current status of telecom market	119
4.1.5.3	Fund background	120
4.1.5.4	Current status of the fund	122
4.1.5.5	What the fund has achieved to date	123
4.1.5.6	Other elements of interest	125
4.1.6	RSA	126
4.1.6.1	Country overview	126
4.1.6.2	Current status of telecom market	126
4.1.6.3	Fund background	127
4.1.6.4	Current status of the fund	128
4.1.6.5	What the fund has achieved to date	130
4.1.6.6	Other elements of interest	132
4.1.7	Uganda	133
4.1.7.1	Country overview	133
4.1.7.2	Current status of telecom market	133
4.1.7.3	Fund background	134
4.1.7.4	Current status of the fund	136
4.1.7.5	What the fund has achieved to date	136
4.1.7.6	Other elements of interest	138
4.2	Asia Pacific	139
4.2.1	Australia	139
4.2.1.1	Country overview	139
4.2.1.2	Current status of telecom market	139
4.2.1.3	Fund background	140
4.2.1.4	Current status of the fund	141
4.2.1.5	What the USF has achieved to date	142
4.2.1.6	Other elements of interest	143
4.2.2	India	144
4.2.2.1	Country overview	144
4.2.2.2	Current status of telecom market	144
4.2.2.3	Fund background	145
4.2.2.4	Current status of the fund	147
4.2.2.5	What the USF has achieved to date	148
4.2.2.6	Other elements of interest	149

4.2.3	<i>Indonesia</i>	150
4.2.3.1	Country overview	150
4.2.3.2	Current status of telecom market	150
4.2.3.3	Fund background	151
4.2.3.4	Current status of the fund	152
4.2.3.5	What the USF has achieved to date	154
4.2.3.6	Other elements of interest	155
4.2.4	<i>Malaysia</i>	157
4.2.4.1	Country overview	157
4.2.4.2	Current status of telecom market	157
4.2.4.3	Fund background	158
4.2.4.4	Current status of the fund	159
4.2.4.5	What the USF has achieved to date	160
4.2.4.6	Other elements of interest	162
4.2.5	<i>Pakistan</i>	163
4.2.5.1	Country overview	163
4.2.5.2	Current status of telecom market	163
4.2.5.3	Fund background	164
4.2.5.4	Current status of the fund	165
4.2.5.5	What the USF has achieved to date	166
4.2.5.6	Other elements of interest	169
4.3	Europe	170
4.3.1	<i>EU Universal Service Directive Overview</i>	170
4.3.1.1	Summary of Directive	170
4.3.1.2	Appendix	172
4.3.2	<i>Czech Republic</i>	175
4.3.2.1	Country overview	175
4.3.2.2	Current status of telecom market	175
4.3.2.3	Fund background	176
4.3.2.4	Current status of the fund	178
4.3.2.5	What the USF has achieved to date	179
4.3.2.6	Other elements of interest	180
4.3.3	<i>Italy</i>	181
4.3.3.1	Country overview	181
4.3.3.2	Current status of telecom market	181
4.3.3.3	Fund background	182
4.3.3.4	Current status of the fund	183
4.3.3.5	What the USF has achieved to date	183
4.3.3.6	Other elements of interest	184
4.4	Latin America	185
4.4.1	<i>Argentina</i>	185
4.4.1.1	Country overview	185
4.4.1.2	Current status of telecom market	185

4.4.1.3	Fund background	186
4.4.1.4	Current status of the fund	188
4.4.1.5	What the USF has achieved to date.....	188
4.4.1.6	Other elements of interest	189
4.4.2	<i>Brazil</i>	190
4.4.2.1	Country overview	190
4.4.2.2	Current status of telecom market	190
4.4.2.3	Fund background	191
4.4.2.4	Current status of the fund	192
4.4.2.5	What the USF has achieved to date.....	193
4.4.2.6	Other elements of interest	193
4.4.3	<i>Chile</i>	195
4.4.3.1	Country overview	195
4.4.3.2	Current status of telecom market	195
4.4.3.3	Fund background	196
4.4.3.4	Current status of the fund	196
4.4.3.5	What the USF has achieved to date.....	197
4.4.3.6	Other elements of interest	197
4.4.4	<i>Colombia</i>	199
4.4.4.1	Country overview	199
4.4.4.2	Current status of telecom market	199
4.4.4.3	Fund background	200
4.4.4.4	Current status of the fund	201
4.4.4.5	What the USF has achieved to date.....	202
4.4.4.6	Other elements of interest	203
4.4.5	<i>Dominican Republic</i>	207
4.4.5.1	Country overview	207
4.4.5.2	Current status of telecom market	207
4.4.5.3	Fund background	208
4.4.5.4	Current status of the fund	209
4.4.5.5	What the USF has achieved to date.....	209
4.4.5.6	Other elements of interest	210
4.4.6	<i>Peru</i>	211
4.4.6.1	Country overview	211
4.4.6.2	Current status of telecom market	211
4.4.6.3	Fund background	212
4.4.6.4	Current status of the fund	214
4.4.6.5	What the USF has achieved to date.....	214
4.4.6.6	Other elements of interest	215
4.5	<i>Middle East</i>	217
4.5.1	<i>KSA</i>	217
4.5.1.1	Country overview	217
4.5.1.2	Current status of telecom market	217
4.5.1.3	Fund background	218

4.5.1.4	Current status of the fund	218
4.5.1.5	What the USF has achieved to date.....	219
4.5.1.6	Other elements of interest	219
4.5.2	<i>Oman</i>	221
4.5.2.1	Country overview.....	221
4.5.2.2	Current status of telecom market	221
4.5.2.3	Fund background	222
4.5.2.4	Current status of the fund	223
4.5.2.5	What the USF has achieved to date.....	223
4.5.2.6	Other elements of interest	223
4.6	North America	225
4.6.1	<i>Canada</i>	225
4.6.1.1	Country overview.....	225
4.6.1.2	Current status of telecom market	225
4.6.1.3	Fund background	226
4.6.1.4	Current status of the fund	228
4.6.1.5	What the fund has achieved to date.....	229
4.6.1.6	Other elements of interest	230
4.6.2	<i>United States</i>	231
4.6.2.1	Country overview.....	231
4.6.2.2	Current status of telecom market	231
4.6.2.3	Fund background	232
4.6.2.4	Current status of the fund	233
4.6.2.5	What the USF has achieved to date.....	235
4.6.2.6	Other elements of interest	235
	BEST PRACTICES IN THE MANAGEMENT OF THE USF	237
5.1	Introduction	237
5.2	Basic Elements and Characteristics of a Successful USF	237
5.3	Examples of Best Practices	238
	COMMON CHALLENGES IN THE ADMINISTRATION OF THE USF	241
6.1	Overview	241
6.2	Examples of Common Challenges and Pitfalls in USF Administration	241
	DOES THE USF APPROACH ACHIEVE COVERAGE TARGETS?	244
7.1	Overview	244
7.2	Are There USF Coverage Objectives and Have They Been Achieved?	244
	ALTERNATIVE APPROACHES TO ADDRESSING THE UNIVERSAL COVERAGE CHALLENGE .	248
8.1	Overview	248
8.2	Bangladesh	248
8.2.1	<i>Introduction</i>	248

8.2.2	<i>Alternative Approach Adopted</i>	248
8.3	Brazil	252
8.3.1	<i>Introduction</i>	252
8.3.2	<i>Alternative Approach Adopted</i>	252
8.4	Cooperatives – Argentina	257
8.4.1	<i>Introduction</i>	257
8.4.2	<i>Alternative Approach Adopted</i>	257
8.5	Finland	258
8.5.1	<i>Introduction</i>	258
8.5.2	<i>Alternative Approach Adopted</i>	259
	GENERAL FINDINGS AND CONCLUSIONS	261
9.1	Overview	261
9.2	Problems Persist and Impediments Linger	261
9.3	Some Good News	263
9.4	Conclusions	263
	APPENDICES	265
10.1	Introduction	265
10.2	Africa	265
10.3	Arab States	282
10.4	Asia Pacific	289
10.5	CIS and Europe	300
10.6	The Americas	318

EXECUTIVE SUMMARY

Most universal service funds (USF) remain inefficient and ineffective. Together, the 64 USFs covered in this report contain more than USD 11 billion waiting to be disbursed. Of those funds studied, many have not disbursed any money. In fact, of those USFs where levies are currently being applied and collected, it is estimated that only 64% of these same USFs have carried out some level of disbursement or reported that some disbursements have been made. In other words, more than one third of the USFs in this study have yet to disburse any of the levies collected and very few funds, if any, would appear to disburse all that they collect. There are many cases in which USF levies and taxes have been established without any substantive analysis regarding the actual service funding/subsidy levels needed. Many funds receive contributions that appear to be far in excess of the actual USF needs or capabilities (e.g., Brazil, which has USD 4.7 billion waiting to be disbursed), while other funds seem unable to develop enough projects to adequately utilize the levies collected (e.g., India, which has accumulated USD 3.9 billion in unused funds).

The underlying legal frameworks for many funds were not well conceived from the outset (e.g., not technology-neutral or service-flexible, excessively bureaucratic, insufficient oversight, inadequate or ambiguous authorization to manage the Fund) and this has resulted in a number of ineffective or severely constrained and/or legally challenged funds (e.g., Brazil, Czech Republic, Ecuador, France, Italy, etc.). Poorly-conceived legal frameworks also pose a major obstacle to the introduction of non-commercially viable broadband through the USF mechanism.

Even in funds where there is a degree of autonomy and independence, there are many cases where political intervention or interference from other government agencies affect the fund's performance (e.g., Brazil, India, Indonesia, Pakistan, Philippines). For example, in Indonesia, the Ministry of Finance is insisting that the USF may be used only for the acquisitions of goods and services and not for the provision of subsidies (a typical application of USFs). In Pakistan, in the absence of a full-time Minister of IT, the Prime Minister has been head of the USF Co board, resulting in extensive delays in decision making, further impacted by the recent dismissal of the Fund CEO. At the same time, many USFs suffer from, or have been accused of, poor or inefficient administration/use of funds (e.g., Afghanistan, Bolivia, South Africa and the U.S.).

In many instances, the programmes and targets established for the deployment of tele-centres and community information centres, for example, have failed to take into account issues related to training and education, maintenance, power sources and other sustainability concerns (e.g., Afghanistan, Indonesia, and India). Overall, project and financial reporting (transparency) for most funds is extremely inadequate: only half of the 64 USFs studied have set some form of targets. Of these 32 USFs, only eight are achieving most of their targets – a success rate of only 25%.

Out of all the funds surveyed globally, Colombia appears to be the country that currently epitomizes best practice in the development and administration of USFs. Colombia's USF has been structured to be financially autonomous, while fund projects are awarded in a highly transparent manner via a public bidding process open to all interested parties and implemented in a timely and transparent manner but it too has challenges.

Some of the telecommunications funds financed directly out of the government's budget and not from operator levies also seem to be performing relatively well and achieving targets (e.g., Chile, Paraguay) with the added benefit that any unused funds are rolled directly back into the Treasury.

Still, alternative approaches to achieving universal service goals are often more effective than USFs. In fact, increased availability of telecommunications services has generally been accomplished through alternate solutions, such as the imposition of licence conditions on operators, the establishment of new plans or funds that are separate from the existing USF, or private/public partnerships (e.g., Bangladesh, Brazil, and Finland).

In summary, based on the general USF approach and performance to date, USFs do not appear to be the most appropriate mechanism for providing universal access and service and furthering social and economic improvement. Serious consideration should be given to more pro-actively exploring alternative coverage and service solutions.

INTRODUCTION AND GENERAL OVERVIEW

1.1 What Is a Universal Service Fund (USF)

One of the policy goals of telecommunications regulators and ministries is to make telecommunications services accessible to the widest number of people at affordable prices. Liberalization of telecommunication markets and promotion of competition have delivered telecommunication services to the vast majority of the world's population. The concept of Universal Service i.e., providing each individual with telecommunications services at affordable prices tends to be underpinned by the three following principles:

- **Availability:** the level of service is the same for all users in their place of work or residence, at all times and without geographical discrimination
- **Affordability:** for all users, the price of the service should not be a factor that limits service access
- **Accessibility:** all telephone subscribers should be treated in a non-discriminatory manner with respect to the price, service and quality of the service, in all places, without distinction of race, sex, religion, etc.

It is important to note that Universal Service (US) and Universal Access (UA) are frequently considered to be the same concept. However, Universal Service is generally regarded as being oriented towards providing service to individuals or households whereas Universal Access is considered to be oriented towards providing service to communities.

Universal service costs vary substantially between countries and are influenced by many factors, including the following:

- the definition of 'universal' as well as the 'universal' policy goal as applied in a particular jurisdiction
- the demographic and geographical characteristics of a country e.g.,
 - income distribution (affordability levels)
 - population density
 - rural and urban population ratios
 - literacy and education rates of the population
 - geography (terrain, distances, etc.)
- efficiency and presence of existing operators
- existing legal and regulatory framework (e.g., monopoly, liberalized)

There are varying approaches to address universal service requirements. These include¹:

- Market based reforms
- Mandatory service obligations
- Cross subsidies
- Access deficit charges
- Universal funds

Over the last two decades, out of the approaches listed above, in addition to market based reforms and mandatory service obligations, the increasingly common approach to help achieve the universal service goal has been the creation of a funding mechanism - Universal Service Funds (USF), also known as Universal Access and Service Funds (UASF). These funds are intended to serve as a financial incentive for operators to provide universal service. Such funds are often used in competitive markets to supplement market-based policies and in order to address access gaps and possible market failures in remote and under-served locations. For the purpose of this report, these funds will be referred to as USFs.

Typically, a USF is financed through some sort of contribution mechanism from telecommunications service providers and the USF contribution methodology is addressed in several different ways. In some cases, the contributions are fixed monthly, quarterly or annual fees whereas, in others, the fees are calculated as a percentage of gross revenues (often with some defined exclusions in the calculation of the revenues). As in the case of revenue sharing schemes, there may be a requirement for the service providers to pay estimated amounts based on revenue projections, with retroactive adjustments made once the year end audited annual financial results are made available. In some countries, the USF fee is not a separate fee but rather, a portion of an overall regulatory or licensing fee. In such cases, the portion of the fee to be directed to the USF may be fixed, but in other cases, it could be subject to annual review. The fees may go directly to the USF or USF administrator or may be collected by the NRA and then subsequently transferred to the Fund manager/administrator.

In addition to a service provider's direct or indirect contribution mechanism, there may be other sources of funds including, but not limited to: full or partial proceeds from spectrum auctions, licensing fees, direct government contributions, private industry contributions, etc. The manner in which these USF funds may be subsequently accessed and utilized is one of the major topics of discussion within this document and will be explored in the sections that follow.

1.2 Study Objective

Irrespective of the laudable intentions and objectives associated with the creation of USFs, there is considerable industry dialogue and debate regarding the practicality and efficacy of using USFs to achieve universal service. Part of this dialogue has been generated by the understanding that there are countries in which USFs have been created and monies collected, yet in many cases, these funds have either not been disbursed at all or the level of disbursements is substantially less than the contributions collected. In addition, there is also considerable doubt as to whether the current structures of many USFs are flexible enough to permit a timely and practical response to rapid technological change and societal requirements. There are also questions regarding the ability of various funds to

¹ ICT Regulation Toolkit Chapter 5 – Universal Access

evolve from providing 'pure' technical solutions to addressing the ancillary support that is often needed to complement and ensure the effectiveness of the universal service solutions. Furthermore, although numerous regional reports have been generated over the last several years regarding USF performance, other than the 2010 ITU regulator survey that incorporated questions regarding USFs², there does not appear to have been a comprehensive global report prepared in the last several years despite many developments in the area of USFs. With these issues, concerns and developments in mind, the GSMA initiated the global overview and analysis contained in this document.

1.3 Scope of Work

1.3.1 Introduction

The scope of work in this report has been formulated based on the following considerations:

- the need for an updated overview of the global status and performance of USFs
- observations regarding areas of potential interest that have not been addressed in the more recent USF studies
- the need for an assessment regarding significant developments and trends in the design and administration of USFs

1.3.2 Deliverables

The report covers some 64 countries in which the following elements are addressed:

- Description of individual country USFs:
 - Historical details (e.g., when the Fund was established).
 - Underlying legal/ regulatory framework and related governance
 - Structure and manner in which the Fund is operated
 - Process for allocation of the funds
 - The services that can be provided using the USF – e.g., fixed, mobile, broadband, etc.
 - Non telecom uses for the funds, if any
 - The degree of industry participation (if any) in determining structure or use of the USF.
 - Sources and structure of the USF funding
 - Estimate (where possible) as to amount currently held in the Fund
 - Assessment of how the Fund has performed so far
- Examples of best practices in USF with emphasis on the processes to use and allocate the funds accompanied by supporting information as to how and why the USF has been successful
- An examination of the challenges and pitfalls of administering a USF
- Examination and highlighting of selected examples of alternative approaches to achieving universal coverage objectives (or close to universal coverage)

² Data is presented in ITU ICT Eye 2010 and is discussed in Section 9 of this report.

1.4 Study Methodology

In order to undertake the tasks required to prepare this report, LADCOMM assembled a small team of multi-lingual telecommunications experts with a broad scope of telecommunications regulatory and operational experience acquired in Africa, Asia Pacific, Europe, Latin America, the Middle East and North America. All team members have been personally involved in some aspect of USF development, operation or use so as to ensure that the examination and presentation of the information contained in this report have been carried out by personnel who have a firsthand understanding, involvement and experience with and exposure to USFs.

The specific phases and activities of the study were as follows:

- **Data gathering and collection**

- The project team collected data using a variety of approaches including, but not limited to, internet searches, entry into specific regulator and USF/USAF web sites and databases and access to published articles and reports.
- The team also exchanged correspondence and conducted interviews and conference calls with regulators, Fund administrators and Fund associations (with varying degrees of success in terms of response rates from the entities and individuals contacted).
- In addition, the team also relied on its network of contacts amongst regulators, operators and industry analysts to seek out additional information that is not readily available publicly.
- Wherever **possible**, the authors have attempted to use the same database to present the same information elements; however many databases do not include data for all countries and in such cases, every attempt was made to limit the number of different databases utilized for the specific information element (e.g., GSMA Wireless Intelligence and Global Wireless Matrix for wireless penetration levels).
- Data gathering with respect to financial performance of many of the funds was especially challenging given the frequent lack of reliable, published information or unwillingness to provide information in this regard.

- **Review and analysis of the data collected**

- The information gathered was verified and confirmed to the extent possible by checking it against multiple sources and further interviews/exchanges of correspondence as needed; one of the challenges in this regard is the degree of variance between official published reports versus the often conflicting reports that challenge or dispute the contents of the official reports.
- In addition to the challenges of dealing with conflicting information, as referenced above, an even more difficult aspect of the report was the dearth of accurate, credible information with respect to the USF funds collected, the USF funds disbursed and the money still residing in the individual funds given that less than half the funds appear to have any regular, formal reporting with respect to the financial management of the Fund; in order to arrive at estimates in this regard, in addition to using and citing Fund financial reports where available, the authors also used the following approaches:

-
- Compilation of individual, confidential reports submitted by operators in which their annual USF contributions were identified; using market share data, annual reports (or similar), estimated other operators' contributions on a conservative pro rata basis
 - "Off the record" discussions with regulators and Fund managers
 - Searches of newspaper and magazine articles that referenced USF amounts
 - In cases where the Fund levies are a defined percentage of operating revenues, a derivation of contributions based on publicly reported operator revenues if and when no other official source was available
 - When the afore-mentioned approaches all failed to yield results, where feasible, the authors cited previously published estimates where the estimates appeared to be from reliable/official reporting sources (e.g., ITU)

OVERVIEW OF USF'S

1.5 Introduction

As alluded to in the explanation in the previous section regarding the study methodology utilized in the preparation of this report, the ability to arrive at an accurate understanding of USFs is frequently hampered by the availability and reliability of information. On the one hand, there is a multitude of information, often conflicting or contradictory, regarding the administration and performance of some funds whereas, on the other, there is an almost complete lack of easily accessible information for other funds, especially in countries where published information is available only in the national language. Further compounding these challenges is that many of the officially published reports regarding USFs reflect the understandably human reaction of wanting to present achievements in the best possible light while perhaps understating some of the less successful aspects of the USF in question. This situation is further exacerbated by the tendency noted in a number of USF reports to merely reiterate data contained in other publications without any additional analysis. Therefore, in the sections which follow, the authors have attempted to present the information as consistently and as **objectively** as possible using multiple information sources with the aim of presenting a balanced assessment of the overall state of USFs as of late 2011 / early 2012.

1.6 USF Overview Tables

1.6.1 Africa

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
1. Burkina Faso				Year Fund Established: 2000 legal and administrative establishment. 2001 collection.				
<p>Law 051/98/AN of 04 December 1998 defined universal service policy.</p> <p>Decree no. 2000-408/PRES/MC/MCI A of 13 September 2000 related to the implementation of access to universal service for telecommunication s created the USF and defined universal service obligations.</p> <p>2003 National Strategy to Develop Universal Service.</p> <p>The July 2004 Poverty Reduction</p>	<p>Fond d'Acces au Service Universel: Fund is managed by ARCE (<u>Autorité de régulation des communications électroniques</u>), previously called Agence de Régulation des Télécommunications (ARTEL).</p> <p>ARCE is responsible for collecting funds while the resources of the Fund are managed by a Council composed of representatives of the relevant Ministries and presided by the</p>	<p>Supervision is done by the Council.</p> <p>Funds are audited annually by the <i>Inspection Générale des Finances</i>, and ARTEL must submit certified financial accounts to the Ministry of Finance at the latest six months after the end of each financial year. In addition, ARCE must publish an annual activity report by March 30th of each year.</p>	<p>2% of annual revenue net of interconnection payments from all operators having an individual licence, paid on a monthly basis and calculated on the previous month's revenues.</p> <p>The Government and local authorities can also contribute to the fund.</p> <p>The law provides for allocation of some of the new or renewal licence fees for the benefit of the fund.</p>	<ul style="list-style-type: none"> Fixed line private residential service Fixed line public payphone service Individual mobile cellular service Public mobile payphone service Broadband Tele-centres Schools (primary, secondary post-secondary) Health centres Emergency services Special services for persons with disabilities and 	<p>Operators and other telecom service providers are eligible , except for operators who do not contribute to the Fund (these become eligible only if no contributing candidate is selected).</p> <p>Originally, for each region, localities not covered by the incumbent's licence were identified with the intention of granting licences to rural operators through a tender process. Only the</p>	<p>Operators are not members of the governance structure.</p>	<p>Estimated contributions by operators for 2010³: approx. USD 5.3M. Latest confirmed figures on contribution to the fund: USD 5.1M⁴ in 2008.</p> <p>Estimated approximately USD 32.7 M⁵ in fund as of YE 2010.</p>	<p>Inactive – has not started disbursements – strategies issued but not carried out.</p> <p>The 2000 Decree provides that licences shall be granted for the extension of geographic zones where the government seeks to expand universal access, with funding being made available as required to operators applying for such licences under the terms defined by the decree.</p> <p>2003 National Strategy identifies zones to be covered by the universal service project and mandates</p>

³ Estimated based on operator response to confidential GSMA 2012 survey

⁴ Amount provided by regulator as part of ITU survey in Report on Universal Access and Service Funds in the Sub-Saharan African Region, ITU, Edgardo Sepulveda, April 2010; excludes any grants

⁵ ITU ICT Regulatory Database 2012

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
<p>Strategy Paper of the Ministry of Economy.</p> <p>Joint Order No. 2005-000006/MPT/MFB on the composition and functioning of the Management Committee of the Universal Service Fund (CGFSU).</p> <p>Law no. 061-2008/AN of 27 Nov. 2008 (transposing the additional act of ECOWAS and UEMOA Directive).</p> <p>Decree no. 2011-093 of 28 Feb 2011.</p> <p>2010-246/PRES/PM/MP TIC/MEF Decree of 20 May 2010 fixing the rates and methods of collection of fees, levies and charges imposed for the benefit of the Electronic Communications Regulatory Authority.</p>	Minister of Communications			<p>elder persons</p> <ul style="list-style-type: none"> • Directory services, and other services defined by the regulator. 	<p>incumbent, Office National des Télécommunications (ONATEL), and existing mobile operators can apply for such licences. In a first stage, a pilot area was defined, working with the incumbent for the provision of service to this area.</p> <p>Under the 2011 Decree, the allocation mechanism is the following:</p> <ul style="list-style-type: none"> - The Regulator sets up a list of villages which are in need of universal service, - The interested villages send a letter to the Telecoms Minister explaining their requirements, - The Regulator prepares a comparative study of the projects and invites operators to subscribe for a project, - Only projects which are not 			<p>the Ministry, through the regulator, to carry out the strategy. The Strategy also divided the country into 13 regions, each representing a project area (each area is equivalent to an administrative region).</p> <p>The 2005 Universal Service Strategy identifies a number of targets:</p> <ul style="list-style-type: none"> - Provide public voice telephony service to an average of 70% of selected rural localities in a given region; - 95% of selected localities must be within 5km of one public access point - Private service must be available in rural areas with prices no more than 25% above published fixed and mobile tariffs; and - Internet POPs in each provincial capital in each tendered region. <p>The aim of the universal service strategy is complete coverage of the national territory, including coverage of 5,200 villages by 2010.</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
					profitable can be financed through the Fund, - The funds are disbursed after complete execution of the project.			ICT strategy for 2006-2010 included goals for the Universal Service Fund, including broadening the areas covered by the fund to include the production of multimedia content in national languages, the introduction of ICT in health and education, universal postal service, training and promotion of e-jobs.
2. Cote d' Ivoire				Year Fund Established: 1998 - legal establishment; 2006 - administration and collection				
National Telecommunication s Fund (FNT was established by Decree No. 98-625 of 11 November 1998 inside the National Treasury Fund (<i>Caisse Autonome d'Amortissement</i>)).	National Telecommunica-tions Fund is an Account of the Regulator: Cote d'Ivoire Telecommunicatio ns Authority (CITA). Account created at National Investment Bank (BNI). Managed by a Management	Economic and Financial supervision is done by the Ministry of Finance & Economy; technical one by the Ministry of Economic Infrastructure.	2% of Gross Annual Revenues from mobile operators only. Sector Contributions (100%) by the end of 2009. According to 1998 Decree, other sources can be used such as: - loans by the Fund, - revenues from	According to the 1998 Decree, rural infrastructure projects. Universal service is defined: • Fixed line private residential service • Fixed line public payphone service • Dial-up Internet access	Based on competitive bids.	N/A	Not publicly available. Estimated operator contributions 2010 ⁶ : USD 30.0M Reported contributions were approx. USD 29.0M and amount in fund as at end of 2008 was USD 97.3M ⁷ . However, a more	Operational. Limited activity.

⁶ Estimated based on operator response to confidential GSMA 2012 survey

⁷ Amount provided by regulator as part of ITU survey in Report on Universal Access and Service Funds in the Sub-Saharan African Region, ITU, Edgardo Sepulveda, April 2010; excludes any grants

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
	<p>Committee, nominated by the various Ministries</p> <ul style="list-style-type: none"> - 10 members: Ministry of Economic Infrastructure, Planning and Development, National Treasury, CITA and chaired by Ministry of Finance & Economy who can be replaced by the Ministry of Telecoms. <p>Management Committee is assisted by a Technical Committee composed of:</p> <ul style="list-style-type: none"> - Ministry of Finance & Economy, - Ministry of Economic Development - National Office for Technical and Developmental Studies, - CITA - Cote d'Ivoire Telecom and - one representative of 		<p>Fund's investments,</p> <ul style="list-style-type: none"> - contributions from State budget, - gifts, - other taxes on telecommunication, - any other source. 	<ul style="list-style-type: none"> • Emergency services • Directory services. 			<p>recent official report⁸ indicates that a total of only USD 28.1M had been collected as of YE 2010 with total disbursements of USD 15.6M.</p>	

⁸ ITU Regulatory Database 2012

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
	another operator.							
3. Democratic Republic of Congo				Year Fund Established: 2002 legally created, not yet functional.				
<p>Framework Act No. 013/2002 of 16 October 2002 on Telecommunications (2002).</p> <p>Telecommunication Law plans the creation of the Fund (Art.39): Ministerial decree should govern its organization, its functioning and the conditions according to which should projects be carried out. Such Ministerial decree has not yet been made.</p>	<p>Account of Regulator.</p> <p>The 2002 Telecommunications Act provides that the Fund is to be managed by the regulator, but does not mention any periodic reviews of the fund or universal service obligations.</p> <p>Sector Contributions, in form of a licence fee, go directly to Public Treasury.</p>	Not known yet.	<p>The 2002 Telecoms Act stated intention to finance the provision of covered services through a fund constituted of contributions assessed against all operators, providers of services, and manufacturers or importers of telecommunications materials.</p> <p>Some licences provide that 2 % of Gross Annual Revenues will also contribute to the USF, those amounts are, in fact, paid only as licence fees.</p>	Universal service is defined in the DRC 2002 Telecommunications Act as the right of every Congolese to benefit from voice telephone, telex, and public telephone service, in rural, urban and isolated areas.	N/A	N/A	Estimated amount collected as of YE 2008 approx. USD 19.0M and reported amount in fund: 63.2⁹	Inactive.

⁹ Amount provided by regulator as part of ITU survey in Report on Universal Access and Service Funds in the Sub-Saharan African Region, ITU, Edgardo Sepulveda, April 2010; excludes grants

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
4. Gabon				Year Fund Established: Legally on 2001: not yet set-up administratively.				
<p>Law no. 005/2001 enacted June 27, 2001 related to Telecommunications Regulation established provisions for the financing of universal service obligations through the creation of a special universal service fund.</p> <p>The 2005 Decree No. 000544/PR/MPT Fixing the Modalities of Implementation, Financing and Management of Special Universal Service Fund revised the financing resources for the Fund.</p>	<p>Fonds Spécial du Service Universel (Special Fund for Universal Service) is administered by the regulator, Agence de Régulation des Télécommunications (ARTEL).</p> <p>Separate account from ARTEL's account at the Public Treasury. The Director General of ARTEL will be responsible for the Fund's receipts and disbursements under the supervision of the President of ARTEL's Regulation Board.</p>	<p>Financial accounts of the Fund must be reported to the Ministry of Telecommunications no later than the April 30 of each year, together with a management and administration report. A copy shall also be sent to the Minister of Finance. The Fund's accounts are audited by ARTEL's Chief Accountant and subsequently submitted to the Accounting Court for revision.</p>	<p>2% of net revenue per year from fixed and mobile operators.</p> <p>The fund can also be financed by other financial sources such as aid from public or private financial organizations and territorial groups.</p>	<p>The 2001 Law establishes that universal service has to be provided to every person who requests basic telecommunications services. Basic telecommunications services include international, national and local fixed telecommunications services for telephone, fax, telex, and telegraph, provision of emergency call service, a universal directory, information service and service in the national territory through the installation of public telephone booths along public roads.</p>	<p>All telecoms operators are eligible.</p> <p>ARTEL is responsible for implementing the universal service programme, which will allocate Fund resources to operators through a competitive bidding process.</p> <p>ARTEL determines which communities are in need of service and the level of subsidies necessary to achieve coverage, and submits a plan to the Ministry for approval.</p>	N/A	<p>It is estimated that operators contributed over USD 2.5M in 2009¹⁰.</p> <p>Since 2009 (or even before in some cases, operators stopped paying universal service contribution based on a licence condition that specifies that the contribution to the Fund will be payable only after the determination of the operating procedures and effective implementation of the Fund by the Regulator, which has not happened to date.</p>	Inactive.
5. Ghana				Year Fund Established: Launched in 2004, started in 2005 and distributed since 2006. Replaced				

¹⁰ Estimated based on operator response to confidential GSMA 2012 survey

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
				in 2008.				
<p>GIFTEL was established under the 2001 Ghana ICT Policy for Accelerated Development.</p> <p>GIFEC was established by the Electronic Communications Act 775 of 2008.</p>	<p>GIFTEL was set up as an agency of the Ministry of Communications.</p> <p>GIFEC was established as an independent agency that manages the Fund. GIFEC funds are to be paid into specific bank accounts.</p> <p>GIFEC is serviced by a Secretariat under the direction of the Administrator of the fund (Chief Executive) and it oversees the implementation of the Fund's projects.</p>	<p>Board of Trustees of GIFEC: ten trustees that include representatives from the National Communications Authority (NCA), the Ministry of Communications, the parliamentary select committee on communications, a representative from each licensed telecom operator and the administrator of the fund.</p> <p>The Minister may direct the Trustees of the GIFEC on matters of policy.</p>	<p>Licensed operators (fixed/mobile operators, and recently licensed MNP CRDB service provider) contribute 1% of their annual revenue (Net revenue means Gross Revenue less VAT, National Health Insurance Levy, Communications Service Tax and Interconnect Charges).</p> <p>Other legal sources of GIFEC funding:</p> <ul style="list-style-type: none"> - Monies provided by Parliament, - Monies that may accrue to the Fund from investment made by the Trustees of the Fund, - Donations, grants and gifts, and 	<p>GIFTEL was set up to facilitate the provision of universal access to basic telephony by the unserved and underserved communities.</p> <p>Projects that are subsidized through GIFEC are prioritized using the following criteria:</p> <ul style="list-style-type: none"> • Provision of basic telephony service to rural areas, • Support for the establishment of access to value-added services including introduction of Internet Points-of-Presence (PoPs) in every district. <p>GIFEC widened the scope of its mandate to include the provision of</p>	<p>Disbursement mainly takes the form of non-commercial but competitive grants:</p> <ul style="list-style-type: none"> - for public telephony projects, Internet Point-of-Presence and training contracts by open tender - to applications in rural areas, which do not have services, or seeking support for 'rural packages' to enhance access to services for public telephony kiosks or telecentres but are seeking amounts less than a certain US\$ threshold, shall be by direct disbursement based on a business plan demonstrating 	<p>A representative from each licensed telecom operator sits on the board of trustees.</p>	<p>Last reported contributions in 2008 were approx. USD 7.8M with estimated USD 21.0M in Fund¹¹</p> <p>About USD 10.5M is estimated to be in the fund as at December 2011 with estimated operator contributions in the neighbourhood of USD 8.1M¹².</p>	<p>Operational Active</p> <p>The fund has been distributed since 2006.</p> <p>Under its Universal Access to Electronic Communications Programme, GIFEC oversaw the following initiatives:</p> <ul style="list-style-type: none"> • <i>Common Telecommunication Facility</i> Project: since 2006, construction of towers for co-location by telecom operators to extend telecom services to underserved areas; 41 towers constructed. • <i>Last Mile Initiative</i> Project: since 2006, in collaboration with USAID/Ghana and possibly UNDP, pineapple and citrus producing areas are targeted and provided with access to telecommunications /ICT services. One pilot project has been completed at Nsaakyie

¹¹ Amount provided by regulator as part of ITU survey in Report on Universal Access and Service Funds in the Sub-Saharan African Region, ITU, Edgardo Sepulveda, April 2010; excludes grants

¹² Estimated based on operator response to confidential GSMA 2012 survey

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
			- Any other monies that may become lawfully payable to the Fund.	access to electronic services including ICT, broadcasting, internet, multimedia service and basic telephony, by the unserved and underserved communities.	<p>financial viability or self-sustainability. By end of 2009, projects d been allocated based on a competitive process: least cost subsidy requested from qualified bidders.</p> <p>Infrastructure subsidies are typically provided to the first entrant in an area and then new entrants share the mast.</p> <p>The board evaluates proposals for their technical and financial viability. Criteria for selecting towns and villages for the project depends on location, population and socio-economic characteristics e.g., number of schools, health services, economic activities, telecommunica-</p>			<p>in the Eastern Region. A second project is constructed at Georgefields near Kasoa in the Central Region. This is to be extended to cotton, mango, and rice producing areas.</p> <p>Community Information Centres Project: project, which GIFEC has been implementing on behalf of the Ministry of Communications with funding from the HIPC Initiative: establishing hybrid for-profit tele-centre and non-profit community resource centres targeting the general community members, school children, youth out of school, women and women's groups, private businesses, non-governmental organisations and local government authorities. By 2010, 120 CICs are at various stages of completion in 100 districts/municipalities. Under a cost-sharing agreement between the Ministry of Communication and the United Nations Development</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
					<p>tions signal availability and geographical obstacles.</p> <p>Tendering is conducted through the National Competitive Tendering procedures specified in the Public Procurement Act of the Republic of Ghana.</p> <p>Any company which implements projects to provide ICT facilities to underserved areas is eligible.</p>			<p>Programme, 79 CICs have been equipped with ICT equipment, network infrastructure and trained Centre Managers, making them operational. The remaining 70 districts/municipalities will each have at least one CIC as envisioned in GIFEC's strategic plan for 2010-2012.</p> <ul style="list-style-type: none"> Library Connectivity Project: establishment of ICT-based Mobile Digital-cottages (MD-Cs) and Regional Digital Library Information Centres (RDLICs) in order to promote and facilitate access to. Rural Pay Phone Project: GIFEC intends to provide twelve thousand rural payphones to underserved communities during the three year period 2010-2012 (the EQUATEL project). Easy Business Connectivity Project: to enhance availability of seed financing on flexible and reasonable terms for entrepreneurs seeking to operate e-powered e-business

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
								<p>centres.</p> <ul style="list-style-type: none"> • Post Office Connectivity Project: to select ten Post Offices with the requisite physical infrastructure to enable the delivery of basic Information Technology and telecommunication services in the pilot phase, then seventy Post Offices for Second Phase (2011 - 2012). • Disability Employment Project: implemented by GIFEC and NCPD is the Easy Business Centres for Persons with Disability. • Security Connectivity Project: to establish state of the art ICT Training Centre at the Prisons Training School • School Connectivity Project: providing educational institutions with high speed computers, printers, scanners, projectors and servers and linking them with internet access. The project started on a pilot basis in 2008. In 2009, GIFEC provided support to fifty schools. By 2010, GIFEC had supported two hundred and sixty-three (263)

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
								<p>educational and training institutions. The plan was to provide ICT equipment and connectivity to two hundred (200) educational, vocational and training institutions between 2010 -2012.</p> <ul style="list-style-type: none"> • Community Initiative Project: To establish state of the art ICT Training Centre for Rural Communities across the country and provide training in computer skills and literacy. • - Fishing Project: in collaboration with the Fisheries Commission and the National Canoe Fishermen Council, to introduce enhanced fishing techniques using state-of-the-art technology to address the fishing needs of the artisan fishermen – to be rolled out in 2012. • - ICT Capacity Building: 2010 -2012, GIFEC intends to fund the provision of basic ICT training to over 12,000 people in the underserved and unserved communities using the CIC facility. <p>GIFEC is collaborating</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
								with all the major telecommunications operators in the provision of common telecommunications site facilities in selected areas across the country under the Universal Access to Telecommunications Programme (UATP). The collaboration involves the award of subsidies to willing and eligible Telecommunications Operators for the provision of common telecommunications site facilities. To date, only MTN has successfully deployed approximately 1200 phones.
6. Lesotho				Year Fund Established: 2009				
Lesotho Telecommunication s Authority Act, 2000. The Universal Access/Service Strategy of 2007 created by the Lesotho	Lesotho Communications Authority (LCA) Universal Access Fund is operated by the Regulator. The Secretariat, a non-voting member of the	There is an independently constituted oversight committee of the Board (representatives of the Ministries of Communication, local government	1% of Net Operating Income on an annual basis. 25% of NRA operating Surplus. Fund received USD1.25M seed	Under the US/UA Policy and Regulation, the primary objective is basic access for everyone through universal network coverage, although the Strategy 2007	Competitive Bid. Universal Service Fund Committee decides on funds allocation. Fund recipient is responsible for providing performance reports.	Only through general legislative consultation process.	Estimated contributions for 2011: USD 1.0M . ¹³ The balance in the USF for the year ended 31 March 2011 was approximately LSL	Operational. Limited activity. In 2010, money had been disbursed to 2 operators for Infrastructure for GSM coverage in Malefiloane Area (USD 990,000), Tebellow Area (USD

¹³ Estimated based on operator response to confidential GSMA survey

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
<p>Communications Authority. Lesotho Communications Authority Universal Access Fund Rules, 2009.</p> <p>Lesotho Communications Act 2012.</p>	<p>oversight committee, executes the decisions of the committee and is responsible for the day to day running of the Fund.</p> <p>LCA serves as the treasurer of the committee.</p>	<p>and Finance) which is responsible for strategic and policy level management of the fund and functions.</p> <p>The USF accounts are audited by the Auditor General and published in the LCA's Annual Report.</p>	<p>capital from the Regulator in 2008. Fund can also receive Government contributions and grants.</p> <p>Universal Service Fund Committee is responsible for designating licensees required to make contribution and determines the amount.</p>	<p>also recognizes the concerns of the people with disabilities or disadvantaged groups.</p> <p>All villages with at least 150 households must have network coverage and communications service access point and all people must have a communications service point within a 4 kilometre radius.</p> <p>The Communications Act 2012 delegates authority to the Fund to ensure access to basic domestic and international telephony services and internet, diverse range of radio & television broadcasting services, basic postal services. USFC may also decide to use the fund towards infrastructure for</p>	<p>LCA identifies USF sites and then issue RFPs. All licensed operators participate in the RFP process.</p> <p>Other entities, such as broadcasters, service providers, content developers, public access ICT telecentres, schools, hospitals, rural clinics and others will be eligible to receive funds from the USF depending upon the programmes and initiatives selected each year by the Fund Advisory Committee in conjunction with the MCST.</p>		<p>5.2 M (USD 0.6M).</p>	<p>720,000), Makhaleng Valley area (USD 506,000) and Hloahloeng (USD 1.4M).</p> <p>The focus of the USF is on network coverage although the funds have been used for establishment of a local internet exchange, for which purpose the Fund Committee had set aside about LSL 1.8 M (USD 211,000). Initial groundwork has been started with stakeholders of the Lesotho Internet community to enlist their buy-in into the project.</p> <p>For 2012/13, the Fund will continue to focus on coverage, although it has been indicated that there are plans to roll out internet access centres.</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
				unserved / underserved areas, telecentres, internet exchange points, acquisition of satellite capacity for broadcasting, public broadcasting services, electrification of post offices, universal postal services.				
7. Madagascar				Year Fund Established: 1999 legal and administrative establishment: 2002 collection and disbursement.				
Act no. 96-034 of 27 January 1997. Decree No. 99-191 relating to Modalities for Implementation and Funding of Access to Telecommunications Services (March 10, 1999) established the Fund. Decree No. 2003-1068 on Extending	Fonds de Développement de Télécommunications et TIC (Telecommunications and ICT Development Fund) administered by the regulator Office Malagasy d'Etudes et de Régulation des Télécommunications (OMERT) as a separate	Overseen by the Telecommunications Ministry. Fund accounts must be verified by an independent accountant.	The Fund is to be funded from: - Annual operators contributions which are equal to 2% of their gross revenues earned from operating public telecommunications networks and the provision of public telecommunications services; - The government's	Included in universal service are: - Providing access to a public telephony networks located no more than 10km from the centre of a rural community of 500 or more persons; - Providing a public access point in an urban area that is within 2 km of all	The funds are distributed on a community-by-community basis, with the specific projects being defined by OMERT who determines which communities are in need of service and the level of subsidies necessary to achieve coverage, and submits a plan to the	None.	Estimated contributions 2011: USD 4.2M ¹⁴ Reported fund balance as of YE 2009 ¹⁵ : USD 10.M	Moderately active. By the end of 2009, the USF had financed: - 1 VSAT for Underserved Communities, - Public access and Private service to voice - the incumbent fixed operator is eligible, - 1 Access Regions, Districts and Communes, - Public access and Private service to voice and Internet.

¹⁴ Estimated based on operator response to confidential GSMA survey plus derivation of 2011 operator revenues posted on OMERT web site

¹⁵ Amount provided by regulator as part of ITU survey in Report on Universal Access and Service Funds in the Sub-Saharan African Region, ITU, Edgardo Sepulveda, April 2010; excludes grants

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
<p>the Objectives of the Telecommunication s Development Fund (Nov. 4, 2003) and Decree No. 2004-329 Amending the Provisions of Article I of Decree No. 2003-1068 (March 16, 2004).</p> <p>Act No. 2005-023 of 17 October 2005 on the Revision of Law no. 96-034 of 27 January 1997 on the Institutional Reform of the Telecommunication s Sector identifies universal access and the lowering of costs as a principle goal, and directs the minister in charge of telecommunication s and ICTs to establish a fund dedicated to the development of telecommunication s and ICT, and support areas that are otherwise unserved.</p>	account.		<p>general budget;</p> <ul style="list-style-type: none"> - Public or private contributions to the fund; and - Local communities seeking to improve telecommunication s in their areas. 	<p>inhabited dwellings;</p> <ul style="list-style-type: none"> - Ensuring the free routing of emergency calls; - Dial-up Internet access and directory services. <p>The 2003 and 2004 Decrees extend the use to which the telecommunication s development funds may be used to study the possibility of international connectivity to undersea fibre and a national backbone.</p>	<p>Ministry for approval. The list of projects is then submitted to the national fixed operators to enquire whether any of them will serve the areas. If none of the operators accept taking on the project without funding, the projects are to be allocated via a transparent and competitive selection process among interested operators. OMERT first runs a restricted tender process. Projects for which no qualified applicants were found are subject to an open competitive process.</p> <p>All telecom operators are eligible.</p>			<p>Part of the USO is used to partly fund PICOM project (a specific entity handling Telecommunications Ministry infrastructure project, also funded by the World Bank).</p> <p>It is estimated that a major part of the Fund has been distributed to Telma (incumbent fixed line) under the subsidies process.</p> <p>Other example includes the Village Phone Project, where based on an agreement between Airtel and the Telecommunications Ministry, the Malagasy Government is supposed to contribute about 40% of the Village Phone equipment through the Fund.</p>
8. Mauritius				Year Fund Established: 2008				

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
<p>Information and Communication Technologies Act 2001.</p> <p>Fund formed under the Information and Communication Technologies Authority, ICTA, (Universal Service Fund) Regulations 2008 (as amended) (GN 206/2008).</p>	<p>Administrative unit and account managed by the Executive Director of NRA (ICTA).</p> <p>The Fund Administrator oversees Fund activities. The Project Manager is responsible for analysing market conditions, developing proposed project plans and acting as liaison with USF funding recipients in the implementation and evaluation of approved projects. Liaison officers: within the Authority (Engineers, attorneys, accountant, economist, etc.) are responsible for extending professional support and resources in their fields of</p>	Board of NRA, upon recommendation of UASF Advisory Committee.	<p>Either a percentage of turnover or a percentage of the price of every incoming call on each operator's network:</p> <p>1. annual contribution to be paid in monthly instalments by operator - 5% of gross revenue generated by operators from the provision of international roaming service for that month and</p> <p>2. USD 0.025 on every minute of international calls terminated by operator in that month.</p> <p>From all operators, both fixed and mobile.</p> <p>In addition, ICTA has given grants to the Fund (29% of the overall value by the end of 2009).</p>	Public access to voice and Internet. Increased broadband penetration;	<p>Competitive bidding process open to all operators.</p> <p>Bidding process open to all licensed ISPs to provide universal service and access to Internet- to install, provide and maintain WiFi access.</p> <p>The bidding exercise is overseen by ICTA.</p>	N/A	<p>Estimated contributions for 2011: USD 1.7M¹⁶</p> <p>Fund had an estimated USD 1.5M as at end 2009¹⁷.</p> <p>No financial details announced publicly at this stage due to delays in the audit process resulting from refusal of some operators to pay their levies.</p>	<p>Moderately active. By end of 2009, funds had been invested for 4 Community Public Access Points. Ongoing Project: Deployment of WiFi Network to include workstations with free internet access for citizens without the necessary terminal equipment across 10 WiFi zones in five municipal councils and four district councils in Mauritius and an administrative building in Rodrigues.</p>

¹⁶ Estimated based on operator response to confidential GSMA survey

¹⁷ Amount provided by regulator as part of ITU survey in Report on Universal Access and Service Funds in the Sub-Saharan African Region, ITU, Edgardo Sepulveda, April 2010; excludes grants

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
	responsibility to the management.		ICTA is currently involved in legal proceedings with operators who have failed to pay their required contributions.					
9. Morocco				Year Fund Established : 2005				
Universal Service is governed by Law No. 24-96 of 7 August 1997, as amended and supplemented by Law No. 55-01 of 8 November 2004. This was complemented by the adoption of Decree No. 2-97-1026 of 25 February 1998, as amended and supplemented by Decree No. 2-05-771 of 13 July 2005.	Fonds du Service Universel des Télécommunications (FSUT) (Universal Service Fund) is administered by Comité de Gestion du Service Universel (CGSUT) (Universal Telecommunications Service Management Committee) under the Regulator, Agence Nationale de Réglementation des Télécommunications (ANRT). Chaired by the Prime Minister, the Management	The Committee prepares an annual report on its activities and the progress of the programmes implementation.	Levy of 2% of annual revenue net of interconnection costs for licensed services on all operators (unless they opt for "play or pay" option). The fund may also receive any other contribution in the form of donations and bequests allocated under the development programs of the Universal Service. The general telecommunications law also requires operators to pay annual contributions for training and	Law No. 55-01 has extended the scope of universal service to include the provision of value added services (esp. access to the internet): - basic telephone service of specified quality at an affordable price; - delivery of emergency calls; - information service and directory; - services related to land use planning, including payphones and other communications devices;	Moroccan legislators deployed the "pay or play" regime in 2004: operators can either pay their financial contributions to the Fund, or they implement projects approved by the Management Committee. Operators may submit their proposals to the Management Committee. Once validated, the conditions of the project are specified. The Management Committee also designs projects as part of a	Operators can suggest universal service projects and can choose between "pay or play" options.	Not publicly available. Estimated 2011 contributions USD 31.0M ¹⁸ The ANRT reported a total of USD 151M on hand for 2007/2008 with disbursements of USD 12.0M .	Active. From 2004 till 2008, under the new framework, only Maroc Telecom and Meditel had chosen to fulfil their universal service obligations through the "play" option. Nine universal service projects were suggested by the operators and approved, included providing 1,556 rural villages with telecommunications services (voice and Internet access). These received MAD 600 M (USD 68M) from the FSU T in subsidies. CGSUT had implemented four universal service

¹⁸ Estimated based on operator response to confidential 2012 GSMA survey

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
	<p>Committee is an interdepartmental committee composed of the Ministries of Interior, Planning, Finance, Telecommunications, National Defence, and of the Chairman of the Management Committee of the ANRT, and the Director General of ANRT.</p> <p>The Management Committee is responsible for determining the programmes for the implementation of universal service; proposing the content of a tender; reviewing the programmes offered by the operators; and approving the specifications for tenders submitted by the ANRT.</p>		<p>standardization of 0.75% and for research of 0.25% of operators' annual revenues net of interconnection costs for licensed services.</p>	<p>- value-added services including services allowing access to the Internet.</p> <p>The Fund has three priority areas:</p> <ul style="list-style-type: none"> - Rural public telephony; - Installation of community centres; and - Expansion of broadband capacity. 	<p>government strategy of development of universal service, for which it announces competitive bidding to determine which operator will be responsible for the implementation.</p>			<p>projects by 2009:</p> <ul style="list-style-type: none"> - roll-out of Internet via ADSL in 159 rural locations; - GSM service to 126 new rural locations without coverage; - Development of 42 public access centres (teleboutiques) in the largest shopping areas; and - the strengthening of GSM in 40 rural areas without coverage. <p>The PACT programme, with a budget of MAD 1.44 B, was adopted by the Management Committee (CGSUT) on November 20, 2006. The objective of the PACT programme is to provide access to telephony and the Internet at 9263 rural areas not covered by the telecommunications networks.</p> <p>The "GENIE" Programme, received a MAD 1B (USD 114M) subsidy. ANRT issued a consultation with all operators for equipping 939 schools with 629 internet connections. Universal Service</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
								agreements have been signed with five operators and deployment began in October 2010 and was completed in May 2011. In 2010, operators had provided computers pre-installed with digital resources to schools.
10. Mozambique				Year Fund Established: 2004/2006 legal establishment. 2008 collection.				
Telecommunication Law No. 8 of 21 July 2004. Decree No. 69 of 26 December 2006 approved the regulation of Universal access and Service Fund. Telecommunication Policy 2004. Ministerial Diploma 79/2007 dated 4 July 2007, on the annual contribution to be paid to the Universal Service Access Fund by the telecom operators.	The Universal Access Fund, Fundo do Serviço de Acesso Universal (FSAU, UASF) is an internal unit and account under the regulator Instituto Nacional das Comunicações de Moçambique, regulatory agency (INCM) managed by Executive Secretary of UASF. The manager of the Fund reports to the Board of	Board of INCM oversees the activities and decisions of USAF.	All licensed and registered entities rendering telecommunications public services must contribute to UASF 1% of net operating income of the previous year. Operators who are operating Internet Cafes are exempt from contributions to the UASF. Government. Development	Services covered: - Telephony and Internet services. - Public and Private Internet access and service. - Infrastructure deployment and service provision. Hospitals and schools located in rural areas can benefit from the fund. The Fund's objectives are to promote rural areas at a fair and affordable price.	Competitive Bid – least-subsidy requested.	Not according to the law.	Contributions in 2008 totalled approx. USD 2.0M ¹⁹ Estimated USD 3.0M in fund as of YE 2009	Limited activity. Mozambique undertook an Internet service pilot project to provide four District Centres in the provinces of Zambézia and Nampula with Internet POPs. The internet tender was won by Mozambican broadband wireless operator INTRA Lda. A similar telephony pilot tender did not receive any bids and was therefore unsuccessful. USD 200,000 was disbursed in 2008 for transmission via

¹⁹ Amount provided by regulator as part of ITU survey in Report on Universal Access and Service Funds in the Sub-Saharan African Region, ITU, Edgardo Sepulveda, April 2010

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
	Directors of INCM.		Partner (international donors) grants.	(publicly accessible telephones within all locales with more than 1,000 inhabitants as well as within 5 km of every rural inhabitant and Internet points of presence and public access to the Internet through tele-centres in all District Centres).				satellite project of mobile telephony covering 5 km from the centre of a district of Matchedje on the border with Tanzania. The World Bank financed certain tele-centres pilot projects and a Community Public Internet Access Points project. Mcel won a tender in June 2011 to build BTS sites in 14 localities, in a project of approx. USD 4 M.
11. Nigeria				Year Fund Established: 2003 legal establishment. 2004 collection. 2007 administrative establishment. 2008 disbursement.				
The Nigerian Communications Act of 2003 addresses the concept of universal access and universal service and provides guidance to the Nigerian Communications	Nigerian Universal Service Provision Fund (USPF) is a separate entity since 2007 managed by the Secretary of USPF.	USPF Board (chaired by the Minister with representation from NCC) supervises and provides broad policy direction for the management of the USPF. It appoints and	Operators do not contribute directly to the USPF. Operators are required by a licence condition to pay 2.5% of net operating revenue, (Annual Operating Levy, AOL) to the NCC on a	The objective of the 2003 Coms Act is to encourage the installation of network facilities and the provision of network services and applications to institutions in	The USP Secretariat is required to undertake an analysis to formally determine where fund money should be directed and specifically the service scope to be applied.	Operators do not participate but can influence the decision making through public consultations.	Not publicly available. Estimated amount deposited to fund in 2008, USD 44.2M Estimated USD 266.7M in Fund ²⁰ as at year end	Active. Approximately \$140 million per annum in disbursements from collections. USPS Activities and Projects in 2009: - Community Communications

²⁰ Amount provided by regulator as part of ITU survey in Report on Universal Access and Service Funds in the Sub-Saharan African Region, ITU, Edgardo Sepulveda, April 2010

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
<p>Commission (NCC) on the development of universal access/service policies and directs the establishment of a Universal Service Provision Fund.</p> <p>The 2007 Universal Service and Universal Access Regulations established a USP Fund (USPF).</p>		<p>removes the USP Fund managers and auditors in consultation with the NCC.</p> <p>The USP Fund managers report on a quarterly basis to the USP Board and the USP Secretariat on the status of the fund including a report detailing the financial situation and performance of the fund.</p>	<p>quarterly basis. The NCC, in turn, contributes 40% of the AOL to the USPF for its activities.</p> <p>According to the 2007 Regulation, the USP fund is to be financed based on 1% of net revenues (net of interconnection payments) of the licensees. NCC has the discretion to increase or decrease contribution to the USPF upon consideration of the USPF operating expenses and based on recommendation made by USPF.</p> <p>The USPF may be funded from other sources:</p> <ul style="list-style-type: none"> - Monies appropriated to the USPF by the National Assembly. - Gifts, loans aids and other such assets. 	<p>unserved and underserved areas or for underserved groups.</p> <p>Universal service covers the following services:</p> <ul style="list-style-type: none"> • Individual mobile cellular service; • Public mobile payphone service; ○ Broadband • Tele-centres • Schools (primary, secondary post-secondary); • Health centres • Emergency services; • Special services for persons with disabilities and elder persons; • Community Centres; • Government offices <p>Currently, the Fund has four programmes:</p> <ul style="list-style-type: none"> - Universal Access Programme, - Universal Coverage Programme, - Universal 	<p>Projects are allocated through a competitive bidding using different methods:</p> <ul style="list-style-type: none"> - Competitive, Combination quality and cost selection; - Competitive, least subsidy requested from qualified bidders; or - Proposal by eligible candidates and evaluation by the USPF. 		<p>2010 with an estimated USD 106.7M disbursed in 2010.</p>	<p>Centre Project Accelerated Mobile Phone Expansion Programmes;</p> <ul style="list-style-type: none"> - Co-location Infrastructure Project; - Base Transceiver Station Project; - Solar-Powered GSM for Rural Network Project; - Rural Broadband Initiative Project; - Backbone Transmission Infrastructure Project; - Schools Access Project; - Tertiary Institution Access Project; - GIS mapping of ICTs Infrastructure, Gap Analysis and Subsidy Estimates in Nigeria.

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
				Service Programme and - ICT for Development Programme.				
12. Niger				Year Fund Establishment: 1999				

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
Decree no. 99-45 issued 26 October 1999, amended by Ordinance no.2010-89 of 16 December 2010 created a Universal Access to Service Fund (The Telecommunications Development Fund).	Originally an account of the Regulator - l'Autorité de Régulation Multisectorielle (ARM). An autonomous entity has been recently established to manage the fund but is not functioning yet.	Ministry of Communications.	<p>After 2003: 4% of annual net (gross) revenue from all licensed operators (some have failed to contribute).</p> <p>In the first two years of the licence, mobile operators were required to make contributions of 35 million CFA for the year 2002 and 70 million CFA for the year 2003.</p> <p>In addition, a joint funding system has been established by the ITU, the World Bank, the United Nations Development Programme (UNDP), the Organisation Internationale de la Francophonie (OIF), the Government of Niger and several non-governmental organizations.</p>	Telecommunications infrastructure and applications in rural areas.	<p>There is no visibility on the fund allocation rules. All contributors are eligible.</p> <p>According to Decree no. 99-45, the regulatory authority lays down optimum standards for the selection of operators that will provide universal access to services. By public tender, the regulatory authority allocates the tasks of implementing universal services to selected operators, who are paid from the Fund.</p>	N/A	<p>Estimated operator contributions in 2011: USD 8.7M.²¹</p> <p>Estimated USD 28 M in fund as of YE 2011.</p>	Inactive.
13. Republic of South Africa				Year Fund Established: 1997				

²¹ Estimated based on operator response to confidential GSMA survey

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
<p>Telecommunications Act, 1996.</p> <p>Telecoms Amendment Act of 2001.</p> <p>Associated Universal Service and Access Fund ("USAF") Regulations of 1999.</p> <p>Electronic Communications Act, 2005.</p> <p>USAF Contributions Regulation of 10 February 2011.</p> <p>Draft Broadband Policy, 2009.</p>	<p>USAF is administered by the Universal Service and Access Agency of South Africa ("USAASA"), a separate legal entity responsible for promoting universal service and access in the country.</p>	<p>Minister of Communications appoints the USAASA Board. The Board retains full and effective control and monitors the executive management and decisions of the Agency.</p>	<p>USAASA is funded by contributions from licensed operators of electronic communication services and networks and broadcasters (the latter may offset their contribution against a contribution to a broadcasting sector Media Development and Diversity Fund).</p> <p>ICASA determines the basis of operators' contributions, which may not exceed 1% of their annual turnover.</p> <p>Currently, the contribution is set at 0.2% of annual turnover (total revenue from licensed activity, less service provider discounts, agency fees, interconnection,</p>	<p>ECA stipulates that the Fund should be used exclusively for payment of subsidies to:</p> <ul style="list-style-type: none"> - assist the needy persons towards the cost of broadcasting and electronic communications services; - public schools and public Further Education and Training Institutions for the procurement of broadcasting and electronic communication services and access to electronic communication networks; - establish and operate broadcasting services and operations, including training and the payment of allowances to personnel, of centres where access to 	<p>Competitive Bid.</p> <p>USAASA manages the funds and identifies projects.</p> <p>Any area with less than 5 % penetration is deemed underserved and is eligible for USAL providers.</p>	N/A	<p>2011: Information not publically available.</p> <p>In 2009, the estimate re Fund was USD 90M.</p> <p>Estimated operator contributions in 2011: USD 28.8M²²</p> <p>Estimated 2010 amount in Fund was approximately (USD 27.4M – 30.4M).</p>	<p>Moderately active although most activities have been suspended since Nov. 2011.</p> <p>Projects have consisted of telecentres, cyber labs, multi-purpose community centres/Thusong service centres and under-serviced area licences (USALs). There were 27 underserved areas and USAL projects in 7 of these areas by the end of 2007. USAASA issued licences to bidders winning USAF subsidies. Some programmes focus on people with disabilities, for example, the access centre in Tembisa.</p> <p>The following projects were earmarked for funding from the 2010 allocation:</p> <ul style="list-style-type: none"> - Implementation of handover strategy for Community ICT Access Centres and E-School Cyber labs;

²² Amount budgeted for the 2011 fiscal year as published in the USAASA Annual Report 2011 - 2012

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
			<p>facilities leasing charges, government grants and subsidies).</p> <p>ICASA collects the contributions and sends them to the National Treasury.</p>	<p>electronic communication networks can be obtained;</p> <p>- any broadcasting service licensee and electronic communications network service licensee for the financing of the construction or extension of electronic communications networks in under-served areas.</p>				<p>- Facilitation of Internet connectivity to schools and Access Centres;</p> <p>- Implementation of Rapid Deployment of new Access Centres strategy;</p> <p>- Development of a Universal Service and Access Fund Manual.</p> <p>- Subsidise internet connectivity at the FET colleges.</p>
14. Rwanda				Year Fund Established: 2004				
The Universal Access Presidential Order 05/01 of 13/03/2004 established the UAF (Universal Access Fund).	Universal Service Fund is an administrative entity and account administered by the regulator, the Rwanda Utilities Regulatory Agency.	Board of the NRA.	<p>2% of gross annual revenues, net of interconnection payments from all operators.</p> <p>The Fund has received numerous grants from international</p>	<p>Public voice access and Private voice service.</p> <p>Public access to Internet, Private Internet service.</p> <p>2008 focus was on lowering bandwidth costs</p>	<p>Competitive bidding process based on least subsidy requested from qualified bidders (operators and ISPs).</p> <p>Funds also allocated through the</p>	N/A.	<p>Not publicly available.</p> <p>The estimated Fund amount as at end 2010 was USD 6.6.</p> <p>Estimated contribution to fund in 2008 USD 2.4M²³</p>	<p>Limited activity.</p> <p>By the end of 2010, the Universal Access Fund had disbursed USD 3.7M.</p> <p>By the end of 2009:</p> <p>- Rural Telephony Project;</p> <p>- Low prices for Internet</p>

²³ Amount provided by regulator as part of ITU survey in Report on Universal Access and Service Funds in the Sub-Saharan African Region, ITU, Edgardo Sepulveda, April 2010

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
			donors, mainly the World Bank. Their contributions formed 68% of the total funding by the end of 2009.	and the extension of ICTs in rural and poor urban areas. Network extension is being accomplished through connecting key Rwandan institutions.	Ministry of Education (to PC providers for the One Laptop per Child Programme).			connectivity and Public access to Internet; - One Laptop per Child Programme.
15. Sudan				Year Fund Established: 2001				
The ICT Fund was established as part of the 2001 National Strategy for Building the Information Society in Sudan.	Information Support Fund is administered by the regulator, the National Telecommunications Corporation (NTC).	The ICT Fund is supervised by the Director General of the NTC and a board of directors, as well as by Sudan's Minister of Telecommunications.	2 % of total gross revenues. The Fund was financed by a fixed fee per voice/minute and a percentage fee on data imposed on all licensed telephone operators. The Fund is also financed by external support and contributions approved by the Council of Ministers.	Universal service includes: - Fixed line private residential service - Individual mobile cellular service - Dial-up Internet access Broadband Tele-centres - Schools (primary, secondary post-secondary) - Health centres - Emergency services. ITC Fund's main objectives are to support universal service and information society policies. Bridging the digital	Competitive bidding process. The IT Fund Council may use funds from the IT Fund to deploy universal service community centres throughout the country.	N/A	Not publicly available.	Active. Projects executed by the Fund for the year 2010: - Projects of National information centre: SD 5,055,323 (USD 1.9M) - Projects of Nile for Technical Research: SD 4,597,837 (USD 1.7M) - E-government projects: SD 15,624,113 (USD 5.85M) - Computers for schools and universities and relevant aspects: SD 6,612,500 (USD 2.5M) - Schools labs: SD 6,631,496 (USD 2.48M) - Comprehensive service centres: SD

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
				<p>divide and enhancing capacity building.</p> <p>The key focus areas for the IT Fund are:</p> <ul style="list-style-type: none"> - Expand fixed and mobile phone service networks; - Provide advanced services (such as Internet and e-mail); - Support economic development taking advantage of communications infrastructure in different economic and commercial areas; - Support basic services in education, health, Government via information and communications network. 				<p>1,837,549 (USD 0.7M)</p> <ul style="list-style-type: none"> - Universities: SD 608,214 (USD 228,000) - Health project: SD 1,522,041 (USD 570,000) - Project of Switchboard of National Internet: SD 1,793,295 (USD 672,000) - Studies and research— external participation: SD 205,780 (USD 77,000). <p>By 2009:</p> <ul style="list-style-type: none"> - 5 year plan to build 2,500 knowledge centres; - 5 year plan to build a computer lab in all 5,000 schools, and; - 5 year plan to distribute two million computers to every home and to academics. <p>By 2008:</p> <ul style="list-style-type: none"> - Computer for Every Home project; - School computer project; - Electronic Government Support Project; - University Information Network Project; and - Nationwide deployment of universal service community

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
								centres established in the roll-out and deployment plans of licensed operators.
16. Swaziland				Year Fund Established: 1990 legal establishment. 2001 operational.				
<p>The Government established a Universal Service Obligation Fund under the licence awarded to Swazi MTN.</p> <p>The Universal Service Obligation Fund is to be established by Electronic Communications Bill 2009.</p> <p>No policy in place.</p>	<p>The Universal Service Obligation Fund is administered by the Universal Service Obligation (USO) Committee under the Regulator, Swaziland Posts & Telecommunications Corporation (SPTC) / the Swaziland Communications Commission (SCC) as an independent regulatory authority.</p> <p>According to the Electronic Communication Bill 2009, the committee is referred to as the 'Commission', responsible for developing the USF implementation strategy in consultation with the Minister.</p>	Ministry of Information, Communications, and Technology.	<p>Contributions from a general levy on all operators' revenue.</p> <p>According to the Electronic Communications Bill 2009, the Commission shall contribute all remaining unused funds or revenue to the Universal Service/Access Programme.</p>	<p>According to the Electronic Communication Bill 2009, the fund is to provide affordable telecom to the public, telephone directory, public pay phones based on geographical end user needs, and specific measure for disabled users and low income users.</p> <p>The proceeds of the original Fund were to be utilized by Swazi MTN for</p> <ul style="list-style-type: none"> - installation and maintenance of payphones; - implementing handset subsidies; and - installation of base stations in four remote locations in the country. 	According to the Electronic Communication Bill 2009, the Commission shall determine the most efficient and appropriate approach for ensuring the implementation of universal service.	N/A	For 2008, SPTC reported licence fees and universal service obligation fees of USD 2.45 M .	<p>Inactive. USD 6M had been disbursed by 2009. Since then, the Fund has been inactive.</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
17. Tanzania				Year Fund Established: 2009 legal establishment. 2010 operational.				
<p>Policies envisaging a universal service fund:</p> <ul style="list-style-type: none"> - National Telecommunications Policy of 1997. - Tanzania Development Vision 2025 and Rural Development Strategy 2001. - National ICT Policy of 2003. <p>Universal Communications Service Access Act 2006 established the guidelines for the creation of the Universal Communications Service Access Fund.</p> <p>Universal Communications Service Access Fund Regulations, 2009.</p>	None.		<p>0.3% of yearly gross operating revenue from all communications service operators (including ISPs, post and courier companies).</p> <p>So far, not successful in collections from operators.</p> <p>Other sources:</p> <ul style="list-style-type: none"> - Government and the regulator. - Parliamentary Allocation - Development Partner grants: Current funds include a World Bank loan. 	The mandate under the law is to identify the rural and urban under-served areas and designate universal service areas.	<p>Competitive tendering and reverse auction.</p> <p>All network facility operators are eligible.</p> <p>Approved projects need to satisfy that they will adequately deal with:</p> <ul style="list-style-type: none"> - People with disabilities, - People with special needs, - Delivery of quality communications services, - Pricing of services in terms of affordability, - Making available and accessible communications services to all people. 		The estimated Fund amount as at 2010 was USD 3M.	<p>Limited activity.</p> <p>The Government of Tanzania received a credit from the International Development Association towards the cost of Tanzania Communications Infrastructure and e-Government Project to cover eligible payments under the Contract for Rural Telecommunications Service Pilot Project 2011:</p> <ol style="list-style-type: none"> 1. Enabling Environment (USD 14 M) – policies. 2. Connectivity (USD 60 M) - extension of coverage and access to ICT services in rural. 3. e-Government Applications (USD 22 M) 4. Project Management Support (USD 4 M). <p>The Fund is working on pilot projects financed by the World Bank funds: it is collecting and verifying coverage information and the operators' two year projections in order to</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
								<p>identify underserved areas that will be used for the pilot project (2012).</p> <p>In January 2012, UCAF announced a bid to cover certain remote areas. The tender fell through as bidders deemed the maximum subsidy of USD 820,000 inadequate (in addition to a lack of geo-marketing and technical survey) in view of the Capex and Opex required to maintain sites that may not be economically viable, given the low number of POPs in these areas and lack of access roads.</p>
18. Togo				Year Fund Established: 2001 legal establishment. 2002 operational.				
Decree No. 2001-195/PR of September 16, 2001 describes the mechanisms for using a special account for the universal service. Decree 2001-	Operators are allowed to submit their bids as part of programmes selected by the Ministry and can negotiate agreements regarding the realization of the	Overseen by the Ministry for Telecommunications.	2% of annual gross revenues net of interconnection payments from all operators (which corresponds to 66.66% of the annual charges levied on all	The sums allocated to the Universal Service should be used: - for development of rural telephony (a minimum grant is awarded by the Regulatory Authority to the	Togo employs a 'pay or play regime'. The Regulator runs an annual survey in order to determine 'unserved areas'.		Estimated 2011 contributions: USD 1.2M²⁴ As at 30 May 2012: USD 5.1M in the fund. This amount does not include the outstanding	Moderately active. As part of the 2008 Programme, Togocel signed an Agreement with the Regulator to provide service in several unserved zones for Public and Private voice and Internet

²⁴ Estimated based on operator response to confidential 2012GSMA survey

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
<p>007/PR of 07 February 2001 on fees payable by operators and providers of telecommunication s services.</p> <p>Replaced by: Decree No. 2006-041/PR on fees payable by operators and providers of telecommunication s services.</p>	<p>US.</p> <p>The new vision set by the Government in its policy statement in May 2011 intends to involve stakeholders in management processes.</p>		<p>operators, which are 3% of their revenues).</p> <p>In the sectorial policy declaration adopted by the Government on 18 May 2011, it is expected to rely on other funding sources to accelerate the achievement of universal service.</p>	<p>bidder following a tender);</p> <ul style="list-style-type: none"> - to cover losses related to the implementation of service to communities not yet served by an operator (communities with low density); - for the installation of public telephones in areas considered to be disadvantaged by the Minister after consulting the Regulatory Authority. 	<p>Projects are awarded following a proposal by eligible candidates and evaluation by NRA based on the least cost subsidy.</p> <p>Operators providing Universal Service can be compensated for:</p> <ul style="list-style-type: none"> - net cost of the routing of calls between telephone subscribers; - net cost of providing pay phones nationwide. <p>The free routing of emergency calls is not eligible for compensation. Only the costs incurred for the implementation of an emergency call centre, if asked to do so by the State, is charged to the US account. The Minister for Telecommunica-ions after consulting with the Regulatory</p>		<p>amounts owed from the operators.</p> <p>The Universal Service Fund is financed only virtually by contributions of the three main operators that provide the universal service instead of paying their contributions.</p> <p>Since 2002, compensation of 13.8bn FCFA (USD 26M) has been made to the 3 operators.</p>	<p>access and service.</p> <p>Three programmes serving rural communities have been published by the Ministry of Telecommunications. The compensation was awarded to operators agreed to carry out these programs.</p> <p>Spontaneous investments made by operators for projects eligible under the universal service between 2002 and 2005 were compensated.</p> <p>About 190 rural communities were already covered under spontaneous investments by the operators between 2002 and 2005 and under the 2008 and 2009-2010 programmes.</p> <p>183 other locations are planned to be covered based on 3 agreements signed between the Ministry and the operators on 3 May 2012 under the 2011-2012 programme.</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
					Authority, can decide to compensate for other special US obligations.			The 2013 programme will be published at the end of 2012, taking into account the areas remaining uncovered after the achievements of 2012.
19. Uganda				Year Fund Established: 1997. 2001 legal establishment. 2003 operational.				
<p>The 1997 Uganda Communications Act.</p> <p>Rural Communications Development Fund (RCDF) established under the Communications (Establishment and Management of the Rural Communications Development Fund) Instrument, 2002.</p> <p>The 2005 Communications (Universal Service) Regulations outline a comprehensive universal service policy for Uganda.</p>	<p>Rural Communications Development Fund is an internal unit of UCC managed by the Manager of the RCDF, appointed by the UCC.</p> <p>A Board appointed by and reporting to the UCC is responsible for the execution of the strategy for RCDF.</p>	<p>Board of the RCDF: consists of representatives of the UCC, the Uganda Postal sector, Uganda Consumer Protection Association, Uganda Institution of Professional Engineers, the Uganda Institute of Bankers, and the Ministry of ICT.</p>	<p>1% of gross annual revenue, net of interconnection payments, from all operators, including the postal service couriers and ISPs.</p> <p>The RCDF may also receive financing from the Uganda Parliament, as well as donations and grants from development partners, and gifts and loans.</p> <p>According to 2005 Regulations, UCC ought to establish a mechanism for sharing the net costs of</p>	<p>Rural Communications Coverage and Internet Services.</p> <p>Funds are available for areas where service provision is not feasible or unlikely to be provided by the operators in the next 1-2 years without a subsidy.</p> <p>The universal service obligations include:</p> <ul style="list-style-type: none"> - emergency and free services; - operator assistance and directory enquiry services; - services for people with disabilities; 	<p>Operators can access the fund through competitive public open bidding when a request for a bid is issued – usually based on least cost subsidy requested.</p> <p>UCC also enters into Public/Private Partnerships to implement selected projects.</p>	<p>Operators are not included in the Governance Structure. However, in practice the project selection is shared with operators, e.g. for roll out requirement operators can indicate areas that are already covered.</p>	<p>Estimated operator contribution for 2011: USD 3.5M²⁵</p> <p>The actual Fund's expenditure on RCDF projects for the period 2002/3 to 2010/11 has been approximately USD 40 M, which represents approximately 85% of the total Fund's revenue.</p>	<p>Active.</p> <p>Funds have been available for areas where service provision is not feasible or unlikely to be provided by the operators in the next 1-2 years without subsidy. 154 underserved sub counties of Uganda have been identified and divided into 3 universal access areas. Between 2003 and 2009, the focus of RCDF projects was on ensuring access to ICT services for the underserved areas. Subsequently, the RCDF project focus shifted to ensuring usage of ICT services.</p> <p>Approximately 5,482</p>

²⁵ Estimated based on operator response to confidential 2012 GSMA survey

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
In 2002, the UCC adopted a RCDF Manual of Operating Procedures to guide how the Board should manage and administer the fund.			supporting the universal service obligation (i.e. difference between the net cost for an operator of operating with the universal service obligation and operating without the universal service obligation) such that the universal service obligation does not represent an unfair burden.	- basic postal services; reasonable levels of access to payphones for all in Uganda on an equitable basis.				projects have been accomplished by the end of 2010/11: - 106 Internet cafes - 175 Health ICT facilities - 78 ICT training centres - 76 Internet POP - 13 Multi- Purpose Community Telecentres (MCTs) - 45 Postal Telecentres - 708 School ICT Labs - 78 Web portals - 4,099 Public pay phones - 90 GSM sites - 6 Content development - 2 Local governance - 6 unique projects.
20. Zambia				Year Fund Established: 1996-2009 establishment. 2009 operational.				
ICT Act 2009, Section 70. No secondary legislation enacted yet. Draft Universal Access Policy 2009. Previously, the Telecommunications Act of 1994 addressed the	Originally under the Regulator Communications Authority of Zambia (CAZ), now called the Zambia Information and Communications Authority (ZICTA). ICT Act 2009 establishes an Independent	The Minister shall cause an annual statement of the income and expenditure of the Fund to be prepared and laid before the National Assembly.	Prior to 2009, CAZ was raising money for the Fund (Board Resolution) through annual licence fees remittance from all operators (holders of Individual Network and Service Licences and holders of Class Network	Main objectives of universal access: - Promote accessibility to ICT facilities and service to all residents in Zambia; - Promote affordability of ICT services to all citizens in terms of pricing; - Promote availability of ICT	Allocation process not yet determined. Tender bid and Fund direct financing through purchase of ICT equipment for projects.	None.	Not publicly available. The estimated Fund amount as at the end of 2009 was USD 12M .	Inactive Fund not active yet, though a number of projects have been implemented by CAZ and ZICTA under the guise of universal access. Funds have been allocated in the past at ZICTA's discretion. First disbursement to LinkNet done by the Regulator. USD 65,000

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
concept of universal access to telecommunication s services by mandating the Communications Authority to take all reasonable steps to extend the provision of telecommunication s services throughout all rural and urban areas of Zambia, including emergency service, public call box services, and directory information services. However, no secondary legislation has been enacted to support management and administration of the Fund.	<p>Agency for USF.</p> <p>The Fund shall be managed and administered by a Fund Manager appointed by ZICTA.</p> <p>The Fund Manager shall each year publish details of the activities, the contributions to, and allocations from the Fund within three months of the end of the financial year.</p>		<p>and Service Licences). Operators would pay Regulatory Fees: Individual Network Licence [2%] and Individual Service Licence [3%] on Annual Gross Turnover (less interconnect and VAT).</p> <p>Since 1998, CAZ has been retaining 10% of its revenue from annual licensing fee as part of the Universal Service Development Fund.</p> <p>In February 2009, ZICTA created a separate Bank Account for the universal access funds.</p> <p>Once in place, policy and regulations will determine breakdown from Regulatory fees to be allocated to universal access fund pool. Current pool of</p>	<p>facilities and services nationwide.</p> <p>The overall objective of the 2009 ICT Act is to promote the widespread availability and usage of electronic communications networks and services through funding to be provided for basic services to unserved or underserved population segments.</p> <ol style="list-style-type: none"> 1. Rural connectivity 2. Road accessibility 3. Renewable energy / Solar projects 4. Rural electrification 5. Payphone rollouts 				<p>has been disbursed in 2009 - K1Bn was given to finance three rural multipurpose telecentres.</p> <p>Projects implemented by ZICTA has included;</p> <ul style="list-style-type: none"> - The planned construction of over 200 Communication Towers in rural and unserved areas of Zambia. (This has not been done and the tender was cancelled in preference for a collaborative approach with operators. For example, Airtel has since deployed 174 rural sites. ZICTA has supported this through lease acquisitions and payment of rates and rent as applicable.) - Establishment of Multi-purpose Community Telecentres in over fifteen selected areas in the country. - Providing last mile Optic Fibre connection to the Copperbelt University, University of Zambia and Mulungushi University under the Zambia Research and

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
			<p>universal access funds are allocated from regulatory fees by decree of the ZICTA Board.</p> <p>Other sources:</p> <ul style="list-style-type: none"> - Any monies appropriated by Act of Parliament for the purposes of the Fund. - Any other monies to which the Fund may be lawfully entitled may also be used. 					<p>Education Network (ZAMREN).</p> <p>ZICTA is currently focusing on the following projects:</p> <ul style="list-style-type: none"> - Multi-purpose Community Telecentres (MCTs) to provide access to basic ICTs and telecommunications service in various rural outposts in Zambia. - GSM services including funding network expansion to identified rural areas of each operator. The Authority is expected to fund sharable infrastructure such as towers and site energy. (This has not yet occurred). - PoPs to extend Internet service provision in rural areas. (This has not yet occurred). - Computer labs in schools. <p>In 2011, ZICTA set aside ZMK 59 billion (over USD 10 M) from the Universal Access Funds for the installation of communication towers throughout Zambia that</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
								<p>will also be used to connect schools.</p> <p>ZICTA has not invited submissions after March 2011. However, Airtel, for example, is currently accessing funds through an ad hoc arrangement - the 350 Universal Access rollout project.</p>
21. Zimbabwe				Year Fund Established: 2001				
<p>Postal and Telecommunications Act of 2000 provided for the setting up of the Universal Service Fund.</p> <p>Policy on Universal Service 2001.</p> <p>Regulations of 2001, required operators to make contributions towards the Universal Service</p>	<p>Universal Service Fund (USF) as an internal unit and account at the Regulator, the Postal and Telecommunications Regulatory Authority of Zimbabwe (Potraz), is managed by a Board of Trustees of Fund as part of the Regulator and Deputy Director General of NRA.</p>	Board of NRA.	<p>2% of Gross Annual Revenues from all operators.</p> <p>Potraz can contribute through money appropriated by an act of Parliament and surplus funds at the end of the regulator's financial year.</p>	<p>In 2001, Universal Service Obligations were imposed on each operator:</p> <ul style="list-style-type: none"> - Roll out targets in under-served areas, - Provision of public payphones, - Provision of access to public emergency call service and directory information service, - Operators to provide services throughout the 	Public bidding process.	N/A	<p>Publicly not available. Estimated contributions for 2009 were USD 3.2M²⁶</p> <p>The estimated amount as at 2010 was USD 20M; however, it is believed that hyper-inflation has since eroded any remaining reserves.</p>	<p>Limited activity.</p> <p>Targets not achieved due to economic and political situation.</p> <p>Ministry of Finance decided in 2010 to use unutilized funds for:</p> <ul style="list-style-type: none"> - fibre optic backbone (USD 10 M); - extension of cellular telecommunication services in rural areas (USD 5 M); - improving access to ICT in under-served areas and communities

²⁶ Amount provided by regulator as part of ITU survey in Report on Universal Access and Service Funds in the Sub-Saharan African Region, ITU, Edgardo Sepulveda, April 2010

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
Fund, as a percentage of their Gross Turnover. Postal and Telecommunications (Universal Service Fund) Regulations, 2005.				Country including rural areas and at Community Centres in under-served areas. Fund to finance provision of services in remote areas.				as well as schools in both rural and urban areas (USD 2 M); - E-Government (USD 1 M). In 2011, Potraz issued a bid to install passive telecommunications infrastructure in designated rural areas. First investments in 8 provincial cities for the remote network coverage started in 2011.

Notes:

1. Indicates the legal/regulatory mechanism used to establish the Fund (e.g., embedded in telecom law/ICT bill, separate regulatory framework, etc.)
2. Specific structure for the fund (e.g., trust, escrow account) and how the Fund is operated (e.g., by regulator, separate USF body, regional regulatory body, etc.)
3. The oversight process, if any, for this Fund (e.g., steering committee, board, etc.)
4. a). Mechanism for collecting the funds (e.g., operator contribution, proceeds from licence payments, etc.) and b) the amount of the contribution (e.g., fixed amount, percentage of revenues, etc.); whether the funds collected on a monthly, quarterly, bi-annual, annual basis.
5. a) The services that can be provided using the USF – e.g., fixed, mobile, broadband, etc.; b) whether the USF may be used for anything other than telecom (e.g., purchase of computers, tele-medicine, schools, etc.).
6. The following elements are addressed: a) How the funds are allocated; b) entities having access to the funds (e.g., direct distribution or competitive process); c) party responsible for defining what projects will be carried out; d) parties responsible for developing and/or presenting project proposals; e) project implementation procedures.
7. Indicates the degree (if any) to which industry is allowed to determine the use and application of the funds (e.g., consultative process)
8. Estimated or reported amounts in the Fund as of YE 2010; where not available, most recent year is stated
9. Fund activity to date is categorized as follows: a) **inactive**: no known activity to date; b) **limited activity** (less than 5 applications of the Fund); c) **moderate activity** (6 to 15 applications of the Fund); d) **active** (more than 15 applications of the Fund)

1.6.2 Asia Pacific

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
1. Afghanistan				Year Fund Established: 2003				
In 2002, Afghanistan began its telecommunications reconstruction programme. The Afghan Telecommunication Law stated that the Afghan Telecommunication Regulatory Authority (ATRA) must establish access to telecommunications services and ensure their availability. In 2003, ATRA established the Telecommunication Development Fund (TDF) as a means to achieve universal access and as a tool to remedy the inadequacy of rural telecommunications facilities.	The Telecommunication Development Fund (TDF) constitutes a financial mechanism that creates economic incentives for private investment in network expansion and service delivery while maintaining market conditions under the management and supervision of the ATRA Board. The Universal Access Department (UAD,) a separate unit within the ATRA's organization, carries out the activities related to the TDF and reports to the ATRA Board via the Secretary General. UAD consists of a Director and six employees with skill sets that include	ATRA is an independent agency reporting to the Minister of Communications and IT and its administrative costs are funded by monies collected through the application of its regulatory dues. ATRA defines all administrative, procedural and substantive rules. ATRA works in consultation not only with the Ministry of Communications and Information Technology, but with the Ministry of Rural Rehabilitation and Development, the Ministry of Public Health, the Ministry of Education, the Ministry of Agriculture and all telecom and	2.5% of net revenues of all licensed service providers. Other sources of funding are also available to the TDF, such as funds from USAID and the World Bank – two major donors to the funds – ITU, UNDP, JICA, and the governments of China, India, Iran and Korea have offered support to many of the projects proposed by the TDF regarding the main cellular operators.	Increase penetration in rural and un-served areas through installation of wireless base stations. Telecom coverage will be a priority for: <ul style="list-style-type: none"> • Small and large villages • Clusters of villages; clusters of scattered houses • Schools and universities (affordable telecom and internet access) • Rural health clinics (telecom and internet discounted rates, passed on to programme participants) • Groups of nomads on the move Specific deliverables are:	TDF subsidies are distributed through competitive awards. Applicants will be invited through public tenders to bid for the provision of the required services in the designated rural areas.	Private sector participation is encouraged as the geographic features of the country are considered to be the most prominent limitations of market deployment of services, so the input from industry is critical in each project that the Fund proposes to undertake.	At the end of 2007, the TDF had approx. USD 20M , comprised of USD 10M received in 2007 and another USD 10M collected previously. Contributions for 2008 are estimated to have reached USD 14.5M ²⁷ . As per the MCIT report, by the end of 2010, the ATRA's budget was approx. USD 100M .	Active. Difficult geography, climate conditions and security concerns have resulted in ongoing delays but of the first 3 project rounds, 61 out of 62 sires are now on air. Of the second round out of 76 sites, only 3 have been completed.

²⁷ www.atra.gov.af

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
	contract/legal/financial/regulation knowledge as well as engineering and managerial/team building skills.	Internet service providers It should be noted that the entire senior fund admin team was being replaced as of May 2012.		<ul style="list-style-type: none"> • (1) A Public Calling Office (PCO) for every village with a population of between 100 and 1,000 and clusters of more than 100 houses • (2) A Telecentre I (Voice telephony, internet, fax) for every village with 1,000-2,000 population • (3) A Tele-centre II (Voice telephony, internet, fax, computer training facility) for every district in rural areas • (4) A mobile phone or mobile Internet kiosk for major nomadic groups (100-200 population) • (5) At least one telephone line and at least one Internet access line for every rural school • (6) At least one telephone line and at least one Internet access line for every village health clinic 				

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
2. Australia				Year Fund Established: 1999				
The Universal Service Obligation (USO) was incorporated in the Telecommunication s Act of 1999 to ensure all people in Australia, no matter where they live, have reasonable access to standard telephone services, payphones and prescribed carriage services. The Minister for Communications, Information Technology and the Arts determined that Telstra is the primary universal service provider for the whole country in respect of the service obligations.	Australian Communications and Media Authority (ACMA) is the Regulatory Agency	ACMA Board of Directors.	Levy on licensed operators depending on market share of eligible revenue. ACMA uses the eligible revenue to determine each carrier's contribution to the USO subsidies. In June 2011, ACMA made a written assessment of each carrier's eligible revenue for the 2009-10 period. This was used to determine the amounts each operator must contribute as the USO levy for the 2010-11 period in September / October 2011.	Under the Telecommunication s Act, Telstra must achieve the following goals: Standard telephone services accessible to all; payphones reasonably accessible to all people on an equitable basis	The government determines the level of subsidy paid to the USO provider. Previously, a USO model was used but subsidy amounts are now administratively determined based on previous modelled amounts.	On March 2012, Parliament passed universal service reform legislation, aimed at ensuring the ongoing delivery of key telecommunications consumer safeguard during and after the rollout of the National Broadband Network (NBN). A new agency, Telecommunication s Universal Service Management Agency (TUSMA) will be in charge of the Programme from July 2012. (See Universal Service Policy in the NBN).	As per ACMA's USO Assessment, for the period 2010-2011, the USO collected AUD 145.M equivalent to USD 146.0M	Active Amount paid for the period 2010 – 2011 to TELSTRA – the service provider: AUD 57.7M equivalent to USD 58.2M
3. Bangladesh				Year Fund Established: N/A				
Bangladesh's mobile coverage has made services available to over 99% of the population. The government indicated in 2010 there is no need per se of a USO	Not yet known	Not yet known	Operators will be required to contribute 1% of audited gross revenues	Not yet known			N/A	Fund not yet active. Please refer to Section 8 for additional details

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
programme for mobile telephony. However, on Nov.10, 2011, the creation of a USOF was announced.								
4. China				Fund year Established: 2002; not operational				
Telecom Law on July 2002 has yet to be fully enacted.	Village to Village Programme – Ministry for Information Industry unveiled the blueprint in July 2002	The Ministry for Information Industry is the manager, supervisor and Regulator for the programme.	The unconnected rural areas across the country were grouped into regions and assigned to one of the major telecom operators (China Telecom, China Netcom, China Mobile, China Unicom, China Railcom, and China Satcom) in accordance with the company's size and financial capacity.	Main objective is provision of voice telephone service to all villages. Universal telecom service is intended to be via the "New Three Fs Policy" (meaning concerns for the village, peasants, agriculture), continuing the projects of the "telephone installation in every village" and the model projects of the ICT in all villages and townships.	N/A Gov't provides subsidies to encourage construction and maintenance of nationwide networks and to increase service in mid-western China.	N/A	N/A	Inactive Universal Service Organization still in the planning stage.
5. India				Year Fund Established: 1999				
In 1999, the Union Cabinet approved the New Telecom Policy (NTP 99) establishing the Universal Service	The Administrator has full powers of implementation within the overall approved budget and in accordance	In November 2002, the Government through the Department of Telecommunications created the "Office	Funds are raised by a "Universal Access Levy" (UAL) as a percentage of the revenue earned by all operators under various	As per NTP 99, USOF goals were: . Provision of voice and low speed data	Funds are awarded by least subsidy auction	As members invited to be part of the Office of the Administrator, the industry has an active participation	Funds collected in 2011: USD 596.4M The total amount collected by the Fund as of	Active but spending not keeping pace with contributions.

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
Obligation Fund (USOF) and its goals. Subsequent Acts and Amendments have been updating the provisions for the USOF as to incorporate mobile services and broadband connectivity.	with contracts/agreements signed with successful bidders. However for operational, technical and financial matters, the Administrator may consult with the Department of Telecom.	of the Universal Service Fund Administrator" (OUSFA) which functions as an Attached Office to the Department of Telecom. The OUSFA has and Administrator, deputy administrator/ directors as needed and support personnel. The Administrator chairs an Inter-Ministerial Advisory Committee, consisting of officers from the Ministry of Finance, Planning Commission, Ministry of Law, Department of Telecommunications, the Telecom Regulatory Authority of India and professionals/experts in the areas of telecommunications, finance, economics and management as required by the Administrator.	licences, and decided in consultation with the Telecom Regulatory Authority of India (TRAI). The percentage has been fixed at 5% of the Adjusted Gross Revenue of all telecom service providers. In addition, the Central Government may also give grants and loans.	service to uncovered villages by 2002. - Achieve internet access to all district headquarters by 2002. - Achieve telephone on demand in urban and rural areas by 2002. As per the ITR Amendment in 2004 and subsequent amends in 2006 and 2008, the following services are supported by the Fund: Stream I: Operation and maintenance of Village Public Telephones (VTP) and installation of VPTs in additional revenue villages as per Census 2001. Provision of a second public phone in villages where the population is more than 2000 and no public call office exists. Replacement of Multi Access		in the planning and allocation of funds. Also, USOF interacts with the ITU and other US funds in other nations.	December 2011 is 40.574.16 Indian Rupees Crore. – Approx. USD 7.8B with approximately half that amount still unspent.	

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
				<p>Radio Relay Technology (MARR) VPTs installed before 2002.</p> <p>Stream II: Provision of household telephones in rural and remote areas</p> <p>Stream III: Creation of infrastructure for provision of Mobile Services in rural and remote areas.</p> <p>Stream IV: Provision of Broadband connectivity to villages in a phased manner</p> <p>Stream V: Creation of general infrastructure in rural areas for development of telecommunications facilities.</p> <p>Stream VI: Induction of new technological developments in the telecom sector in rural areas. Pilot projects to establish new developments in the telecom sector.</p>				

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
6. Indonesia				Year Fund Established: 1999				
In 1999 the Telecommunications Law No.36 established that every telecom provider has to contribute to the universal service obligation, to provide infrastructure and service or other compensation. Government Regulation No.52 in 2000 created the USO to provide access to telecommunications services. In 2007, the USO service was expanded to information technology through Ministerial Regulation No. 11.	BTIP (Balai Telekomunikasi dan Informatika Perdesaan) the Authority for Rural Telecommunications and Information Technology, a non-profit public service institution has been established to manage the USO Fund.	Directorate General of Posts and Telecommunications is the Regulatory Agency	In 2009, Government Regulation No.7 established that the contribution to the USO would increase from 0.75% to 1.25% of gross profit, charged to all telecom providers.	<ul style="list-style-type: none"> Provision of telecommunications and information technology services. Public phone service 24 hours a day. Independent technology. Local content priority internet and broadband also 	USO Fund is distributed through BTIP under the State Budget Mechanism. Subsidy goes to villages through the operator to provide Access and Services. All contracts are performance based and with multi-year budget allocations.	The Government through the Directorate General of Post and Telecommunications makes all decisions regarding goals of the USO.	Contribution to the USO as per Budget Year 2011 amounted to USD 135.0M	Active. See deep dive for detailed account of project activities

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
7. Japan				Year Fund Established: 2002				
Under the Telecom Business Law of 2002 and up until 2007, universal service obligations were imposed solely on NTT with NTT required to bear the costs; in 2007, in response to the increasing competition in the Japanese market, a new scheme was introduced whereby each operator connected to NTT's network is required to share the cost of such obligations.		MIC (Ministry of Internal Affairs and Communication)	Contribution calculated annually; the amount to be contributed by each operator earning over JPY 1B annually, is a pro rata allocation of NTT's cost of providing US in certain geographic locations, determined in accordance with their per cent market share The costs incurred by the operators are passed on to the subscriber in the form of a monthly charge on their bills.	Service deemed indispensable to daily Japanese life: analogue fixed line phones, payphones and emergency calls There are plans underway to designate 'optical IP telephony' as part of US in conjunction with the new broadband super highway initiative	All compensation allocated to NTT	None	N/A	Active
8. Korea (South)				Year Fund Established: 2008				
Under Article 3-2 of the Framework Act on Development of Broadcasting and Telecommunications (TBA), all operators are responsible for the provision of US or for compensation for losses due to a lack of US.	Compensation for losses if needed / requested / approved	Administered by the Korean Communications Commission (KCC)	All operators are obliged to provide US and accept any loss arising from the service provision. Operators making less than KRW 30B per annum may be exempted by the KCC	Universal services are fixed line services including emergency calls and public phones plus discounted services for the disabled or low income classes.		None	N/A	Active

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
9. Malaysia				Year Fund Established: 1998				
The Universal Service Policy was established in 1998 to regulate the country's telecommunications, and to provide communication access to underserved areas. The policy was later updated to prioritize providing collective access, not only to basic phone service but also to internet services and broadband.	The Fund is controlled and operated by the regulator, the Malaysian Communications and Multimedia Commission (MCMC)	The Malaysian Communications and Multimedia Commission (MCMC) is the Regulatory Agency	Fixed and mobile network operators contribute 6% of their weighted revenues from designated services to the Fund. The contributions for the Fund began in 2002.	Basic telephony and internet access; public payphones in rural areas. Subsequently updated to include broadband. In addition, the US has not been confined to the telecom industry, but extended to broadcasting and information technology.	Malaysia telecom authorities plan, manage and invest the funds as per the Government's plans. No input from the industry has been requested.	From 1999 to 2002, Telekom Malaysia was the only operator with access to the Fund. Starting in July 2002, other operators were invited to submit proposals for financing through a competitive process. All now have the possibility to compete for projects and funding.	Estimated operator contributions for 2010 were USD 341.90M . As of February 2010, the USF had collected MYR 5 B – equivalent to USD 1.5 B .	Active. See deep dive in Section 4.0
10. Mongolia				Year Fund Established: 2006				
A Universal Access Strategy was developed by the Government in 2005, creating the USOF in 2006. The programme has been progressively updated and was substantially implemented by late 2009	ICTPA was formed by Decrees Nr.64 (2008) and Nr. 05 (2009). ICTPA is responsible for policy formulation, planning, implementation and coordination. USOF is one of the Offices of the newly formed ICTPA.	Control of USOF was transferred from the CRC to Information, Communications Technology and Post Authority (ICTPA) but CRC remains as the Regulatory Agency	2% of net taxable income from all operators	The fund was created to finance the delivery of essential communications services to unserved inhabitants and remote areas, and to construct, expand and renovate communications networks.	USOF is a publicly operated fund. Currently under discussion is the need for telecom operators to rejuvenate the USOF, as it appears to have slowed down, through the creation of a Public-Private partnership with an effective management board	The World Bank provided seed finance of over USD 5.4 M to support the pilot projects: - To install VSAT in 32 baghs (nomadic rural communities) and mobile and internet POPs in two areas. - Roll out of voice services in the form of mobile service in	Over the last 4 years (2007 – 2010), a total of 10.6B MNT has been collected equivalent to USD 7.85M ; the majority is seed money from aid agencies and approximately 85% has been disbursed.	Active. Between 2005 and 2010, number of soums with wireless access more than quintupled from 60 to almost 340

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
					constituted with a majority by the operators.	90 soums (districts) and VSAT services in 152 baghs. - Broadband wireless internet points of presence in 27 rural soum centres and 7 almag (provincial) centres.		
11. Nepal				Year Fund Established: 2000				
The Rural Telecommunication s Special Programme was created by His Majesty's Government in 2000. Later, Policy Nr. 2060 established the Universal Access to Telecommunication s Service to provide services to the areas where services were not provided. It also established the Universal Service Obligation as a way to ensure the provision of such services.	Rural Telecommunication s Development Fund (RTDF)	Nepal Telecom Authority (NTA) is the Regulatory Agency	2% levy on the revenues of the incumbent operator, ISPs and mobile operators	The main goal of the programme is to provide public access telephones. Not less than of 90% of funds are to be used for universal telephone access and not more than 10% for other relevant services such as internet.	Subsidies are distributed through competitive bidding.	On 2004, Telecommunication Policy Nr. 2060 established in Chapter 5 that the private sector's participation must be encouraged and the private sector informed of all matters relevant to the sector.	According to The Himalayan Times on Jan. 27, 2012, Purushottan Khanal, Director of NTA the Fund had collected USD 54.1 M in the first half of the fiscal year 2011.	Operational but inactive. Due to unresolved issues between the NTA and the Ministry of Telecom, the Fund has not been awarding any new projects.

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
12. New Zealand				Year Fund Established: 2001				
The Telecommunication s Act of 2001 established the Telecommunication s Service Obligations (TSO). The Telecommunication s Act requires that a review of local service TSO arrangements be commenced at the start of 2013. New TSO with Telecom Corporation and Telecom New Zealand was signed on November 2011 under the New Telecommunication s Act approved in 2011.	Telecom is the TSO provider for the local residential telephone services. Sprint International is the TSO Provider for the relay service for deaf, hearing impaired and speech impaired people. A separate TSO requires Chorus to provide input services to Telecom to enable it to meet its TSO obligations.	A TSO is established through an agreement under the Telecom Act between the Crown and a TSO provider.	Costs for subsidizing telecommunications services supplied under TSO are funded through the Telecommunications Development Levy (TDL) collected from the telecom industry. The Commerce Commission determines the TSO charge to be paid to a TSO provider and the proportion of the TDL borne by each liable telecommunications service provider. The Telecommunications Development Levy was established in 2011 to: <ul style="list-style-type: none"> • Pay TSO Charges for Telecommunication s Service Obligations (that subsidize the provision of certain telecommunications services in the public interest) • Pay charges for developing non-urban telecommunications 			In 2010, the Ministry of Communications and Information Technology introduced a bill to provide a framework for the government's broadband policies and to reform the TSO framework. The Ministry decided to introduce the Bill in consultation with the telecom industry to ensure universal access to faster and better quality services. The Bill sets out regulatory changes to enable the Government to implement the Ultra - Fast Broadband Initiative and the Rural Broadband Initiative (RBI). The Bill has been subject to considerable debate and amendment	Prior to introduction of the new levy in 2011, annual levies ²⁸ were in the neighbourhood of NZ 70M (approx. USD 55.7M). The rural broadband initiative is expected to cost around NZ 300M, and it is being funded by a NZ 48M direct government grant, plus NZ 252M from a new Telecommunication s Development Levy being set up as part of the accompanying TSO reforms (estimated collection of NZ 50M or USD 39.8M) per annum. In the 6 years following its	Active

²⁸ <http://www.simpsongrinson.com/april-2010-1/>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
			<p>infrastructure</p> <ul style="list-style-type: none"> • Pay charges for upgrades to the emergency calling system; and • Other purposes (case by case) <p>For fiscal years 2010 through to 2016, the levy has been set at NZ 50M per annum for each eligible service provider</p>				introduction, the new TSO levy is expected to raise: NZ 48M for payments for delivery of TSO services and upgrades to the emergency calling services system and NZ 252M for the Rural Broadband Initiative.	
13. Pakistan				Year Fund Established: 2006				
Universal Service Fund Company Limited (USF) was created by the Government of Pakistan under Section 42 of the Companies Ordinance 1984, at the end of 2006. The Ministry of Information Technology was in compliance with the Telecommunication s Law issued in July 2003, the Mobile Cellular Policy issued in January 2004 and the Broadband Policy from December 2004.	USF will be controlled and monitored by the MoIT, and administered by an independent but wholly state-owned company.	Universal Service Fund Company is a Corporation with an independent Board of Directors equally balanced between four members from the Government and four members from the private sector. The CEO is the 9 th Director of the Board. The four members from the Government are from the Ministry of Information Technology, including the Minister, and the four members of the private sector are nominees from fixed	1.5% levy on the revenues of all operators. All licensed operators that contribute to USF are eligible to apply for all USF Contracts, including Special Projects.	The fund is targeting rural penetration as well as universal access. The targets are country-wide, financing projects to provide basic telephony services, broadband services, fibre optic backbone network to rural and underserved urban areas.	Universal Service Contracts will be awarded using a “negative auction”. The bid for the lowest amount of subsidy for the performance of each pre-defined contract will win the contract. Obligations and Rights of USF contractors will be clearly specified in the Contract.	As members of the Board, the participation of the industry is an integral part of the USF. The USF also permits and encourages participation by local communities and voluntary bodies where relevant. Operators with innovative and cost effective solutions are encouraged.	Estimated contributions for 2011 in the neighbourhood of USD 90M . Estimated amount in the Fund as of May 2012: USD 500M	Active. See deep dive in Section 4.

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
		line licensees, mobile cellular licensees, data licensees and a representative of the consumer groups. The Chief Executive Officer is selected by the Government.						
14. Philippines				Year Fund Established: 1995				
Telecommunication Law – Republic Act Nr. 7925 in 1995 - created the Universal Access Funds. Executive Order Nr. 264 in 2004 created the Commission on Information and Communications Technology (CICT) which issues the Strategic Roadmaps outlining the government's Agenda regarding telecommunications , infrastructure and services. All this changed on June 23, 2011, when President Aquino dissolved the CITC and abolished the positions of the CICT commissioners with Executive Order 47.	The new ICTO is under the Department of Science and Technology (DOST). ICTO has an Executive Director with the rank of undersecretary.	National Communications Commission (NCC) is the regulatory agency.	No information has been made public since June 2011.	The goal is connectivity in all villages by 2015 which is achieved by: 1) Service Area Scheme (Basic Telephone Service) 2) Teleponosa Barangay-telephones made accessible in all rural areas. 3) Community e-Centres to Provide the general public with internet, email, fax, etc. services	All programmes and contracts have been stopped.	The private sector contributed greatly at the beginning of the fund in terms of facilitating reach via mobile phones, particularly to areas previously underserved or not served, but the greater need to access internet has not been met by them. EO 47 was a surprise to the industry, as there was never any consultation nor was anyone informed before the Order was made public.	Not available	Inactive. Not operational since EO 47 dissolved the CITC and stop all the plans developed by the Commission.

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
The same EO created the Information and Communication Technology Office (ICTO).								
15. Thailand				Year Fund Established: 2001				
In 2001, Thailand approved the Telecommunications Business Act which, in Section 17, created the National Telecommunications Commission (NTC). In 2010, the New Act on Organization of Telecommunications on its Chapter IV established the Broadcasting and Telecommunications Research and Development Fund for the Public Interest (BTRDF) under the newly created National Broadcasting and Telecommunications Commission (NBTC)	NBTC is an independent government agency directed by eleven Commissioners with expertise in the broadcasting, telecom, financial and consumer protection fields appointed by the Senate for a 6 year term in charge of administering the Universal Service Obligation and the management of the BTRDF. The Law established that the Fund will have a "Fund Management Committee" consisting of the Chairperson of the NBTC, the permanent Secretary of the Office of the Prime Minister, Secretary General of the Office of the National Economic	The Office of the NBTC is the regulatory agency. As the NBTC has not yet been configured as per the new Law and guidelines, the NTC is still in charge of all the telecom activities as before.	By law, all networking licensees are obligated to provide services and the designated USO providers have to be responsible for all costs incurred from their investment. Non-designated licensees have to contribute 4.0% of their revenue to the USF.	Basic telecommunications services: Services in rural areas and low rate of return areas; Services for educational, religious, medical and social services institutions; Services for disabled, seniors and underprivileged people.	Funds are disbursed through competitive bidding. Operators have a universal service obligation to extend service to unserved areas.	Members of the different operators are appointed to the Fund Management Committee as the expert members required by Law. The names are submitted by the operators.	The money collected for the USO under the NTC will be given to the newly created NBTC. Information regarding the amount is not publicly available. However, it is estimated that approximately USD 100M was in the Fund as of YE 2011 with only USD 5M having been disbursed.	Active

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
	and Social Development Board, Director General of the Comptroller Department, and Director of the National Electronics and Computer Technology Centre; one expert with knowledge and experience in human resources, four more members will have expertise in human resources, consumer rights, telecommunications and promotion.							
16. Vietnam				Year Fund Established: 2006				
The Vietnam Public Utility Telecommunication Service Fund (VTF) is the agency responsible for administering the fund and is under supervision and regulation of the Ministry of Post and Teleomatics.	Ministry of Post and Teleomatics is the Regulatory Agency	VTF is a State Financial Organization directly under the MPT, operating for non – profit goals; it is exempt from income tax and VAT. The Fund's managerial and executive structure consists of the: 1) Management Board, formed by 5	3% of fixed line operators' revenues; 4% of the revenue for international telephone service and international lease-line subscription service; and 5% of mobile operators' revenues.	The VTF was established to subsidize end user charges and installations costs for 110.000 new fixed lines and 5.000 internet accounts, to develop 3.000 new public telecom service sites. 90% of	Contracts assigned by the Fund contain all the details of the work to be done, the payments and all other conditions.	This is a state run and administered Fund.	As per VTF, as of 2010, the capital for carrying the program was USD 325M .	Active. Specific objectives of the VTF were to ensure that, by 2010: 1. teledensity in the areas provided with public-utility telecommunications

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
		<p>members appointed and dismissed by the MPT. The Chairman of the Board is the Ministry of Post and Telematics.</p> <p>2)Control Board is composed of between 3 and 5 members, also appointed by the MPT, and</p> <p>3) Executive Board formed by the Fund's director and the deputy directors.</p>		<p>communes are to have public telephones and 30% of communes are to have internet access.</p>				<p>services reached 5 tel. sets per 100 people;</p> <p>2. 100% of communes throughout the country had public tel. service access points;</p> <p>3. 70% have public Internet service access points; and</p> <p>4. all citizens have the right to free access to compulsory telecom services. According to VTF, these policy targets were achieved in 2009, with 10.7 out of 100 people now using public telephones in remote areas, and 4873 public telecoms access areas already established</p>

Notes:

1. Indicates the legal/regulatory mechanism used to establish the Fund (e.g., embedded in telecom law/ICT bill, separate regulatory framework, etc.)
2. Specific structure for the Fund (e.g., trust, escrow account) and how the Fund is operated (e.g., by regulator, separate USF body, regional regulatory body, etc.)
3. The oversight process, if any, for this Fund (e.g., steering committee, board, etc.)
4. a). Mechanism for collecting the funds (e.g., operator contribution, proceeds from licence payments, etc.) and b) the amount of the contribution (e.g., fixed amount, percentage of revenues, etc.); whether the funds collected on a monthly, quarterly, bi-annual, annual basis.
5. a) The services that can be provided using the USF – e.g., fixed, mobile, broadband, etc.; b) whether the USF may be used for anything other than telecom (e.g., purchase of computers, tele-medicine, schools, etc.).
6. The following elements are addressed: a) How the funds are allocated; b) entities having access to the funds (e.g., direct distribution or competitive process); c) party responsible for defining what projects will be carried out; d) parties responsible for developing and/or presenting project proposals; e) project implementation procedures.
7. Indicates the degree (if any) to which industry is allowed to determine the use and application of the funds (e.g., consultative process)
8. Estimated or reported amounts in the Fund as of YE 2010; where not available, most recent year is stated
9. Fund activity to date is categorized as follows: a) inactive: no known activity to date; b) **limited activity** (less than 5 applications of the Fund); c) **moderate activity** (6 to 15 applications of the Fund); d) **active** (more than 15 applications of the Fund)

1.6.3 Europe

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
1. Bulgaria				Year Fund Established: 2005				
<p>Law of Telecommunication sProm. SG. 88/7 Oct 2003, as amended SG. 19/1 Mar 2005.</p> <p>Amended in 2010, with provisions on compensation rules for universal service.</p>	<p>Universal Service Compensation Fund is administered by the Communications Regulation Commission (CRC),</p> <p>Fund is managed by a Managing Board consisting of 5 members: Chairman appointed by CRC, Deputy chairman by Commission for Protection of the Competition, and members from the Bulgarian National Bank, Ministry of Labour and Social Policy and Ministry of Finance.</p>	<p>The Managing Board of the Fund accounts for its activity by reporting to the Minister of Transport and Communications, the Minister of Finance, the Minister of Labour and Social Policy, the Governor of the BNB and the Commission for the Protection of Competition.</p> <p>The Audit Office exercises control over the Fund's activity</p>	0.8% of voice revenues minus certain interconnection and special access costs from all operators on an annual basis.	<p>Universal service obligations include:</p> <ul style="list-style-type: none"> - Initial connection to a public fixed telephone network and access to fixed voice telephone services; - Access to fixed voice telephone service through public telephone sets; - Telephone directory; - Unbundled access to emergency calls; - Access to fixed voice telephone services under special conditions and/or providing terminals for the disabled or underprivileged. 	<p>Operators may apply annually for compensation for losses from the provision of universal service.</p> <p>Large public operators required to provide universal services.</p> <p>Smaller operators can opt to participate in a tender competition.</p>	N/A	Not publicly available.	<p>Operational. Active</p> <p>Aims to achieve 100% broadband coverage by 2013.</p>
2. Czech Republic				Year Fund Established: 2002				
<p>Act No. 151/2000 Coll., Telecommunication Act.</p> <p>Act No. 127/2005 Coll. on Electronic</p>	<p>Universal Service Fund was set up as a dedicated (escrow) bank account administered by the</p>	<p>NRA has an obligation to provide explanations and to publish every year a Statement of Account</p>	<p>Under the first USF, (2001-2006) funds were supposed to be collected from all holders of a telecommunication</p>	<p>The following services were included in the US in 2001-2006:</p> <ul style="list-style-type: none"> - Public telephone service provided via 	<p>The NRA determines which obligations fall under universal service and appoints the US</p>	<p>Operators participate in a consultation on whether a particular service is already being provided on</p>	<p>In 2008, net cost calculations were finalized for 2001-2005. The decisions</p>	<p>Operational. Moderate activity. Compensation for demonstrable</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
<p>Communications.</p> <p>Decisions of NRA with respect to individual US obligations and providers.</p>	<p>regulator, the Czech Telecommunication Office (CTU).</p> <p>As of 2010, providers of universal service are reimbursed directly from the state budget.</p>	<p>Management in a Telecommunication s Journal or the Annual Report.</p> <p>2001- 2006 decisions of the CTU have been subject to judicial review.</p>	<p>licence. The amount the contributors were to pay was a share to cover the "demonstrable loss" of the provision of the US by the US provider, which was established based on their profit from the applicable year (revenues of the contributor minus some costs such as interconnection costs).</p> <p>Under the second regulation (2006-2009), all operators contribute to the "Net costs" of other services.</p> <p>Any contributor whose income for the applicable year is below CZK 10 million (EUR 40,000 or USD 50,000) does not have the obligation to contribute.</p> <p>In case the contribution should exceed 1% of revenues of the contributor, the rest (above the 1%) was to be paid from the state budget.</p>	<p>public telephone network;</p> <ul style="list-style-type: none"> - Operator services; - Free of charge, uninterrupted access to emergency calls; - Information service about telephone numbers; - Obligation to periodically issue phone books and to ensure access to those books; - Obligation to offer public pay phone services (phone booths); - Discounts to the disabled. <p>Since 2006, the NRA had the mandate to order the USO provider to offer the following services:</p> <ul style="list-style-type: none"> - Connection in a fixed location to a public communication network; - Access in a fixed location to a publicly available telephone service; - Obligation to periodically issue phone books and to ensure access to those books; - Information service 	<p>provider through a tender process.</p> <p>The US provider is to be reimbursed: For 2001-2006, a "demonstrable loss" (i.e., how much was spent on provision of the US by the provider) was confirmed by the NRA. Then, the NRA calculated the share of each contributor on the overall "profit" and applied the same ratio to determine what part of the "demonstrable loss" should be covered by each operator.</p> <p>Under the second regulation (2006-2009), the cost of US has been financed from two sources. The cost of US provided to people with "special social needs" in the form of special prices is reimbursed directly from the state budget. "Net costs" of other services are paid from the US account, where the NRA initially</p>	<p>commercial basis in the market or whether such service is not provided in sufficient amount and quality and should therefore be provided as a US.</p>	<p>have been appealed in court by the operators. No money is deposited in the USF.</p> <p>For the years 2006 – 2009, the Fund also still exists as the NRA is still in the process of settling the contributions to the Fund.</p> <p>In 2008, the costs were approximately CZK 115M (USD 5.8M). The net US costs in 2010, financed from the state budget, were approximately CZK 47 M (USD 2.4M).</p>	<p>losses for 2001-2006 is subject to legal delays.</p> <p>There is a declining applicvacion to the scope of US services as well as US costs.</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
			As of 2010, there was no USF for the future years and universal costs are to be reimbursed directly from the state budget.	<p>about telephone numbers;</p> <ul style="list-style-type: none"> - Obligation to offer public pay phone services (phone booths) - Access to telephone service for disabled; - Special tariffs for disabled. <p>The following services are currently imposed:</p> <ul style="list-style-type: none"> - Obligation to offer public pay phone services (phone booths); - Access to telephone service for the disabled; - Special tariffs for the disabled. 	calculates the "net costs". It then decides whether the net costs of provision of the US represent an "unbearable burden" for the provider. If so, the NRA sets a percentage of profit of individual contributors and based on this, it determines the contribution amount that is proportionate to the share of all profits of all contributors.			
3. France				Year Fund Established: 1997				
The European Commission's concept of Universal Service is laid out in two Directives: the Voice Telephony Directive (1996) and the Interconnection Directive (1997). In accordance with these directives, France's Ministry of	The Universal Service Fund is managed and administered by Caisse des Depots et Consignations, an independent financial institution with oversight by the Ministry of Economy.	France Telecom is the public provider of universal services; however the law allows other operators to be designated as universal service providers if they are able to provide the range of services required nationally. Up until 2003, the regulator was the	All operators offering voice telephony are required to contribute to the fund; Operators are required to contribute two types of payments: 1. An explicit surcharge paid in addition to interconnection charges, and 2. A payment to the	According to the Telecom Act, the USF obligations include the provision of basic telephony services at an affordable price, the free forwarding of emergency calls, the provision of information services, the establishment of	Allocation of funds is done by the Caisse as per ARCEP's instructions. As of 2011, all payments were to France Telecom.	None	Contributions to the Fund for 2011 were approx. EUR 22.7M (Approx. USD 28.9M).	Operational Active The Fund has been under fire by critics following complaints from the associations of French new telecommunication infrastructure and service

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
Communications issued a Universal Service Decree implementing the Telecommunication s Act in 1996. The Act stipulates that geographically averaged tariffs and reduced-rate social tariffs (for specific categories of the population such as the disabled or less privileged) are required to ensure all consumers have access to universal services. All operators are entitled to participate in programmes to provide discounted services to qualifying low income users. Operators providing social tariffs will have the cost of the service deducted from the contribution they are obliged to make to the fund		Autorité de Régulation des Télécommunication s (ART) but the Regulatory Package of 2003 created the Autorité de Régulation des Communications Électroniques et des Postes (ARCEP).	Fund that is a proportionate share of FT's net universal service costs calculated on a pro rata basis system linked to a carrier's traffic volume. Operators pay into the USF three times a year.	public payphones over the French territory.				providers, the European Commission took France to the Court of Justice of the European Communities regarding the financing of universal service and the method of calculating the costs to be paid to the fund by new entrants. The ruling, favouring the plaintiff, caused a setback when France had to repay amounts charged and allowed for other companies to justify no payments during the four years
4. Hungary				Year Fund Established: 2004				

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
<p>Section 122 of the Act 100 of the Electronic Communications Act of 2003, as amended by Act 174 of 2007.</p> <p>The Fund was established in October 2004 as a successor to the previous Universal Communications Compensation Fund by the Decree of Government No 134 of 2004.</p> <p>Decree No. 7/2004 of the Ministry of Informatics and Communications re the principles of calculating the net avoidable costs of universal electronic communications service and the method of establishing such costs.</p>	<p>Universal Electronic Communications Support Fund administered by the National Communications Authority (National Media and Infocommunications Authority) and has a separate legal personality.</p>	<p>The Minister appoints the Director of the Fund as well as the members of its Oversight Board, and approves the Rules of Organisation and Operation of the Fund, the Rules of Operation of the Oversight Board, the annual budget and the annual report of the Fund, which the Minister has the obligation to publish based on data supplied by the NRA. Finances and accounting of the fund are audited by the State Audit Office.</p>	<p>Until April 2010, a Decree of the Minister. (Decree No 18 of 2004 of the Minister of Informatics and Communications) mandated service providers to submit audited reports and other data in order for the NRA to calculate providers' contributions to the Fund and their compensation.</p> <p>After 2007, there were no contributions paid by service providers to the Fund.</p> <p>In 2010, a new funding system was introduced: the State took the place of the contributing service providers.</p>	<p>Universal service obligations include:</p> <ul style="list-style-type: none"> - Operation of one public pay phone per 1,000 inhabitants or in settlements with a population of less than 1,000. - National directory enquiry services. - Private connection to a telephone network at a designated place. 	<p>The Minister designates the universal service providers to ensure the coverage of the entire territory of the country with universal services, and the least distortion to competition, so that the universal service to be provided by the service provider able to do so the most efficiently and at the least net avoidable cost.</p> <p>Universal service providers (USPs) need to prove that they suffer an unfair burden and that they incur net avoidable costs related to the provision of universal services before they can receive compensation. The Minister decides whether the net avoidable costs claimed by the operators are legitimate and the NRA then decides on the amount of compensation due</p>	N/A	<p>Not publicly available. Based on the last 2011 annual report of the Fund, the sources of the Fund amounted to HUF 58,095,323 (USD 260,000).</p>	<p>Operational. Low activity. From 2004 to 2007, USPs applied for compensation but their requests were refused, as net avoidable costs were not substantiated. In 2010, the State took the place of the contributing service providers</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
					<p>to the providers of universal services.</p> <p>After 2007, the operation of the Fund was aimed primarily at the settlement of legal disputes in progress. Compensations have been paid based on the judgments passed in these disputes only. Under the new 2010 system, the additional costs of the universal service providers are reimbursed based on the unit costs submitted by the service providers and approved by the NRA. Compensations are paid for the present year on a quarterly basis.</p>			
5. Italy				Year Fund Established: 1999, 2003				

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
<p>The Universal Service Fund was established by the Decree of the President of the Republic no. 317/98 and by the Electronic Communications Code (ECC – Legislative Decree 259 of August 1, 2003).</p> <p>The details of calculation of the net cost of the provision of the US are contained in the EC Code (Annex 11) and in the relevant decisions taken by the NRA, namely, Decision no. 1/2008.</p>	<p>The fund is managed by the Ministry of Communication. The Communications Regulatory Authority, AGCOM, controls the amount of the net cost of universal service and defines contributions to universal service supply.</p>	<p>Decisions subject to judicial review.</p>	<p>Contribution of 1% of revenue by all fixed and mobile operators (Telecom Italia, TIM, Sparkle, Vodafone, Wind) collected on an annual basis.</p> <p>Providers of value added services, data transmission services, Internet providers, providers of private networks and providers of services to closed user groups are excluded from contribution to the fund.</p>	<p>Universal service obligations include:</p> <ul style="list-style-type: none"> - Access to a fixed location (unprofitable areas); - Payphones (unprofitable payphones); - Directories and information service; - Free routing of emergency calls; - Special provisions for disabled users; - Special rates for low income users. <p>Provision of a quality telephone service to everyone at an affordable price.</p>	<p>The Ministry for Economic Development is responsible for the allocation of funds.</p> <p>Operators submit the amount of their net cost of the provision of USO (revenues foregone minus certain avoidable costs less the indirect benefits) on an annual basis.</p>	N/A	<p>Based on a court decision, amounts to be contributed between 1999 – 2003 will be released once amounts for 2004 – 2010 are audited by independent external auditor.</p> <p>Available information for year 2003: EUR 41 M</p>	<p>Operational Low Activity - subject to legal delays. There have been long lasting litigations between Telecom Italia and the other contributors regarding the financing of the USF who all appealed against decisions of AGCOM at the Administrative Court.</p>
6. Poland				Year Fund Established: 2006				
<p>Telecommunication s Act of 2004.</p>	<p>Universal Service Fund administered by the regulator, Office of Electronic Communications (UKE).</p>	<p>Certain decisions of UKE subject to judicial review.</p>	<p>Levy not greater than 1% of operator's net annual revenues for operators earning over EUR 2 M.</p> <p>The President of the NRA determines, by means of an administrative decision, the amount of the subsidy, the</p>	<p>Universal service obligations between 2006 and 2011 included:</p> <ul style="list-style-type: none"> - Connection of single network termination point at a subscriber's main location (excluding ISDN); - Maintaining the subscriber line with 	<p>Funds are paid to operators who are required to meet universal service requirements.</p> <p>Subsidy is paid based on the net cost of service provision as specified by an ordinance of the</p>	N/A	<p>2006 – 2009: total amount of subsidy awarded to TP was PLN 66,994,345 (USD 19.5M), 2010: PLN 55 102 375 (USD 16.1M) Amounts for 2011 have not</p>	<p>Operational Low activity; subject to legal delays. Under the decisions of the President of UKE, Telekomunikacja Polska SA (TP) provided</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
			<p>telecommunications undertakings obliged to finance the subsidy and the proportion of their contribution to the subsidy (proportionally to the amount of this undertaking's revenue from telecommunications activities in a given calendar year).</p> <p>Telecommunications undertakings, which have revenue from telecommunications activities higher than PLN 4M (USD 1.2M) in the calendar year for which the universal service subsidy is due shall contribute to the subsidy.</p>	<p>a network termination point;</p> <p>- National and international calls including to mobile networks and the internet as well as fax and data transmission;</p> <p>- Provision of directory enquiries and directories;</p> <p>- Provision of facilities for the disabled;</p> <p>- Provision of phone services via public pay phones</p> <p>The scope of the USO is stipulated by law.</p> <p>The Minister for Communications shall specify, by an ordinance, detailed requirements concerning the provision of universal service.</p>	<p>Minister for Communications.</p> <p>A designated undertaking may submit a request for the subsidy within 6 months of the end of a calendar.</p> <p>The President of NRA, within 60 days of the request, shall verify the net cost and shall grant a specified amount of the subsidy or refuse to grant it in case it is established that the net cost is not a justified burden for the designated undertaking.</p>		<p>been applied for by TP yet.</p>	<p>universal service in Poland between 8 May 2006 - 8 May 2011. After 8 May 2011, TP is no longer obliged to provide universal service, pending the adoption of amendments to the Telecommunications Act proposed by the President of the UKE.</p> <p>The Provincial Administrative Court refused that TP to be granted compensation in 2009 on procedural grounds.</p> <p>UKE in 2011 reached the conclusion that the existing model of Universal Service provision is ineffective and recommended a new set of guidelines.</p>
7. Romania				Year Fund Established: USO funding mechanism in place since 2004.				

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
<p>Government Emergency Ordinance no. 79/2002 on the general regulatory framework for communications, approved, with amendments and completions, by Law no. 591/2002.</p> <p>Decision on the Implementation of Universal Service in the Field of Electronic Communications 1074/EN/2004 issued July 6, 2004.</p> <p>National Strategy on the Universal Service implementation in the electronic communications sector, approved by Order of MCSI no.461/2009.</p> <p>The decisions were replaced by Decision no.7/2011 on the Universal Service implementation in the electronic communications sector.</p>	<p>Universal Service Fund administered by the regulator National Authority for Management and Regulation in Communications of Romania (ANCOM).</p>	<p>Decisions subject to judicial review.</p>	<p>0.398% of annual revenue from all providers of public electronic communications networks with revenue of at least EUR 3M (2006).</p> <p>The annual amount paid by each operator was not to exceed EUR 2M for 2005 and EUR 3M for 2006.</p> <p>In 2007 and 2008, the Romanian NRA, ANCOM, decided not to collect the contributions.</p>	<p>Universal service obligations include:</p> <ul style="list-style-type: none"> - Provision of access to the public telephone network, at a fixed location; - Directory enquiry services and making available of directories of subscribers; - Access to public pay telephones. <p>The fund finances the national tele-centres programme. The minimum duration for the functioning of the tele-centres is three years.</p>	<p>Universal service providers are designated for each village by a public tender procedure to install tele-centres with phone, fax and Internet services. The tender starts from a level of subsidy estimated as being sufficient to cover the net cost. Any provider of public electronic communications networks is allowed to bid, irrespective of the technology used. The provider submitting the lowest bid for a subsidy wins the tender.</p> <p>ANCOM makes a decision, upon request of the universal service provider concerned, to grant subsidies.</p>	N/A	<p>No contributions were collected in 2007 or 2008.</p>	<p>Operational. Low activity.</p> <p>By the end of 2008, 633 tele-centres had been established.</p> <p>The resources of the Universal Service Fund have been allocated on the following basis: 45% of funds for financing tele-centres, 35% of funds for subsidizing low income families to enable access to the fixed network and 20% of funds for financing public phones and providing accessible directory services.</p> <p>Short term objective: increasing availability of community access to public telephone network at a fixed location.</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
								Long term objective: countrywide availability of individual access to PTN at a fixed location. Aim: inclusion of broadband Internet connection in USO and 100% coverage by 2015.
8. Russian Federation				Year Fund Established: 2005				
<p>The 2003 Law on Communication introduced rules relating to universal service.</p> <p>Universal service is also regulated by five Government Resolutions adopted in April 2005:</p> <ul style="list-style-type: none"> - On the measures for organizing universal network communications service provision; - On establishing the rules for state regulation of tariffs for universal communication 	Universal Service Fund administered by the regulator, the Federal Communication Agency (FCA).	The Government	1.2% of annual revenue from all fixed and mobile operators (not including revenue from interconnection and routing).	<p>Universal Service includes:</p> <ul style="list-style-type: none"> Telephone communications services, including the use of public phone booths; Data transfer services; and Internet access services through public access points. <p>Initially, payphones in unserved regions.</p> <p>The procedure, tariffs and the starting time for provision of universal services</p>	<p>Funds distributed through competitive tender process conducted on a municipal or regional basis under the authority of the Ministry for Communications and Informatisation.</p> <p>Fund reimburses the losses incurred by universal service providers.</p> <p>The prices charged for universal service are regulated.</p>	N/A	In June 2009, the FCA announced its projected 2009 fund contributions to be USD 335M.	<p>Active. The FCA expected 150,000 payphones and 20,000 public internet access points to be installed under the universal service programme by the end of 2009.</p> <p>Regional Svyazinvest companies were among the winners for telephony services. The Russian Postal</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
<p>services;</p> <ul style="list-style-type: none"> - On establishing the rules for reimbursing the losses incurred by universal service providers; - On establishing the rules for the tendering process for the right to provide universal services; - On establishing the rules for accumulating and spending the resources of the universal service fund. <p>Order on Cost Accounting covers costs related to the provision of universal communications services.</p>				<p>are determined by the Government based on a report from the RosSvyazNadzor considering:</p> <ul style="list-style-type: none"> - The time it takes for a user to access a phone booth, without using any means of transportation, should not exceed one hour; - Each settlement should have at least one phone booth for free emergency services; - All settlements with over five hundred people should have at least one public access point providing access to the Internet. 				Service has won a significant number of PIAP tenders. Others were won by local and interregional ISPs.
9. Ukraine				Year Fund Established: Discussion on establishing it still in progress.				
No legislation in place.	No name yet. No dedicated staff as yet.	N/A	Planned 3% levy on all operators' revenues.	Planned focus appears to be on Broadband at this stage.	N/A	N/A	N/A	Pre-development, exploratory stage.

Notes:

1. Indicates the legal/regulatory mechanism used to establish the Fund (e.g., embedded in telecom law/ICT bill, separate regulatory framework, etc.)
2. Specific structure for the Fund (e.g., trust, escrow account) and how the Fund is operated (e.g., by regulator, separate USF body, regional regulatory body, etc.)
3. The oversight process, if any, for this Fund (e.g., steering committee, board, etc.)
4. a). Mechanism for collecting the funds (e.g., operator contribution, proceeds from licence payments, etc.) and b) the amount of the contribution (e.g., fixed amount, percentage of revenues, etc.); whether the funds collected on a monthly, quarterly, bi-annual, annual basis.
5. a) The services that can be provided using the USF – e.g., fixed, mobile, broadband, etc.; b) whether the USF may be used for anything other than telecom (e.g., purchase of computers, tele-medicine, schools, etc.).
6. The following elements are addressed: a) How the funds are allocated; b) entities having access to the funds (e.g., direct distribution or competitive process); c) party responsible for defining what projects will be carried out; d) parties responsible for developing and/or presenting project proposals; e) project implementation procedures.
7. Indicates the degree (if any) to which industry is allowed to determine the use and application of the funds (e.g., consultative process)
8. Estimated or reported amounts in the Fund as of YE 2010; where not available, most recent year in which information was available is stated
9. Fund activity to date is categorized as follows: a) inactive: no known activity to date; b) **limited activity** (less than 5 applications of the Fund); c) **moderate activity** (6 to 15 applications of the Fund); d) **active** (more than 15 applications of the Fund)

1.6.4 Latin America

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
1. Argentina				Year Fund Established: On 2000 the Fund was legally established but it did not become operative till 2009				
Resolution 18.971: in July 1999 the Ministry of Communications approved the creation of the General Regulations of Universal Service, to govern the administrative, economic and legal body implementing the USF, which is aimed at promoting equal opportunity of access to telecommunications services to all inhabitants of Argentina. The 11 th Article of the RGSU established the Consejo de Administración, whose President was appointed by the Ministry and had representation from all sectors involved in the provision of services. The law also established the way the Fondo	Trust Fund administered by SeCom.	Until 2008, Fund was directed by Administrative Board (Consejo de Administración) whose President was appointed by the Ministry of Economy. Under Decree 558/08, a new system is created with SeCom (Secretaría de Comunicaciones) taking charge under the Ministry of Federal Planning, Public Investments and Services. The 10 SeComm members are selected by various levels of government, operators and consumers	1% of all operators' gross revenues – Argentine operators can contribute either by paying 1% of revenues to the fund or by proving that they are installing service in underserved areas	Until 2008, the objective of the funds was to provide basic services (long distance access in the many areas without it, public telephone access to everyone, programmes to help education, health (integration of disadvantaged population) and cultural developments. Since Decree 558/08, the focal point is to expand the telecommunications services to all underserved areas.	Public open bidding process.	Telecommunications law and subsequent regulations and decrees do not legislate regarding industry participation in the fund allocation. SeCom can invite as much participation at any level of the programme as it considers pertinent for the successful achievement of its goals.	Total funds as of 2011 are calculated to be around USD 220M . Estimated fund contributions in 2011 totalling approx. USD 60M .	Limited activity due to bureaucratic and political issues.

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
Fiduciario del Servicio Universal will obtain its funds. Decree 558 of April 2008 modifications were introduced to the RGSU: a) definition of Universal Services; b) management of the Fund; c) services subsidized by the Fund and d) programmes to be implemented.								
2. Bolivia				Year Fund Established: Began in 1996, but changed completely when the new Constitution was approved in 2009				
Telecommunication Law Nr. 1632 approved in July 1996 was replaced by Law Nr. 164 of August 2011, which followed the new constitutional precepts established in 2009	PRONTIS (Programa Nacional de Telecomunicaciones de Inclusion Social) is the new programme developing the policies and procedures of universal access funds. The Unidad de Ejecución de Proyectos will manage the programme and will be created by a new regulation.	PRONTIS is under the supervision and control of the Vice Minister of Telecommunications, a division of the Ministry of Public Work, Services and Housing.	PRONTIS will receive 2% of all gross income of operators and industry suppliers (telephone cooperatives, private companies, owners of private networks, and others) from January 2012 on. Other sources of USF funding are from licences, payment of penalties, frequency fees, etc. External aid and international cooperation are	PRONTIS will be used for investment projects in telecommunication s (infrastructure and networks) and information & communication technologies; the development of content and applications intended for e-government, tele-education, tele-health & productive development for the achievement	Funds will be allocated by the Vice Minister of Telecommunications; who will sign contracts for telecommunication s projects and ICT projects (social inclusion) with telecommunication s companies with majority state participation. If these companies cannot implement such projects, the Vice Minister will conduct a public bidding process	Funding should be allocated in rural areas and areas of social interest for investment in telecommunication s (infrastructure and networks) and ICT projects.	Amounts previously collected by SITTEL and not spent at 2009 were folded in the 2010 federal budget to be applied to social services accounts. The new funds will be collected for the first time in December 2012.	Inactive.

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
			other sources of funding.	of universal access in rural and social interest areas.	amongst incumbent operators in Bolivia.			
3. Brazil				Year Fund Established: 2000				
Telecommunications Law Nr. 9.472 on July 1997 opened the telecomm market in Brazil. Universal Access obligations are defined by Presidential Decree 2.592 on May 1998, but it is Law Nr. 9.998 in August 2000 which established Fundo de Universalizacão do Serviço de Telecomunicações (FUST) and ANATEL, as the Agency in charge of administering FUST. The agency is independent and financially autonomous, not hierarchically subordinate to any government agency, and its decisions can be contested only through the Justice system.	ANATEL is governed by a Board of Directors formed by 5 members selected by the President of Brazil and approved by the Federal Senate. The Board reaches all decision by majority. All members must be Brazilian citizens and possess a University degree, and be recognized as experts in the telecommunications sector. Members have a five year mandate, with sequential changes so as not to lose the integrity and coherence of the Agency.	Ministry of Communications defines policy, direction and priorities of the Fund. Anatel (Agência Nacional de Telecomunicações) implements projects and proposes programmes to the Ministry.	1% of service providers' gross operational revenues earned from the provision of telecom services.	Fixed line services only. Efforts have been underway since 2010 to modify the legislation to permit deployment of broadband but, to date, this legislation has not been approved.	So far, FUST has collected a substantial amount of money but due to conflicting legal interpretations regarding the use of the fund's resources, very limited funds have been disbursed	There is no provision in the law regarding participation of the industry regarding funds allocations, but the Ministry of Communications has expressed its interest in establishing consultation regarding each of the projects the FUST will undertake.	Reported contributions for 2010 are: USD 485M Reported amount in the Fund as of 2010: USD 4.7B	Inactive due to ongoing legal disputes and inability to allocate project funds.

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
4. Chile				Year Fund Established: 1982				
Telecommunications Law Nr. 18.168 of October 1982 and subsequent modifications by Decrees in 1987 and 1994, established the Fondo de Desarrollo de las Telecomunicaciones (FDT)	The FDT is administered by a Council appointed by the President of the Republic. The Council decides on the annual programme, prioritizes projects eligible for subsidy, award the funds through competitive tender and publishes an annual report. Members of the Council: Minister of Transportation and Telecommunications, who presides over it; Minister of Economy or a delegate, Minister of Planning or delegate, and three professionals in the telecommunications area directly assigned by the President of the Republic.	Fondo de Desarrollo de las Telecomunicaciones (FDT) with the Subsecretaria de Telecomunicaciones as the regulatory agency.	Government budget	Original goal was to provide public telephone service to about 6,000 underserved locales. This target was achieved in 1999. Funds were then directed to support tele-centre projects, backbone broadband and mobile network expansion. In 2009, the fund began supporting rural broadband expansion, Inverca Telecom won the contract to extend broadband to an additional 3 million rural residents valued at USD 57 M. Entel was granted USD 1.4 M to extend mobile services to underserved, remote areas.	The subsidy provided by the Fund is paid out in two instalments, the first when the project is ready for service and the second one year later. In the meantime operators must finance the whole cost of their projects plus guarantees (2% or 3% of the overall value) out of their own resources.	Telecom industries have no input in suggesting projects, but can provide input regarding best practices	2011 FDT budget of approximately USD 18.5M. (9.3B Chilean pesos) Amount is given in the national budget and must be spent in the year it is allocated. If not spent in full, the money must be returned to the federal government.	Active See deep dive Section 4.

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
5. Colombia				Year Fund Established: First established on 1994 as Fondo de Telecomunicaciones. Replaced in 2009 by Fondo de las Tecnologías de la Información y las Comunicaciones - FTIC				
Telecommunications Law Nr.72 on 1989 opened the market in Colombia. Law Nr. 142 established the Fondo de Comunicaciones (FCM) in 1994 with the specific goal of investing in social telephone programmes in low income urban and rural areas. Law Nr. 1342 in 2009 expanded the goals and established the governance of the Fund.	The Fund is represented, managed and administered by the Minister of Communications, who is the Director of the Fund. The General Secretary of the Ministry is also the Secretary of the Fund. The Treasurer at the Ministry is also Treasurer for the Fund. The director can assign other members at his sole discretion.	Law 1341 approved in 2009, created the Unidad Administrativa Especial, a legal entity directed to administer the FTIC under the direction of the Ministry of Communications.	All fixed and mobile operators contribute 5% of gross revenues of national and international long distance and mobile services, and a percentage of net revenues from fixed telephony, VAS and trunking.	The first goals were related to access to services – telephony and internet – in rural areas. in accordance with Law 1341, the funds are to be directed to support all programmes and projects allowing universal access to all information technologies and communications for all residents of the country.	Competitive bidding scheme for private operators, in which local entrepreneurs in each community will operate the tele-centres.	The Ministry manages all aspects of the planning, bidding and adjudication of the projects. There have been very few cases where the Unit has required industry input.	Approx. USD 384.2M was received in contributions in 2011.	Active See deep dive in Section 4.
6. Dominican Republic				Year Fund Established: 1998				
General Telecommunications Law Nr.153 in May 1998 created an independent, administratively decentralized regulator, Instituto Dominicano de las Telecomunicaciones	Independent unit created by the Telecommunications law and subsequently regulated.	Fondo de Desarrollo de las Telecomunicaciones (FDT) with INDOTEL as the regulatory agency. INDOTEL is headed by a five member Executive Council appointed	Each operator of public telecommunications services contributes 2% of its gross income. 40% of the Fund is used to finance regulatory activities of INDOTEL and 60%	Objectives of the Fund: Provide access to broadband services for all Dominicans. Achieve an internet penetration of 40% of the	In the Dominican Republic, there is a two year planning cycle for UAF financed projects. Once projects are approved by INDOTEL, the execution can begin, the first step	Consultations with operators are conducted regularly by INDOTEL.	Approx. USD 18.5M in the Fund as per INDOTEL audited financial report for 2007. Operator contributions in 2010 totalled RD \$ 1.1B (approx. USD 30.1M) and RD\$	Active See deep dive in Section 4.

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
es (INDOTEL) which has the policy setting and regulatory responsibilities for the sector. The same law established the Fondo de Desarrollo de las Telecomunicaciones		every four years by the Executive Branch of the government; The President of the Executive Council has the rank of Secretary of State.	to finance development projects which are eligible for funding.	population Achieve a penetration rate of personal computer users of at least 50% of the population. Rural Broadband Connectivity Project.	being the preparation of a bidding document explaining the purpose, objectives and characteristics, as well as its technical specifications and terms of reference of the bidding process. Subsidies are paid as follows: 20% at contract signing; 40% on completion of installations; and 40% in six month instalments over a period of five years.		1.2B (approx. USD 29.9M) in 2011. The remaining Fund balance as of YE2010 was RD\$ 460.5M or approximately USD 12.3 M .	
7. Ecuador				Year Fund Established: 2001				
Special Telecommunications Law Nr. 2000-4 and Executive Decree Nr.1790 on August 2001, fully liberalized the market and placed universal access obligations on fixed lines and mobile operators for all operators through Fondo para el Desarrollo de las Telecomunicaciones	The Board of Directors of FODETEL is formed by the President of CONATEL, who presides over the Board, the Secretary of the Ministry of Telecommunications, and the Director of Planning of the Presidency of the Republic.	Ministry of Telecommunications through Dirección de Acceso Universal	1% operator levy on fixed line operators. Funds can also be provided by the Ministry of Telecommunications and the Ministry of Finance. Also, the Fund may receive from time to time allocations from the government for projects considered top priorities.	The projects focus on the creation of community tele-centre and educational centres. The newest priority is internet infrastructure and systems.	Disbursement of the funds will be consider as part of the agreement signed by the selected bidder and depending of the project and total value of the service/equipment required.	Allows input and requests for funds from the telecom industries working in the country to provide the services the Fund covers.	From September 2000 until May 2008, FODETEL had received USD 2.5M , but there are some unpaid levies from operators for an amount close to USD 36M . Estimates of contributions vary, with CEPAL indicating that funding amount available as of YE 2009 was USD 3.6M	Active. All projects are part of the National Investment Plan of the government (PIA) and of the Annual Operative Plan (POA), and they are geared to the provision of internet connection to schools. The goal is to achieve 100% connectivity in urban schools, and 50% in rural schools. The cost

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
es en Areas Rurales y Urbanos Marginales (FODETEL).							However, operator reports indicate contributions in 2011 at more than USD 4.4M²⁹ . The government is in the process of regulating the way the money has been levied.	of this project is estimated at USD 4.6M.
8. Guatemala				Year Fund Established: 1996				
General Telecommunication Law in 1996 opened the market and established the guidelines for the establishment of Fondo para el Desarrollo de la Telefonía (FONDETEL)	FONDETEL Guatemala was created as an autonomous agency by the General Telecommunications Law and the Ministerial Decree 214 in 1998.	Ministry of Communications operating through the Consejo de Administración, formed by four members: two selected by the President of Guatemala and the other two by the Ministry of Communications, from among a group of public employees working in the telecommunication sector.	Transfers from government and 70% of the amount collected through spectrum auction plus World Bank funding	Funds to finance telephony projects awarded through auction were the main goal till 2006 but presently it has moved towards the development of community internet access	Funds are giving to winning bidder when the work has been completed for capital projects and biannually for operational type projects.	Laws and subsequent regulations do not consider input from the industry as necessary, but since 2006, Fondetel has been including more private input into the projects funded.	As per the budget assignment to FONDETEL for the year 2012, the Fund was to receive USD 7.2 M in quarterly instalments. The government's 2010 financial report indicated that the Fund had been allocated almost GTQ 7.0 (approx. USD 8.7M) with disbursement in that year of GTQ 6.7 (approximately USD 8.3M)	Active

²⁹ Estimated based on operator response to confidential 2012 GSMA survey

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
9. Nicaragua				Year Fund Established: 2003				
Executive Decree 84-2003 on March 2003 established Fondo de Inversion de Telecomunicaciones (FITEL) The FITEL was re-established, this time under the umbrella of TELCOR by Executive Decree Nr.5 on January 2006	FITEL is a financial mechanism embedded in TELCOR to help to expand and better the telecommunications system in Nicaragua, making is accessible to all.	TELCOR - Instituto Nicaragüense de Telecomunicaciones y Correos - is the regulatory agency with Fund oversight responsibility..	2% operator levy	Public telephones in rural areas. Internet access for public schools.	Funds are awarded through public tender.	One of the functions given to FITEL is to work with the private sector in Nicaragua to achieve the goals proposed from the Government to make telephony and internet accessible to all citizens	N.A	Limited activity
10. Paraguay				Year Fund Established: 1998				
Telecommunications Law Nr. 642 from December 1995 established CONATEL, the legal entity in charge of all telecom projects and programmes in Paraguay.	The universal access fund is managed by CONATEL	CONATEL - Comisión Nacional de Telecomunicaciones - is the regulatory agency carrying out administrative, technical, planning, programming, control, oversight and verification operations in compliance with all applicable rules, regulations and government policies.	20% of operators' corporate taxes.	Projects supported include payphones, internet access for schools and nation-wide 911 emergency calling systems. The government launched the National Telecommunications Plan (PNT) for the period 2010-2015. Through PNT, CONATEL aims to reach 50% of homes with broadband by	Public bidding. The first part of the subsidy is paid within 30 days of signing the contract with the Fund. The rest is paid once it has been confirmed by the Fund administrator, CONATEL, that all installations are operating and services are being provided.	Operators have been invited to provide plans to accomplish the goals of "Paraguay conectado". Most of the funds raised have already been awarded.	Investment will be around USD 150M per year. CONATEL has been investing approx. USD 100M since 2006 in telecom expansion.	Active. Plan "Paraguay Conectado" is being supported by the fund at this time. From Mar. 2009 until Aug. 2013, operators will provide access to telephone services and internet to all municipalities in the country. Conatel has granted mobile operator Tigo the licence for universal service provision. Tigo will receive subsidies

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
				2015 and deploy 1,000 km of urban fibre optic cable per year.				of PYG 5B from the USF to deploy mobile telephony in areas currently not covered by the network of Paraguay's state-owned operator incumbent Copaco. Over the next 6 months, Tigo will have to deploy mobile phone services in the dept. of San Pedro. Overall subsidies for this area are PYG 1.15B. Additionally, subsidies for the department of Concepcion exceed PYG 2.3B, while the Amambay region has been allocated PYG 1.12B and the Canindeyu area will receive up to PYG 377M in universal subsidies.
11. Peru				Year Fund Established: 1993				
Telecommunications Law of 1993 and subsequent Decrees and	Since 2007, FITELE Peru is an independent agency, managing	Organismo Supervisor de Inversión Privada en	1% of all telecom and CATV operators' gross revenues;	Funds are allocated towards services as telephone, fax and	After MTC approval, FITELE allocates funds in three ways:	Projects presented by the different levels of government are	2010 operator contributions plus other sources: USD 50M	Active 2010 expenditures were USD 27M or

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
Regulations from 1998, 1999, 2002 and 2004 opened the market, set the rules for all operators and established the Fondo de Inversion de Telecomunicaciones (FITEL)	its own funds. FITEL is defined as a Technical Secretariat and is formed by the Technical Secretary appointed by the Council of Ministries and a group of six professional appointed by the Ministry of Transportation and Communications.	Telecomunicaciones was the regulatory agency until Law 28900 in 2007 transformed FITEL into an independent legal entity under the supervision of the Ministry of Transportation and Communications.	percentage of all amounts collected by the Ministry for usage of the radio electric spectrum of the telecommunications public services and will be determined every fiscal year by the Ministry, but may never be less than 20%; funds given to FITEL through the federal budget and all amounts FITEL itself can generate as a result of its functions.	data, and free emergency calls in priority locations as determined by the government: rural towns with more than 400 inhabitants, district capitals and towns in high social interest areas.	Public bidding Auction by invitation Direct award. The payout scheme depends on the particular project and contract. Generally subsidies are paid out over a 4-5 year period for projects costing more than USD 1M. For lesser amounts, the payout is agreed in the contract signed with the Fund.	approved by FITEL and a competitive bidding process is open. Since 2007, third party projects presented in accordance with FITEL's plan can be also considered for funding, if they have community or municipality's endorsement.	<p>Estimated total contributions from 1996 – 2010: USD 360M.</p> <p>However, from 1998 to 2010 FITEL committed only USD 158M</p> <p>On November 2011, the Ministry of Economy and Finance reported the amount received by FITEL for all contributions was nuevos soles \$ 777.0 777.0 M (approx. USD 287.2M) and the amount spent in the same period was nuevos soles \$ 117,314,376.68. (approx. USD 43.0M)</p> <p>The Ministry's report is not consistent with other amounts reported by FITEL.</p>	<p>USD 54M from 2007 through 2010.</p> <p>See deep dive in Section 4.</p>

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
12. Venezuela				Year Fund Established: 2000				
Telecommunication Law Nr. 36.970 on July 2000 established CONATEL which is mandated to establish the Fondo de Servicio Universal (FSU)	FSU is a dependent Unit with separate assets from CONATEL.	A Board consisting of the head of the telecom regulator, representatives from three ministries and a representative of contributing operators.	1% levy on all operators' revenues.	Installation of telecentres and connecting agricultural estates and government offices.	Public bidding is the main way of granting subsidies. The Fund operator defines the payout schedule as part of its bid offer.	One of the members of the FSU Board is chosen from the operators in the country, allowing then to have a voice in the planning and executions of the Funds.	CONATEL's Annual Report 2010 established that the FSU received the amount of Bs. 294.3M from levies plus Bs. 103.8M from other grants. Total: Bs. 398.1M (Approx. USD 92.6M)	Active. In 2010, the FSU spent Bs. 293.6M (approx. USD 68.2M). Projects covered: TELCEL, expansion of Broadband, extension of internet access in rural areas, and other expenses for furnishing and equipment for telecentres in rural areas.

Notes:

1. Indicates the legal/regulatory mechanism used to establish the Fund (e.g., embedded in telecom law/ICT bill, separate regulatory framework, etc.)
2. Specific structure for the Fund (e.g., trust, escrow account) and how the Fund is operated (e.g., by regulator, separate USF body, regional regulatory body, etc.)
3. The oversight process, if any, for this Fund (e.g., steering committee, board, etc.)
4. a). Mechanism for collecting the funds (e.g., operator contribution, proceeds from licence payments, etc.) and b) the amount of the contribution (e.g., fixed amount, percentage of revenues, etc.); whether the funds collected on a monthly, quarterly, bi-annual, annual basis.
5. a) The services that can be provided using the USF – e.g., fixed, mobile, broadband, etc.; b) whether the USF may be used for anything other than telecom (e.g., purchase of computers, tele-medicine, schools, etc.).
6. The following elements are addressed: a) How the funds are allocated; b) entities having access to the funds (e.g., direct distribution or competitive process); c) party responsible for defining what projects will be carried out; d) parties responsible for developing and/or presenting project proposals; e) project implementation procedures.
7. Indicates the degree (if any) to which industry is allowed to determine the use and application of the funds (e.g., consultative process)
8. Estimated or reported amounts in the Fund as of YE 2010; where not available, most recent year is stated
9. Fund activity to date is categorized as follows: a) inactive: no known activity to date; b) **limited activity** (less than 5 applications of the fund); c) **moderate activity** (6 to 15 applications of the Fund); d) **active** (more than 15 applications of the fund)

1.6.5 Middle East

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
1. Egypt				Year Fund Established: 2003				
Telecom Law of 2002 places the responsibility of establishing and managing a Universal Service Fund on TRA; replaced by NTRA in 2003.	Compensation to those operators that are awarded US projects	The NTRA sets regulations for provision of telecom services in remote areas or areas where service provision is not economically feasible. The NTRA monitors the implementation of US projects to ensure their compatibility with timeframes as well as with technical and economic specifications.	Derived from surpluses from the NTRA budget.	First stage: basic telecoms services to low-income areas that are not economically - feasible. Priority to the more populated of such areas with a minimum of 300 inhabitants. Second Stage: Increase average penetration rate in each governorate to 20% Third Stage: Narrow the digital divide between people accessing tele-services services on one hand and people deprived of these services, by means of gradual provision of Internet and data services to each region according to the administrative division of governorate. Fourth Stage: Reaching a tele-density of 100%	NTRA administers <ul style="list-style-type: none"> • Technical studies : data collection and classification • RFP • Tender for every pre-selected area • Supervision of the projects • Periodic evaluation 	None	N/A	Inactive No published reports of any activity.

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
				when measured by the number of fixed phone lines per family				
2. Oman				Year Fund Established: 2009				
The provision of universal service is enshrined in the Telecommunications Regulatory Act issued by Royal Decree No. 30/2002. In accordance with Article 38 of the Act, the Minister of Transport and Communications is required to consult with the Council of Ministers in order to: 1. Expand the telecom services and networks in defined areas according to their geographical location, or number of inhabitants; and to establish public telecommunication centres including the installation of public payphones	Compensation / subsidies to operators providing universal service	TRA A series of public consultations was carried out with the proposed structure and administration but the fund has yet to be formally established	Derived from annual licence royalty payments	Basic telephony via fixed or wireless Public phones Emergency call services Dial up internet Tele-centres Broadband Maritime services	TRA was to fund based on application or joint funding but	No formal fund or participation but the TRA consults with operators re potential projects.	N/A	No formal activity Recent rural broadband initiative announced

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
<p>in these areas</p> <p>2. Specify the basic public telecoms services which the licensee is obliged to provide to any requesting beneficiary at a reasonable price as decided by the Authority in the service areas</p> <p>3. Provide maritime telecommunication s services</p> <p>4. Provide telecommunication s services to persons with special needs</p> <p>TRA issued implementation policy in 2009 but has not yet been formally adopted.</p>								
3. Saudi Arabia				Established: Policy established 2006 ; Launched 2010				
The Universal Access and Universal Service Policy was approved on June 17, 2006 by the Ministry of	The USF is formed by three bodies: the Board of the Commission; the Executive Committee and the Administration.	The Communication and Information Technology Commission (CITC) is the Regulatory Agency.	The USF is financed primarily by the monies collected through the USF fee, 1% of the net revenues of the service	The USF is focused on financing new networks and/or services to provide universal access or universal services	Financial support from the USF is given as a one-time subsidy. The amount is determined by the USF as part of the	USF projects to be included in the Operating Plan can be designed by the Administration or can be proposed	Information not available as the funds is still in the process of establishing itself Estimated	Moderate activity Note: Because the fund is extremely new, it has not yet reached the level of 6 – 15 projects; however, the

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
Communication and Information Technology. Decision Nr. 165/1428 established the Universal Service Fund (USF). The fund became operational in 2010.	The Board is the governing body and supervises and provides direction to the Administration. The Executive Committee is responsible for following up on the USF activities and issuance of all USF decisions necessary to manage and execute its duties. The Administration is responsible for the day to day operation and administration of the funds.		providers designated by the Ministry. The fund also receives 'significant' amounts from the national budget.	to geographic areas that are in the commercially underserved zones of the Kingdom. The USF is required to prepare Programmes and Projects in accordance with the following: Programmes: Macro scale USF initiatives aimed at achieving one or more of the objectives given to the USF, typically over the course of several years and to be implemented in stages based on funding availability. Projects: Specific micro scale implementation activities related to each USF Programme. One or more projects can be implemented at the same time, as they may cover different areas, population and or service. The main goals:	competitive selection process. The amount is proposed by the Administration and included in the Operational Plan to be approved by the Board. The USF uses a competitive selection process to select USF providers. Payments may be disbursed in a lump sum or according to milestones established in the agreement signed with the provider. The USF may request a bid and/or performance guarantee from the parties participating in the competitive selection process.	by any other party interested in achieving the goals of the Funds. (Art.8 – Operating Plans of Decision 165/1428)	amounts collected in 2011 – USD 131M ³⁰	number of projects undertaken in the first two years indicates that the activity level will soon meet the 6 project level, hence the moderate activity designation. Fund reports that USD 131M was disbursed on projects in 2011

³⁰ ITU Regulatory Indicator Database 2012

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
				provision of fixed or mobile telephony as well as internet services to all locations with more than 100 inhabitants.				

Notes:

1. Indicates the legal/regulatory mechanism used to establish the Fund (e.g., embedded in telecom law/ICT bill, separate regulatory framework, etc.)
2. Specific structure for the Fund (e.g., trust, escrow account) and how the Fund is operated (e.g., by regulator, separate USF body, regional regulatory body, etc.)
3. The oversight process, if any, for this Fund (e.g., steering committee, board, etc.)
4. a). Mechanism for collecting the funds (e.g., operator contribution, proceeds from licence payments, etc.) and b) the amount of the contribution (e.g., fixed amount, percentage of revenues, etc.); whether the funds collected on a monthly, quarterly, bi-annual, annual basis.
5. a) The services that can be provided using the USF – e.g., fixed, mobile, broadband, etc.; b) whether the USF may be used for anything other than telecom (e.g., purchase of computers, tele-medicine, schools, etc.).
6. The following elements are addressed: a) How the funds are allocated; b) entities having access to the funds (e.g., direct distribution or competitive process); c) party responsible for defining what projects will be carried out; d) parties responsible for developing and/or presenting project proposals; e) project implementation procedures.
7. Indicates the degree (if any) to which industry is allowed to determine the use and application of the funds (e.g., consultative process)
8. Estimated or reported amounts in the Fund as of YE 2010; where not available, most recent year is stated
9. Fund activity to date is categorized as follows: a) inactive: no known activity to date; b) **limited activity** (less than 5 applications of the Fund); c) **moderate activity** (6 to 15 applications of the fund); d) **active** (more than 15 applications of the Fund)

1.6.6 North America

Underlying Framework for Fund (Note 1)	Overall Fund Structure and Operation (Note 2)	Governance (Note 3)	Contribution Type and Frequency (Note 4)	Services that Can be Provided via the Fund (Note 5)	Fund Allocation Process (Note 6)	Degree of Industry Participation in Fund Allocation (Note 7)	Estimated Fund Amount as of YE 2010 (Note 8)	Fund Performance to Date (Note 9)
1. Canada				Year Fund Established: 2001				
In June 1992, the CRTC issued Telecom Decision 92-12 which removed the federally regulated telephone companies' monopoly, as per the objectives of the Telecommunications Act introduced by the government earlier that year. In October 1999, the CRTC issued Telecom Decision 99-16 regarding the provision of telephone service to high-cost serving areas. In January 2001, the National Contribution Fund (NCF) was established.	The Canadian Portable Contribution Consortium Inc. (CPCC) is a telecommunication s industry consortium incorporated for the purpose of establishing and supervising the mechanisms to implement the portable contribution regime established by the CTRC. CCPC has designated Welch Fund Administration Services Inc. as the Administrator of the NCF until January 2015.	CRTC is the Regulatory Agency.	As per Decision 99-16, long distance service providers alone paid into the subsidy fund. On November 2000, the CRTC issued Decision 2000-745 changing the way the subsidy was to be provided. The new levy, initially set at 4.5% of net revenues of the previous year for 2001, was reduced to 1.4% on an interim basis in 2002, and adjusted annually thereafter. At the present time, phone companies pay 0.84% of their revenues to the National Contribution Fund.	Decision 99-16 set three goals to be achieved: 1) extend service to unserved areas; 2) upgrade service levels in underserved areas; and 3) ensure that existing levels of service do not erode under competition. The CRTC identified a basic level of service that all Canadians should have access to and took steps to ensure that, over time, this service would be available to all. Basic service includes: single line touch tone access, capability to access the internet at low speed without paying long distance charges; access to 911; voice relay services for the hearing impaired, directory assistance services; long distance services; and a copy of the local telephone directory.			Contributions received in 2011: CDN 154.9M – approx. USD 154.9M.	Active. Funds basically fully disbursed on an annual basis.

2. Mexico				Year Fund Established: 2002				
<p>Federal Telecommunications Law in 1995 created the Fondo de Cobertura Social de Telecomunicaciones (FCST) as a temporary Fund</p> <p>Although the possibility of creating a fund for universal service in telecommunication is contained in Article 50 of the Federal Telecommunications Act (1994), it was not until 2002 that FCST was created by the Federal Budget Decree on 2002 (Transitory Article 19), this Decree is issued by the legislative branch and states the federal budget for this year.</p>	<p>FCST (Fondo de cobertura social) is a trust fund which receives funds from the national budget.</p> <p>So far, the only funding that FCST has received is from the Federal Government, although the two trust agreements that are referred to list the possibility of receiving funds from private sources.</p>	<p>The FCST is managed by a technical committee through the Secretary of Transport and Communications. The Technical Committee is formed by 3 members of the Ministry of Transportation and Communications and two members selected from the operators in the telecom market.</p> <p>The Technical Committee of the FCST consists of representatives of 6 Secretaries of State (SCT, SHCP, SE, SEDESOL, SEP and SSA), chaired by the Secretary of Communications and Transport SCT and with the participation of two representatives owners and their respective alternates, Private Sector Telecommunications "proposed unanimously by all the chambers and industry associations." To date, the two private sector</p>	<p>Government's budget allocation.</p>	<p>Programmes to be funded: rural area telephone services, digital community centres (CCDs) as per needs referred by all levels of government units and public foundations. FCST can provide telephone and Internet to rural or underserved areas. There is another project of the Mexican Federal Government made directly through the Ministry of Communications and Transportation was called "e-Mexico" and now "Unit for Information and Knowledge Society" the Digital Community Centres dependent on this.</p>	<p>Funds are awarded via public tender. The last two projects awarded in 2007 to Telmex are still unfinished.</p> <p>Unfortunately, the lack of both political will and new programmes has resulted in a lack of activity by the Mexican authorities.</p>	<p>Two members of the Technical Committee which manages the FCST are appointed by the operators, giving the private sector a voice into the way the projects are selected and funded.</p>	<p>A 2012 OECD report states that Mexico has spent USD 98M on projects between 2002 and 2010 but no substantiating details are provided.</p> <p>Approximately USD 25.3M every 5 years must be spent in the time allowed or returned to the federal government.</p> <p>Once the 2007 Telmex projects are finished, it is expected that the rest of the money will be returned to the state.</p>	<p>Inactive</p> <p>There is some recent discussion of an SCT programme set up to subsidize up to a one thousand pesos (around USD 70) purchase of computers, there is no information at this time on the origin of the funds for this grant.</p>

		representatives are appointed by the National Chamber of Industry of Information Technologies by other associations like the Chamber of Industry of Radio and Television and National Association of Telecommunications.						
3. United States of America				Year Fund Established: 1997				
In 1996, US Congress passed the Telecommunications Act, which mandated the creation of a Universal Service Fund. In 1997, the United States Federal Communications Commission (FCC) created the Universal Service Fund (USF).	USAC has a 19 member Board of Directors representing the different interest groups affected and interested in universal services (e.g., regulatory and business sectors). Members are nominated by their respective interest group and approved by the Chairman of the FCC. Also has an Executive Team which manages the day to day operations, formed by experienced professionals with expertise in business, administration, accounting, and legal matters.	FCC designated the Universal Service Administrative Company (USAC) to manage the contribution of revenues and the distribution of funds from the USF. FCC is the regulatory agency.	All companies providing interstate and international telephone and VoIP services must contribute to the USF. Contributions are based on projected quarterly earnings reported to the USAC. Exemption: a company where reported revenues are such that the calculated contribution to the USF is less than USD 10,000.	As mandated by the Telecom Act: promote the availability of services at affordable rates. Increase access to advanced telecom services To make services accessible to all, including those in low income, rural, insular and high cost areas at a rate comparable to those charged in urban areas.	USF funds the High Cost, Lifeline, Rural Health Care and Schools and Libraries Programmes. Entities eligible for support from these programmes submit information to USAC for processing and evaluation, leading to disbursement of support to those approved for funding.	The industry is represented in the USAC.	USD 8.4B was contributed to the Fund in 2011 of which 8.1B was disbursed.	Active See deep dive in Section 4

	USAC functions and responsibilities include: administration of each of the programmes; billing contributors, collecting and disbursing universal service support; reporting quarterly to the FCC on disbursements.							
--	---	--	--	--	--	--	--	--

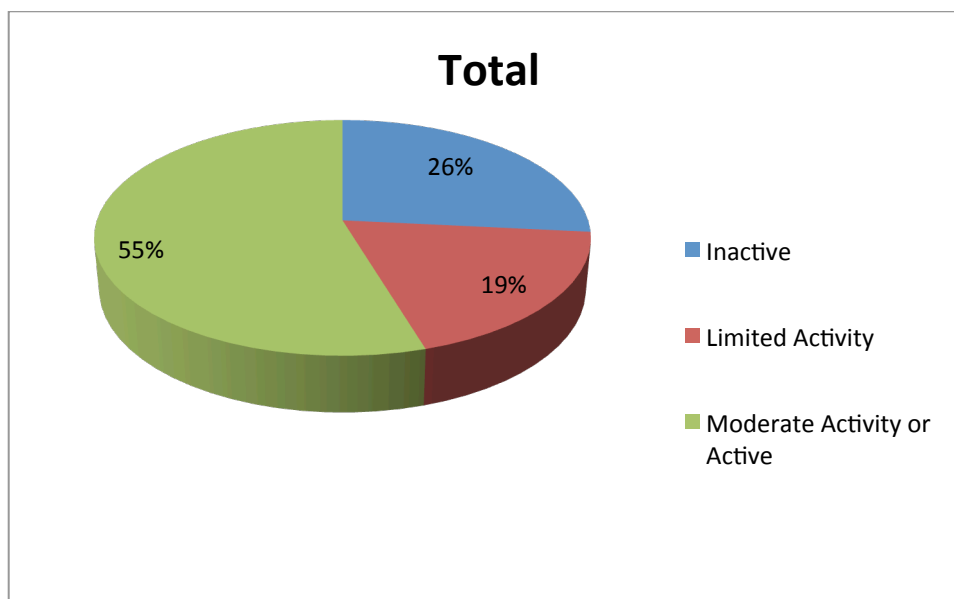
Notes:

1. Indicates the legal/regulatory mechanism used to establish the Fund (e.g., embedded in telecom law/ICT bill, separate regulatory framework, etc.)
2. Specific structure for the fund (e.g., trust, escrow account) and how the fund is operated (e.g., by regulator, separate USF body, regional regulatory body, etc.)
3. The oversight process, if any, for this Fund (e.g., steering committee, board, etc.)
4. a). Mechanism for collecting the funds (e.g., operator contribution, proceeds from licence payments, etc.) and b) the amount of the contribution (e.g., fixed amount, percentage of revenues, etc.); whether the funds collected on a monthly, quarterly, bi-annual, annual basis.
5. a) The services that can be provided using the USF – e.g., fixed, mobile, broadband, etc.; b) whether the USF may be used for anything other than telecom (e.g., purchase of computers, tele-medicine, schools, etc.).
6. The following elements are addressed: a) How the funds are allocated; b) entities having access to the funds (e.g., direct distribution or competitive process); c) party responsible for defining what projects will be carried out; d) parties responsible for developing and/or presenting project proposals; e) project implementation procedures.
7. Indicates the degree (if any) to which industry is allowed to determine the use and application of the funds (e.g., consultative process)
8. Estimated or reported amounts in the Fund as of YE 2010; where not available, most recent year in which information was available is stated
9. Fund activity to date is categorized as follows: a) inactive: no known activity to date; b) **limited activity** (less than 5 applications of the Fund); c) **moderate activity** (6 to 15 applications of the Fund); d) **active** (more than 15 applications of the Fund)

1.7 Recap of Fund Information Tables

1.7.1 Comments and Observations regarding the USF Overview

Based on the information gathered about the 64 funds addressed in this study (as just presented in the previous section), the following graphic and table summarize USF activity levels and general characteristics on a regional level.



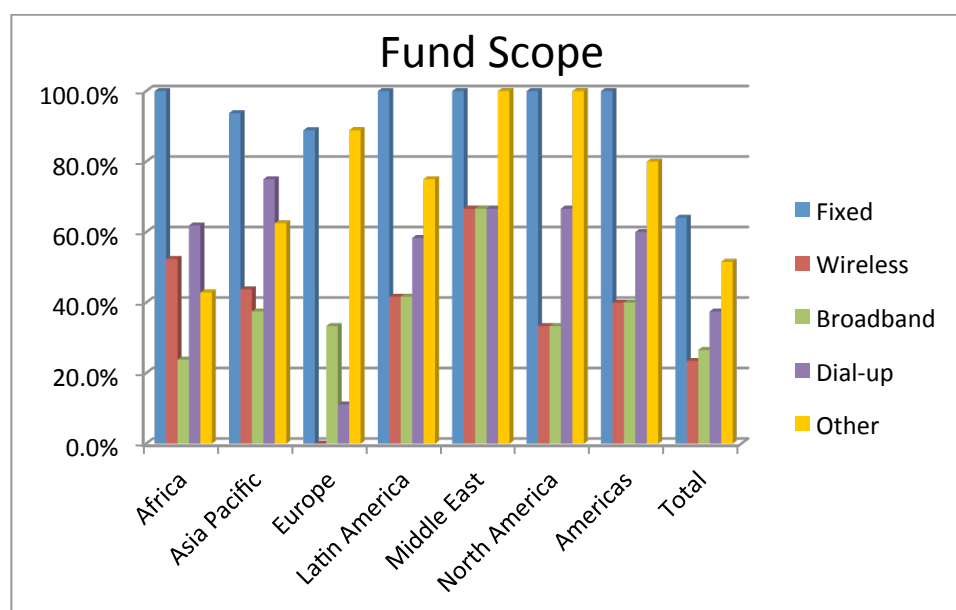
Region	# Funds Surveyed	Inactive	Limited Activity	Moderate Activity or Active	Fund covers fixed line	Fund covers wireless	Fund covers broadband	Fund covers dial up Internet	Fund covers other services
Africa	21	7	5	9	21	11	4	13	9
Asia Pacific	16 ³¹	4	0	12	15	7	6	13	11
Europe	9 ³²	2	4	3	8	0	3	1	8
Latin America	12	2	2	8	12	5	5	7	9
Middle East	3	1	1	1	3	2	2	2	3
North America	3	1	0	2	3	1	1	2	3
Total	64	17	12	35	62	26	21	38	43

Based on the results displayed in the table above, the following conclusions may be drawn:

³¹ No info available on Bangladesh other than that Fund has been created

³² No info available on Ukraine other than Fund is being created

- Of the 64 Funds in this study³³, 17 or 26 % can be classified as inactive³⁴
- An additional 12 Funds or 19% are classified as having limited activity
 - Africa has the highest preponderance of Funds with limited or no activity, followed by Latin America
- Only 21 Funds of those surveyed (approximately one third), currently allow use of funds for broadband deployment
 - The permitted use of USFs to fund broadband is the most prevalent in the Middle East (small sample size) followed by Latin America (42%) and Asia Pacific (40%)
- Funds are still heavily skewed towards fixed line solutions and less than half of those surveyed currently permit wireless solutions



³³ For the purposes of calculations, a total of 62 funds is utilized due to the lack of information for the other two i.e., Bangladesh and Ukraine

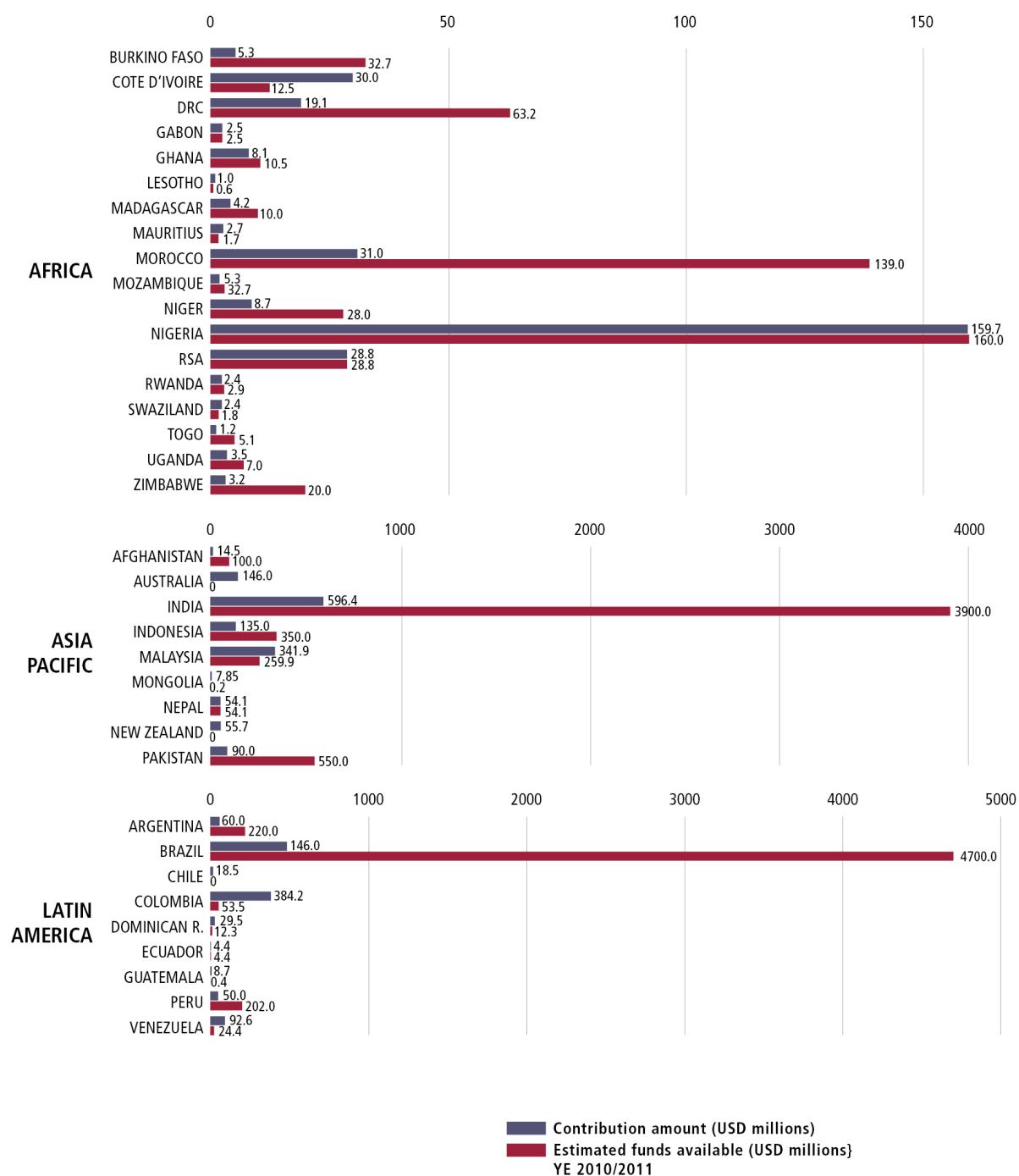
³⁴ **limited activity** (less than 5 applications of the fund); **moderate activity** (6 to 15 applications of the fund); **active** (more than 15 applications of the fund)

1.7.2 Summary of USF Financial Activity

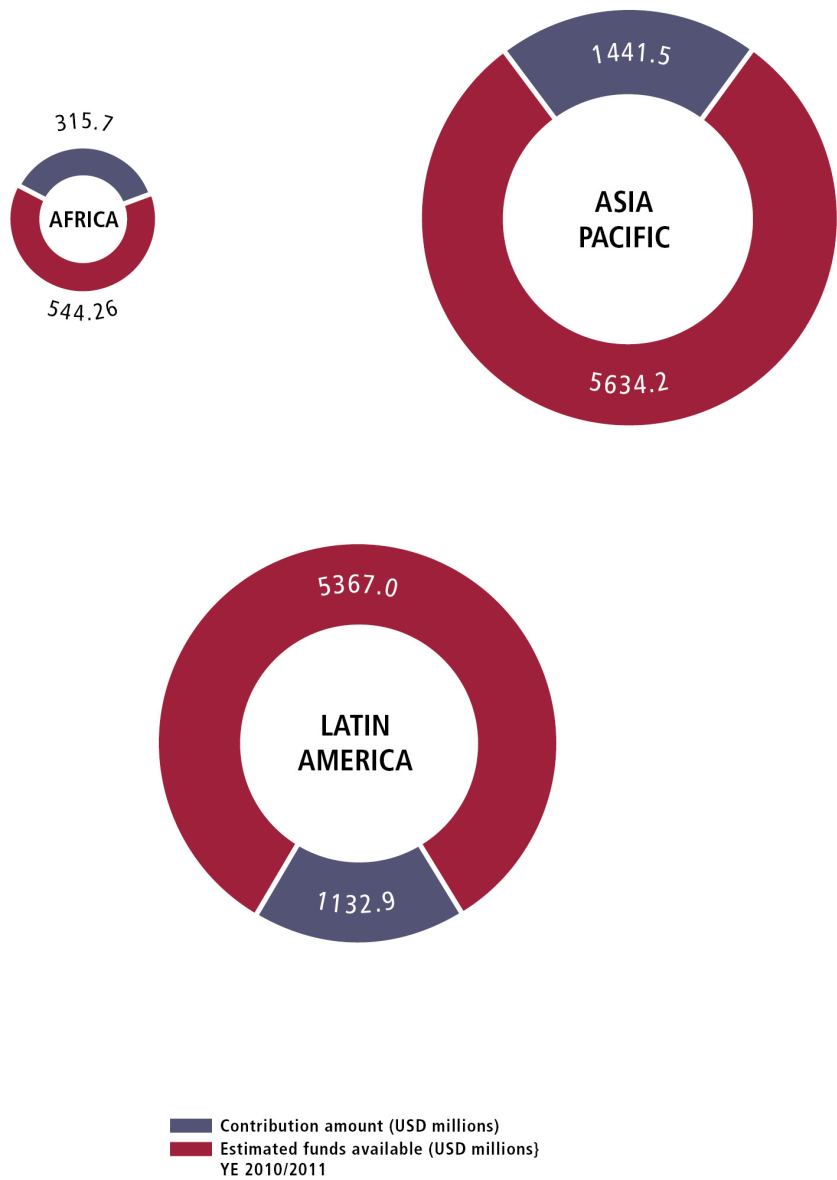
The figures below show the estimated amount of unused funds and the annual contribution collected/estimated for the latest reporting period. There are several points that need to be noted:

- Only those countries for which some data has been reported are included in the figure; countries for which there was no published data have been excluded.
- Contributions/levies collected as of the latest date for which information has been published **or** for which estimates can be made.
- Due to the lack of detailed financial reporting (or the absence of any financial reporting whatsoever) from the majority of USFs, many of the contributions were estimated and every attempt was made to be as realistic and accurate as possible.
- Funds disbursed or estimated as having been disbursed; it is important to note that this information is **not** released for most funds, hence the lack of complete information in this area; in many cases, reports on individual USF projects indicate that funds have been disbursed, but the total funds disbursed is not clear.
- Even where figures are officially reported, it is not always possible to arrive at a direct calculation in which total funds collected = total fund amount; total fund amount minus funds disbursed = balance remaining in fund; this is due to the fact that very few USF financial reports present all three of these elements.
- Even when allowing for the limitations regarding the overall precision of the numbers presented, it is clear that there is an enormous gap between the levies and contributions gathered versus the funds actually subsequently disbursed, i.e., on a global basis, **slightly less than 50 per cent of the estimated funds collected** have been disbursed.
- Brazil and India, two of the countries for which official financial reports are released, account for **USD 8.6 billion** of undisbursed funds or approximately **73 per cent** of the estimated fund balances associated with the countries presented in this report.

SUMMARY OF USE ACTIVITY LEVELS AND GENERAL CHARACTERISTICS BY COUNTRY

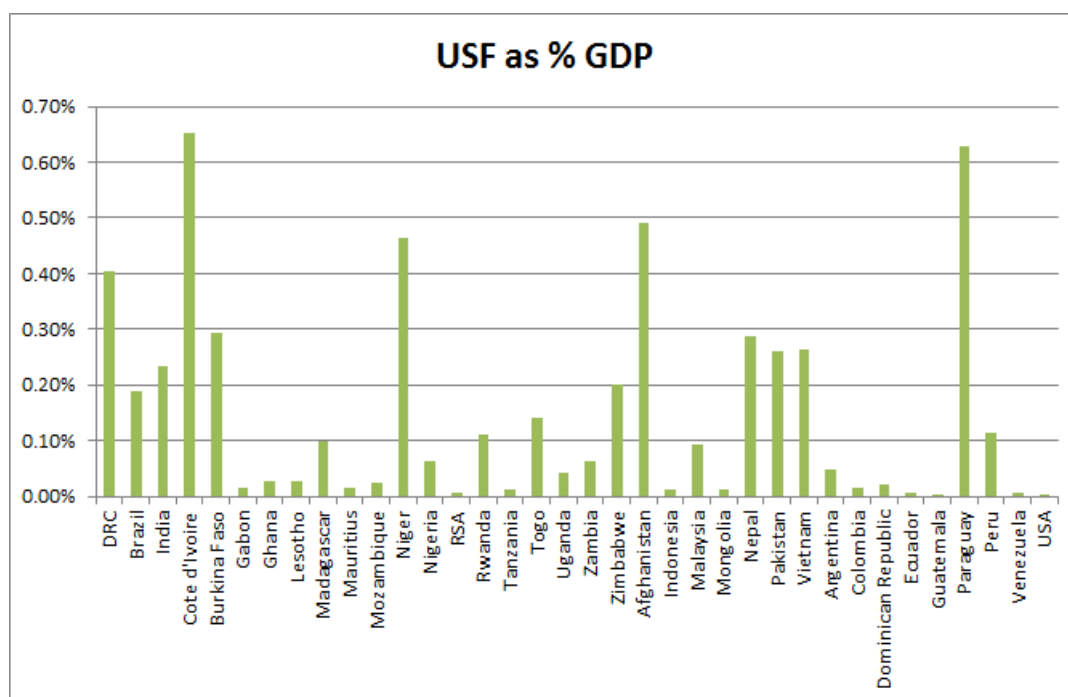


SUMMARY OF USF ACTIVITY LEVELS AND GENERAL CHARACTERISTICS BY REGION



1.7.3 Putting the Lack of Disbursements in Perspective

Although there is no doubt that the level of unused funds in many countries is of great concern, it is also useful to analyze this situation from a different perspective by examining the undisbursed/unused funds as a percentage of GDP. Whereas it is true that countries such as Brazil and India have a huge 'surplus', there are other countries where the funds, when viewed as a percentage of GDP, would appear to be in even worse condition. The following graph underscores this point – demonstrating that Cote d'Ivoire, Niger, Afghanistan and Paraguay are amongst the worst offenders.



World Bank Nominal GDP

DEEP DIVE ANALYSES

1.8 Africa

1.8.1 ECOWAS

In its efforts to provide Member States with guidelines for the successful implementation of universal access/service policies, the Economic Community for West African States (ECOWAS) adopted the Supplementary Act on Universal Access/Service in 2007. The 15 ECOWAS member states are: Benin, Burkina Faso, Cape Verde, Gambia, Ghana, Guinea, Guinea Bissau, Ivory Coast, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo. The Act provides guidelines on the following:

- creation of an appropriate regulatory and policy environment that fosters universal access/service
- measures that can be taken to develop a national policy with realistic universal access/service objectives
- role to be played by national regulators, policymakers and operators
- telecommunications services to be included in universal service obligations
- funding mechanisms
- co-operation in the area of universal access/service

1.8.1.1 Universal Service/Access Legal Framework and Scope

The ECOWAS Supplementary Act A/SA.6/01/07 on Universal Access/Service ("The Act") was adopted by ECOWAS Heads of State in January, 2007. The Act defines universal service as all citizens within the territory of the ECOWAS Member States having access to a basic group of services at affordable rates, regardless of their geographic location.³⁵

The Act calls upon Member States to take all necessary measures in order to:

- Formulate a national policy that identifies appropriate and realistic universal access/service objectives and considers the differences between universal access (public access to ICTs) and universal service (private or household access to ICTs)
- As frequently as possible, conduct public consultations with stakeholders to identify their needs and modify universal access/service policies, regulations and practices accordingly
- Design universal access/service policies, regulations and practices to create incentives for the private sector to extend universal access to communications services
- Use a multi-pronged approach to addressing universal access/service challenges and opportunities, relying on complementary strategies to meet the targets that have been set
- Establish a fair and transparent telecommunications regulatory framework that promotes universal access to ICTs, while allowing the market to address universal access/service to the greatest extent possible, intervening only where the market has failed or seems likely to do so

³⁵ ECOWAS Supplementary Act A/SA.6/01/07 on Universal Access/Service at Art. 1 (2)

Creating the appropriate regulatory framework entails:

- Promoting technology-neutral licensing practices that enable service providers to use the most cost-effective technology in providing services for end users
- Adopting a transparent and non-discriminatory interconnection framework in which interconnection rates are linked to costs
- Reducing regulatory burdens to lower the costs of providing services to end users
- Promoting competition in the provision of a full range of ICT services to increase access, affordability, availability and use of ICTs.³⁶

In addition, the Act determines that where it is necessary for regulators and policymakers to intervene to facilitate the delivery of universal access/service, the following should be addressed:

- Public access strategies should be explored in addition to private universal service strategies
- Both pay and play strategies should be employed, but where possible, operators should be encouraged to invest in rural, remote and low-income populations and areas
- Countries may use regulatory reform as the first step in achieving universal access, recognizing that further steps may be necessary to achieve ubiquitous access to ICTs, e.g., in rural areas or for users with special needs
- Appropriate licensing schemes for rural service providers could be set up to meet the needs of unserved and underserved areas.

Furthermore, the Act establishes that national regulatory authorities must ensure that universal service is provided to everyone at affordable rates. They may, at the request of the minister in charge of the sector, require designated companies to make available to low-income or special-needs users prices, options or schemes that differ from those normally prevailing in a commercial operation, particularly with a view to ensuring universal service. The conditions under which such facilities are granted must be proportional, transparent, non-discriminatory and publicly promulgated.³⁷

According to the Act, Member States should also aim to establish innovative regulatory policies to promote universal service, including:

- Promoting access to low-cost broadband interconnectivity from the local level to the international level, involving government authorities, companies and non-governmental organizations
- Adopting regulatory frameworks that support applications such as e-education and e-government
- Adopting policies aimed at increasing access to the Internet and broadband services, based on their own market structure, such that the policies reflect diversity in culture, language and social interests
- Ensuring that national regulatory authorities work with stakeholders to expand broadband coverage and use through multi-stakeholder partnerships, in conjunction with government initiatives that promote financially sustainable programmes, particularly with a view to bridging the market gap that may exist in some countries

³⁶ ECOWAS Supplementary Act A/SA.6/01/07 on Universal Access/Service at Art. 1 (2)

³⁷ Id.

-
- Adopting regulatory regimes that facilitate the use of all transport media, whether wire line, power line, cable, wireless or any other new technology
 - Ensuring that national regulatory authorities put forward initiatives for encouraging public access to broadband and Internet services in schools, libraries and other community centres
 - Ensuring that national regulatory authorities implement harmonized spectrum allocations consistent with the ITU radio communication conference process and each country's national interest.³⁸

The Act also provides that cooperation in the area of universal service/access must be explored on several levels:

- Between the private sector and communities, so that where possible the market can deliver universal access/service
- Between communities, government and the private sector, to ensure that the access gap is dealt with in a manner that is relevant to communities
- Within government, where the full benefits of ICTs may be reaped when it extends beyond infrastructure and technology, to include ICT access in health, education, agriculture and other sectors.³⁹

In terms of enforcement, the Act provides that Member States shall ensure that the companies entrusted with the task of providing users with services under the universal service regime provide the national regulatory authority with a regular account of their activities and results achieved. National regulatory authorities shall also establish performance objectives for companies assuming universal service obligations.⁴⁰

Pursuant to the ECOWAS Supplementary Act, individual licences may specify results to be achieved for the provision of universal access/service.⁴¹ A licensee's persistent failure to achieve the specified performance objectives and quality levels may entail the application of sanctions by the national regulatory authority. National regulatory authorities are also entitled to require independent verification of an operator's performance of the obligations imposed on it.⁴²

Mandatory services include directory and information services, emergency services, public payphones and services to people with disabilities or special needs. However, the Act states that within their respective national territories, Member States may decide to make additional services accessible to the public beyond those services already defined in the Act as universal service obligations.⁴³ In terms of emergency services, the Act provides that Member States shall ensure that emergency calls can be made free of charge from any fixed or mobile telephone, including telephone booths.⁴⁴

The Act also states that in order to enable those who do not subscribe to a telephone service to have access to telephone services, Member States must ensure that public payphones are installed, under reasonable conditions, in terms of quantity and geographic distribution. Without prejudice to more generous domestic legislation that may

³⁸ ECOWAS Supplementary Act A/SA.6/01/07 on Universal Access/Service at Art. 1 (2)

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ ECOWAS Supplementary Act A/SA.3/01/07 on the Legal Regime Applicable to Network Operators and Service Providers

⁴² ECOWAS Supplementary Act A/SA.6/01/07 on Universal Access/Service at Art. 17(3)

⁴³ *Id.*

⁴⁴ *Id.*

exist, Member States were required to ensure that national regulatory authorities are in a position to impose schedules for the deployment of public payphones, with the aim of having at least one public payphone in each locality numbering 500 inhabitants or more by December 31, 2010. ECOWAS will monitor the implementation of this measure on an annual basis.⁴⁵

In addition, the Act provides that where the need exists, Member States shall take specific measures to ensure that users with disabilities or special social needs have equivalent and affordable access to publicly available telephone services, including emergency and directory services at an affordable price.⁴⁶

The Act mandates that in monitoring and reviewing policies, Member States must, on one hand, adopt measurable targets for improving connectivity and access to ICT use, which can be based on distance, population density or length of time needed to have access to ICTs. On the other hand, Member States must hold periodic reviews of universal access/service policies, regulations and practices in order to adapt to the evolving nature of ICT services and end-user needs. Member States are required to periodically review the scope of the universal service, focusing on proposals for its modification or redefinition. The first such review is to be held no later than two years following the date of the Act's entry into force, and thereafter a review shall be held every three years. The review shall consider social, economic and technological developments, and shall have particular regard to data mobility and transfer rates for the technologies most widely used by the majority of subscribers. Member States are required inform the Executive Secretariat of ECOWAS of any changes.⁴⁷

1.8.1.2 Funding Mechanism

To assist national regulatory authorities in determining whether provision of universal service places an unjustified burden on the companies designated as providers, the Act establishes that Member States shall commit to provide for the adoption of a method for calculating the costs of the universal service, based on net costs. The net cost corresponds to the difference between the investment and operational costs associated with provision of the universal service and the relevant revenues. Relevant revenues are the direct and indirect revenues generated by the universal service. The net cost of any special price-scheme offers made by an operator to certain categories of subscribers to ensure their access to the universal service are to be deducted from that operator's contribution to the USF. The calculation of the net cost of the universal service obligations must be submitted for auditing by an entity that is not connected with the body responsible for managing the Fund. The result of the net cost calculation and the audit conclusions are to be made publicly available.

Funding and subsidies must be targeted, and these are to be determined and delivered in a manner that is transparent, non-discriminatory, inexpensive and competitively neutral. Subsidies can be provided using several means, including:

- A universal service fund, which should be developed as a mechanism within a broader market-oriented approach to achieving universal access
- USF may be financed by a broad range of market players, managed by neutral bodies such as regulators

⁴⁵ ECOWAS Supplementary Act A/SA.6/01/07 on Universal Access/Service at Art. 11.

⁴⁶ *Id.*

⁴⁷ ECOWAS Supplementary Act A/SA.6/01/07 on Universal Access/Service at Art. 13.

and may also be used to kick-start public access projects that meet the needs of the local community

Governments may also consider a full range of other financing mechanisms. Competitive minimum subsidy auctions are one option that may be used to reduce the amount of financing necessary for public access projects financed by a universal service fund. Public access projects can be designed to achieve long-term financial self-sustainability, especially where consideration is given to innovative low-cost technologies.⁴⁸

1.8.1.3 What has the ECOWAS Act achieved so far

Despite the many solid guidelines for effective creation and management of USFs/UASFs that are contained within the Act, there is little evidence that the Member States have made any noticeable progress in adopting and carrying out these guidelines.

1.8.2 AUSAFA

The African Universal Service and Access Fund Association (**AUSAFA**) was formed on August 26, 2008, in Lilongwe, Malawi, where representatives of 12 Universal Service and Access Funds issued a Declaration, adopted the Constitution of AUSAFA and elected the office bearers: the Chairman, First Vice Chairman, and Second Vice Chairman. AUSAFA's inaugural meeting was held on December 10, 2008, in London, where delegates agreed on an annual work programme⁴⁹.

AUSAFA's aim is to help African Universal Service and Access Funds fulfil their collective mission to improve rural ICT access and to: act as a common voice for African USAFs; sharing and disseminating information; leveraging internal capacities and strengthening African USAFs' bargaining position; developing common standards and protocols where possible; and the development of synergistic working relationships.

As the secretariat for AUSAFA, the Commonwealth Telecommunications Organisation coordinates the work of the Association and allows its members to leverage its institutional knowledge, its reach within the Global ICT sector and its relationships with numerous ICT stakeholders.

The London meeting provided an opportunity for participants to listen to high-quality presentations, exchange views, network and discuss both global and Africa-specific USAF best practices. Participants concluded with discussion of the association's annual work programme, which ought to focus on improving USF agencies ability to implement projects, procure expertise and build capacity. Members then developed two subcommittees, or working groups, to address specific areas (institutionalization, financial strategy, project development and communication). Budget requirements were also discussed⁵⁰.

Since the initial meetings, progress has been slow and one of the main focuses at present is to share best practices through a web portal and to look at the most effective means of providing mutual support amongst members.

⁴⁸ *Id.* at Art. 20.

⁴⁹ Commonwealth Telecommunications Organisation, <http://www.cto.int/>

⁵⁰ Official Event Report, The Inaugural Meeting of the African Universal Service and Access Fund (AUSAFA), Inmarsat Conference Centre, London UK, 10 December 2008

AUSAFA established a new committee in August 2011, at the CRC Africa meeting in Tanzania and they are progressing things slowly in terms of framework, structure and funding of the Association. Thus, so far, the AUSAFA initiative has not crystalized into any tangible deliverables.

1.8.3 Morocco



1.8.3.1 Country overview

Morocco has a land mass of around 446,000 sq. km. and is characterized by a mountainous northern coast and interior. Its 32.3 M inhabitants are 58% urban with many residing in the five major cities: Casablanca – 3.2 M; Rabat (capital) – 1.8M; Fes – 1.0M; Marrakech – 0.9M; and Tangier – 0.8M.

Morocco's GDP per capita (PPP) is USD 5100 (2011 estimate).⁵¹

1.8.3.2 Current status of telecom market

General assessment⁵²: good system composed of open-wire lines, cables, and microwave radio relay links; principal switching centres are Casablanca and Rabat; national network is nearly 100% digital using fibre-optic links; improved rural service employs microwave radio relay; Internet available but expensive

Domestic telecommunications: fixed-line teledensity is roughly 10 per 100 persons

- Approximately 3.7M fixed lines (2010)⁵³
- Wireline market penetration⁵⁴ (YE 2011): 3.6%

Mobile (cellular) communications:

- 36.6M subscribers⁵⁵ (YE2011)
- Wireless market penetration YE 2011: 113.6%⁵⁶
- 3 Main Operators⁵⁷:
 - Maroc Telecom, with approximately 47% market share
 - Medi Telecom, with approximately 33 % market share

⁵¹ CIA World Factbook 2012

⁵² CIA World Factbook 2012

⁵³ *Id.*

⁵⁴ Global Wireless Matrix 1Q2012

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ Global Wireless Matrix 1Q2012

-
- Wana Corporate, with approximately 20% market share

Internet⁵⁸:

- Hosts: 278,075 (2011)
- Users: 13.2M (2009)

Morocco started to liberalize its telecommunications market following the enactment of the telecommunications law 24-96 of 1997. The previous state monopoly Post Office and Telecommunications Board was restructured and split into two entities in 1998: Itissalat Al Maghrib or Maroc Telecom S.A. for telecommunications and Barid Al Maghrib for postal services; and the National Telecommunications Regulation Agency (ANRT) was set up. A second GSM licence was granted in August 1999 to Medi Telecom, originally owned by a consortium of Telefónica and Portugal Telecom in addition to Moroccan institutional and financial investors led by the BMCE Bank and CDG6, but is now owned by Finance Com and Telefónica. The third licence, initially only a 3G licence, was awarded to Wana (Maroc Connect), formerly owned by France Telecom (Wanadoo), now jointly owned by Ona and Zain (minority participation). Wana started as an Internet service provider in 1999 and began to provide mobile telecommunications services in February 2007.

1.8.3.3 Fund background

Achieving the goal of universal service was one of the cornerstones of the reform of the telecommunications sector in 1998. Today, universal service in Morocco is governed by Law No. 24-96 of 7 August 1997, as amended and supplemented by Law No. 55-01 of 8 November 2004. This was complemented by the adoption of Decree No. 2-97-1026 of 25 February 1998, as amended and supplemented by Decree No. 2-05-771 of 13 July 2005, on the specifications of operation of public telecommunications networks.

The Universal Service Fund in Morocco, *Fonds du Service Universel des Télécommunications (FSUT)*, hereinafter referred to as FSUT or the Fund, is administered by the Universal Telecommunications Service Management Committee, *Comité de Gestion du Service Universel (CGSUT)*, under the auspices of the Regulator, *Agence Nationale de Réglementation des Télécommunications (ANRT)*. Chaired by the Prime Minister, the CGSUT is an interdepartmental committee established under the Head of Government, and is composed of representatives from:

- Ministry of the Interior
- Ministry of Planning
- Ministry of Finance
- Ministry of Telecommunications
- Ministry of National Defence
- Chairman of the Management Committee of the ANRT
- Director General of ANRT.

The CGSUT is responsible for:

⁵⁸ CIA World Factbook 2012

-
- Determining the programmes for the implementation of universal service within the national territory
 - Proposing universal service projects for public tenders
 - Reviewing the programmes offered by the operators
 - Approving the draft specifications for tender projects not proposed by operators but submitted by the ANRT

The CGSUT is required to prepare an annual report of its activities and the progress achieved in programme implementation.

A levy of two per cent (2%) of revenues before tax is imposed on all operators (unless they opt for the “play or pay” option). The Fund may also receive any other contribution in the form of donations and bequests allocated under the development programmes of the Universal Service. The general telecommunications law also requires operators of public networks to pay annual contributions for training, standardization and research. The fee for training and standardization is 0.75% of the operator’s annual revenues, net of interconnection costs for licensed services, and the research fees are 0.25% of the same revenues.

The Fund has three priority areas:

- Rural public telephony;
- Installation of community centres
- Expansion of broadband capacity

Law No. 55-01 has extended the scope of universal service to include the provision of value added services, especially those allowing access to the Internet:

- At a minimum, a basic telephone service of specified quality at an affordable price
- Mandatory services, consisting of the delivery of emergency calls, providing an information service and directory in print or electronic form
- Services related to land use planning, including serving the country in telephone booths and / or service by means of telecommunications devices in urban areas, industrial areas and rural areas
- Value-added services including services allowing access to the Internet

Until December 2002, Ittisalat Al Maghrib (Maroc Telecom) had exclusivity on fixed and international services and had to make a financial contribution to the *aménagement du territoire* of up to two per cent (2%) of its net revenues as well as a universal service contribution of up to four per cent (4%) of its net revenues. After that, its exclusivity was terminated and Maroc Telecom became subject to the same universal service terms and conditions as other licensees.

1.8.3.4 Current status of the fund

Since 2004, when the revised law was introduced, Morocco has entertained a “pay or play” regime: operators can either pay their financial contributions to the Fund, or they may implement projects approved by the CGSUT. Operators are required to submit their proposals to the CGSUT. Once validated, the conditions of the project are specified by the CGSUT and then the operator moves forward with the implementation. The CGSUT also designs

projects as part of a government strategy of development of universal service, for which it announces competitive bidding to determine which operator will be responsible for the implementation.

Although financial information on the Fund is not publicly available, it is estimated that operators contributed in the neighbourhood of **USD 31.0M** in 2011. Other unofficial figures available indicate that of the **USD 151.0M** in the Fund in 2008, only **USD 12.0M** was disbursed.

1.8.3.5 What the fund has achieved to date

In 2004, Morocco's original universal service policy was redefined to focus on telecommunications services in addition to telephone services. From 2004 till 2008, under the new framework, only Maroc Telecom and Meditel chose to fulfil their universal service obligations through the "play" option. The ANRT claims that the approach has been successful. In terms of projects chosen, there have been the National Initiative of Human Development (INDH), public rural telephony, the creation of community ICT centres and the expansion of broadband networks. Since 2005, several universal service projects were suggested by the existing operators and approved. These projects included providing 1,556 rural villages with telecommunications services (voice and Internet access) and had received MAD 600M (USD 68M) from the FSUT in subsidies by 2008.

By 2009, the CGSUT implemented four universal service projects, which were proposed by the operators and approved by the CGSUT (outside of the PACT and GENIE Programmes described below):

- Roll-out of Internet via ADSL in 159 rural locations
- Mobile service to 126 new rural locations without coverage
- Developing 42 public access centres (teleboutiques) in the largest shopping areas
- Strengthening of mobile service in 40 rural areas without coverage

Despite the wide distribution of the GSM network, numerous villages were still considered to be insufficiently covered. This prompted the government to establish the "PACT" programme to provide these villages with telecommunications service. The PACT programme, with a budget of MAD 1.44 B (USD 164M), was adopted by the CGSUT in December 2007. The objective of the PACT programme was to provide access to telephony and the Internet in 9,263 rural locations (i.e. a population of about 2 million inhabitants), described as white areas (areas not covered by the telecommunications network). It was to be carried out during the 2008 - 2011 period but the completion date of the programme was postponed to June 2012, following the resolution of the Board in July 2011. Four operators: Itissalat AL Maghrib, Médi Telecom, CimeCom and SpaceCom have agreed to cover a certain number of white areas based on agreements signed with the Director General of the ANRT. The two VSAT operators, CimeCom and SpaceCom, pulled out of the Programme in 2011 due to delays in the coverage of the areas. By the end of 2011, 77% of the areas were covered and an additional 9% was in the process of being covered. Out of the uncovered areas: 2% have difficult terrain, 11% have problems with power supply and 1% is inaccessible, unachievable or unidentified.

The "GENIE" Programme also received a MAD 1B (USD 114M) subsidy. The ANRT took part in the GENIE implementation programme of the national strategy for Generalization of Information Technologies and Communications in Education (infrastructure, teacher training, development of digital resources and uses). ANRT issued a consultation with all public telecommunications network operators regarding the provision of 939 schools with 629 internet connections. Universal Service agreements were signed with five operators (Cimecom, Ittissalat al-

Maghrib, Medi Telecom, Spacecom et Wana Corporate) and deployment began in October 2010 and was completed in May 2011.

Morocco's other universal service Fund projects have largely focused on the educational system, such as:

- Bringing Digital Devices and Broadband to Teachers Project, where nearly half the teachers in Morocco now have access to laptops and broadband Internet access thanks to the NAFID Programme. Funded by the country's USF, the programme seeks to enhance teachers' ICT-related skills. As a result, more than 150,000 teachers have subscribed to a subsidized broadband Internet connection and have purchased 50,000 laptop computers at a subsidized price, with localized, built-in content.
- Helping Students get Connected Project, where since 2009, the INJAZ programme has provided substantial subsidies to lower the cost of digital devices and the first year of broadband Internet access for engineering and science students. As a result, more than 40,000 science and engineering students now have their own laptops and broadband Internet connections.

1.8.3.6 Other elements of interest

Liberalization and market-based policies in Morocco have led to a booming telecommunications market. Overall, its universal service policies have been targeted at areas of market failure and permit operators to become involved in the selection process by suggesting universal service projects in addition to providing them with "pay or play" options. Supplementing its formal universal service policies, Morocco's increasingly competitive telecommunications sector has led to the expansion of services through market forces. The partial liberalization of the market has resulted in high levels of private investment, rapid network rollout and increased access to services.

1.8.4 Mozambique



1.8.4.1 Country overview

Mozambique is located in South East Africa and is bordered by Malawi, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. Its terrain is predominately coastal lowland with uplands in the centre, high plateaus in the northwest and mountains in the west. Mozambique spans almost 800,000 sq. km. and has a population of over 23 M with the urban population making up only about 38% of the total population. There are over 1.5 M people living in the capital city of Maputo and over 700,000 in Matola.

Mozambique's GDP per capita (PPP) is USD 1100 (2011 estimate).⁵⁹

1.8.4.2 Current status of telecom market

General Assessment⁶⁰: a fair telecommunications system that is shackled with a heavy state presence, lack of competition and high operating costs and charges

Domestic Telecommunications⁶¹: is characterized by: stagnation in the fixed-line network contrasts with rapid growth in the mobile-cellular network; mobile-cellular coverage now includes all the main cities and key roads, including those from Maputo to the South African and Swaziland borders, the national highway through Gaza and Inhambane provinces, the Beira corridor, and from Nampula to Nacala; extremely low fixed-line teledensity; despite significant growth in mobile-

cellular services, teledensity remains low at about 35 per 100 persons.

- Approximately 88,000 fixed lines (2009)⁶²
- State-owned TDM continues to be the sole provider of fixed line services

Mobile (cellular) communications:

- 7.2M subscribers⁶³ (YE2009)

⁵⁹ CIA World Factbook 2012

⁶⁰ Id.

⁶¹ Id.

⁶² Id.

-
- Wireless market penetration YE 2011: 35%⁶⁴
 - 3 Main Operators:
 - MCell, the state-owned first provider of mobile services in the country, had approximately 62% market share in 2010
 - Vodacom, 85% owned by Vodacom South Africa and operating since 2002, had approximately 38% market share in 2010
 - Movitel, owned by a consortium made up of Viettel Telecom (Vietnam) and Mozambique's SPI, was awarded a licence in November 2010

Internet⁶⁵:

- Hosts: 82,804 (2011)
- Users: 613,600 (2009)

Prior to the liberalization of the telecommunications industry, Mozambique was under Portuguese rule and the Portuguese state owned monopoly, Correios, Telegrafos e Telefones (CTT) was the sole provider of telecommunications in the country. In June 1981, the CTT was dissolved and Telecomunicações de Moçambique E.E. (**TDM**) was created, becoming the sole provider of services in the country. In 1992, the independent regulator, Instituto Nacional das Comunicações de Moçambique (**INCM**), was created and TDM also became a public company. The second mobile licence was awarded to Vodacom in 2002. The Telecommunications Law of 2004 attempted further liberalization by introducing a competitive regulatory regime.

Although Mozambique is one of the highest growth potential telecom markets in Africa, penetration rates remain relatively low and the main reason for this is that proper infrastructure has not been put in place. Furthermore, the majority of population is low income and close to 50% of the population are illiterate.

1.8.4.3 Fund background

The Telecommunication Law No. 8 of 21 July 2004, which was based on the 2004 Telecommunications Policy, laid ground for the regulation of universal service and the establishment of a universal service fund. The Fund was administratively established by Decree No. 69 of December 26, 2006, which set out details of the regulation of the Universal Access and Service Fund. The collection of funds did not commence until a Ministerial Diploma 79/2007 of July 4, 2007 fixed the annual contribution to be paid by the telecom operators to the Universal Service Access Fund. The Fund started to collect contributions in 2008.

The Universal Access Service Fund, Fundo do Serviço de Acesso Universal (**FSAU, UASF**) is a separate internal unit and account under the national regulator, Instituto Nacional das Comunicações de Moçambique (INCM) and is managed by the Executive Secretary of the UASF Internal Unit. The Executive Secretary of the UASF reports directly to the Board of Directors of INCM and works in coordination with other departments within the Regulator. The Board of INCM oversees the activities and decisions of the UASF.

⁶³ *Id.*

⁶⁴. GSMA Wireless Intelligence

⁶⁵ CIA World Factbook 2012

All licensed and registered entities providing public telecommunications services must contribute one per cent (1%) of their previous year's net operating income to the UASF. Operators who operate Internet Cafes are exempt from contribution to the UASF. Other sources of financing can include government contributions and grants from development partners (international donors).

The Fund's objectives are to promote investment in the provision of service in rural areas at a fair and affordable price. The short-term targets for telephony are to enable the establishment of a publicly accessible telephone within all locales with more than 1,000 inhabitants as well as within five kilometres of every rural inhabitant. The short-term targets for Internet services are to extend Internet points of presence and public access to the Internet through telecentres to all District Centres. The services in focus are:

- Providing telephony and Internet services
- Public and Private Internet access and service
- Infrastructure deployment and service provision

Hospitals and schools located in rural areas can also benefit from the Fund.

Tenders are awarded through a competitive bid based on the least subsidy requested from qualified bidders. Projects are selected and specified by the USAF / INCM. Operators do not participate in the decision-making process nor do they have any significant influence over the specifications of the projects.

1.8.4.4 Current status of the fund

The Fund is moderately active. It began its operation only relatively recently, in 2008, and has had slow take up. So far, it has not been able to achieve operations of scale in extending voice and Internet coverage, which is partly due to the reality of the limited competition in the telecommunications market, with only two active large players up to 2011. The estimated amount held in the account was **USD 3M in 2009**.

1.8.4.5 What the fund has achieved to date

The Universal Access programme began with two pilot projects:

- A telephony pilot project to extend transmission, access networks and UA services to one zone of the country, covering five districts in the province of Zambézia and three districts in the province of Nampula
- An Internet service pilot project to provide an advanced level of service to four District Centres in the provinces of Zambézia and Nampula through the provision of Internet POPs, with a minimum service radius of 5 km. from the District Centre

A bidding process for the UA pilot projects was launched in February 2007. The telephony tender did not receive any bids and was therefore unsuccessful. The Internet tender was won by the Mozambican broadband wireless operator INTRA Lda.

USD 200,000 was disbursed in 2008 for a project entailing the transmission of mobile telephony via satellite, covering

5 km. from the centre of the Matchedje district in the north of the country on the Tanzanian border.

By the end of 2009, grants from the World Bank constituted 13% of the overall financing of the Fund. The World Bank has financed certain tele-centres pilot projects and one Community Public Internet Access Points project (Public and Private Internet access and service).

MCel won a tender in June 2011 to build BTS sites in 14 locales, in a project worth approximately USD 4 M. MCel had nine months to build the sites.

1.8.4.6 Other elements of interest

The lack of dynamic competition in the country's telecommunications market, which is still dominated by the state owned TDM and its subsidiary, MCel, combined with Mozambique's challenging geography with 62% of its population situated in rural, and often remote, poor areas, is not conducive to a rapid increase in voice telephony or Internet coverage, despite the subsidies offered through the Universal Access Service Fund.

1.8.5 Nigeria



1.8.5.1 Country overview

Nigeria has one of the largest populations in Africa. It is located in Western Africa, bordering Benin, Cameroon, Chad and Niger with 853 kilometres of coastline on the Gulf of Guinea. Nigeria consists of a varied terrain with southern lowlands, central hills and plateaus, mountains in the southeast and plains in the north. The population of Nigeria is estimated to be more than 170M, making it the seventh most populous country in the world. Approximately 50% of the population is urban, with the 50% rural population often situated in remote areas. Nigeria's most populated cities are: Lagos - 10.2 M; Kano - 3.3 M, Ibadan - 2.7 M; Abuja, the capital - 1.9 M; and Kaduna - 1.5 M.

Nigeria's GDP per capita (PPP) is USD 2600 (2011 estimate).⁶⁶

1.8.5.2 Current status of telecom market

General Assessment: further expansion and modernization of the fixed-line telephone network is needed; network quality remains a problem

Domestic telecommunications is as follows⁶⁷: the addition of a second fixed-line provider in 2002 resulted in faster growth but subscribership remains only about 1 per 100 persons; mobile-cellular services are growing rapidly, in part responding to the shortcomings of the fixed-line network; multiple cellular providers operate nationally with subscribership approaching 60 per 100 persons in 2010.

- Approximately 1.05 M fixed lines (2010)⁶⁸
- Wireline market penetration⁶⁹ (YE 2011): 1.2%
- Main fixed line operators: Nitel and Globacom

Mobile (cellular) communications:

- 59.3M subscribers⁷⁰ (YE 2011)
- Wireless market penetration YE 2011: 59.3%⁷¹

⁶⁶ CIA World Factbook 2012

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ Global Wireless Matrix 1Q2012

⁷⁰ *Id.*

⁷¹ *Id.*

-
- 4 Main Operators and 4 smaller operators ⁷²:
 - MTN with approximately 44% market share
 - Glo Mobile, owned by Globacom, with approximately 21% market share
 - Airtel, owned by Bharti Airtel, with approximately 19% market share
 - Etisalat, owned by Etisalat and Mubadala, with approximately 11% market share
 - Others' total market share – 5%

Internet⁷³:

- Hosts: 936 (2011)
- Users: 44.0 M (2009)

In the past ten years, there has been a surge in Internet usage and where in 2000, usage was at 0.1%; by 2011, this was estimated to be at least 44%⁷⁴.

Nigeria started liberalization of its telecommunications market in 1992 and is today one of the most open telecommunications markets in Africa. The Nigerian Communications Commission (NCC) was established in 1992 as the independent regulatory body for the Nigerian telecommunications industry. The telecommunications policy was put into play in 2000, accelerating a sweeping liberalization that has led to hundreds of companies providing virtually all kinds of telecom and value-added services.

Nigeria has been dominated by the incumbent state owned operator Nitel, which has not yet been privatized in spite of three attempts in the past (likely due to its perilous financial state). The addition of a second fixed-line provider, Globacom, in 2002 resulted in faster fixed line growth but subscribership remains at only about one per cent (1%). Today, there are approximately 80 other fixed licensees providing services, mainly through fixed wireless connections. Further expansion and modernization of the fixed-line telephone network is needed as network quality remains a significant problem.

Although mobile-cellular services have been growing rapidly, the relatively high penetration is as a result of multiple SIM ownership. The growth has slowed down somewhat following the mandatory SIM card registration in 2011.

1.8.5.3 Fund background

The Nigerian Communications Act of 2003 addresses the concept of universal access and universal service; provides guidance to the Nigerian Communications Commission (NCC) on the development of universal access/service policies; and directs the establishment of a Universal Service Provision Fund. The Nigerian Universal Service Provision Fund (USPF) was established in 2007 as a separate entity in accordance with the 2007 Universal Service and Universal Access Regulations. The Fund is managed by the Secretary of the USPF.

The 2007 Regulations also established a USP Board (Chaired by the Minister with representation from the NCC) to

⁷² *Id*

⁷³ CIA World Factbook 2012

⁷⁴ Insights to the African Telecom Market 2011: Analysis, Forecasts and Commentary, by TelecomsMarketResearch.com, in association with Buddecomm, August 2011

supervise and provide broad policy direction for the management of the USPF as well as to aid the USP Fund managers. It has the authority to appoint and remove the USP Fund managers and auditors in consultation with the NCC. The Board is entrusted with approving standing orders to establish and regulate activities of the USP Fund managers, as well as approve all processes, procedures, guidelines and decisions necessary to implement the regulations. The USP Fund managers report on a quarterly basis to the USP Board and the USP Secretariat on the status of the Fund, including a report detailing the financial situation and performance of the Fund.

The NCC plays the following roles in relation to the USPF:

- considers, designs and determines a system which shall promote the widespread availability and usage of network services and services to unserved and underserved parts of the country
- is represented on the USPF Board (the USPF Secretariat is located within the premises of the NCC Head Office in Abuja) and is consulted on the appointment of USPF managers
- supports the Fund on staffing
- ensures that the USPF is at all times totally separated from the Commission's Fund and transparently maintained
- develops regulations regarding contributions by licensees, under the NCA, 2003, to the USPF and any other matters related or incidental to the Universal Service Provision and the establishment and operation of the USPF

Both the Act and the Regulations provide that the USP Fund shall be audited each financial year. The Act provides that independent auditors shall be appointed by the Board and that the auditor's report shall be presented to the National Assembly and published. The USP Board is required to prepare and submit an annual report to the National Assembly, through the President, no later than six months after the end of each financial year. In addition, the USP Fund must maintain a website and include posting of the Fund's quarterly reports, the USP Board annual reports and projects underway.

Before the creation of the USPF in 2007, an Annual Operating Levy (AOL), required by licence conditions, had been collected by the NCC. Based on the 2007 Regulation, the NCC makes financial contributions to the USPF based on a portion of the AOL paid to the Commission by licensees. Operators continue to submit an AOL of 2.5% of net operating revenues to the NCC on a quarterly basis. The NCC, in turn, contributes 40% of the AOL to the USPF for its activities. The 2007 Regulations provide that the initial amount of the USP Contributions shall be equal to one per cent of net revenues of the licensees from which the NCC collects annual levies (this is currently the 40% of the 2.5% AOL). NCC has the discretion to increase or decrease the contribution to the USPF upon consideration of the USPF operating expenses and based on recommendations made by USPF.

The USPF is also supposed to be funded from other sources:

- Such monies as may be specifically appropriated to the USPF from time to time by the National Assembly
- Gifts, loans aids and such other assets that may from time to time specifically accrue to the USPF

However, sector contributions have made up most of the Fund's contributions.

The objective of the 2003 Communications Act is to encourage the installation of network facilities and the provision

of network services and applications to institutions in unserved and underserved areas or for underserved groups. The Secretariat determines if the USP Fund is to be used to finance the maintenance of existing services and network facilities for areas or only for the provision of new networks and services.

According to the 2007 Regulations, the priorities of the Fund are to provide financial support for ensuring universal access and universal service to specific areas defined as follows:

- unserved areas, which are geographic areas where there is no level of access currently available
- underserved areas, which are geographic areas where some level of access may currently be available, but not across the entire regional segment
- underserved groups within a community, which refers to a designated population segment that shares a common set of characteristics and, unlike the rest of the community, does not have universal access.

Universal service covers the following services:

- Individual mobile cellular service
- Public mobile payphone service
- Broadband
- Tele-centres
- Schools (primary, secondary post-secondary)
- Health centres
- Emergency services
- Special services for persons with disabilities and elder persons
- Community centres
- Government offices

The USP Secretariat is required to undertake an analysis to formally determine where Fund money should be directed and, specifically, the service scope to be applied. In the allocation process, the USPF shall use competitive selection processes, which may include minimum subsidy auctions or such other processes designed by the USP Secretariat in accordance with the Regulations. The USPF has used the following methods:

- Competitive, combination quality and cost selection
- Competitive, least subsidy requested from qualified bidders
- Proposal by eligible candidates and evaluation by the USPF

The industry is invited to participate in the consultation process on the RFI/RFP but the final decision on projects is made by the USPF board on the advice of the NCC.

1.8.5.4 Current status of the fund

The USPF is operational and active. Currently, the Fund has four programmes, namely, the Universal Access Programme, Universal Coverage Programme, Universal Service Programme and ICT for Development Programme. The latter includes issues such as applications, content, software and training, unlike the Universal Access and Service Programmes, which deal primarily with funding of services and networks.

To date, the main focus of the Fund has been on BTS projects covering unserved and under-served areas, providing up to 25% subsidies for tower building.

The latest published bids (published on the USPF website on September 26, 2011) included:

- Provision of Backbone Transmission Infrastructure (BTRAIN) Project
- Construction of Passive Telecommunications Infrastructure for Purpose of Co-Location of Telecommunication Companies in Rural/Un-served Communities
- Establishment of Base Transceiver Stations (BTS) in (Rural) Un-Served/Under-Served Areas of the Federation⁷⁵

The current amount in the USPF account is not publicly available. The reported balance in 2009, to be carried forward to 2010, was Naira NGN 23.6 B⁷⁶ (**USD 145M**).

1.8.5.5 What the fund has achieved to date

The USPF 2007-2011 Strategic Plan cites these types of projects eligible for USPF financing:

- large scale ICT projects
- community communications centres (CCC) projects
- ICTs for all Nigerians project
- accelerated mobile phone expansion project
- backbone infrastructure project
- enabling environment projects
- school and university access projects for digital lifestyle
- institutional development projects

The Fund claims that approximately **UAD 140M** per annum has been disbursed to various projects. The USPF's activities and projects in 2009 included⁷⁷:

- Community Communications Centres: 18 bidders were to construct 109 CCCs in 36 states
- Co-location Infrastructure Projects (CIP): Secretariat oversaw the initiation of the construction of 54 CIPs
- Base Transceiver Station Project: construction of 51 BTS sites
- Plan for a Solar-powered GSM for Rural Network Project
- Rural Broadband Initiative Project: to provide wholesale Internet bandwidth to Community Communication Centres, Cybercafés, Rural Internet Service Providers, School Access Project, Tertiary Institution Access Project and similar institutions in rural communities; will be rolled out in 109 local government areas
- Backbone Transmission Infrastructure Project: to commence in the year 2011, to address the dearth and inadequacies of fibre optic backbone networks and transmission links in rural Nigeria

⁷⁵ <http://uspf.gov.ng/index.htm>

⁷⁶ 2009 Annual Report – last annual report that has been published on the USPF web site

⁷⁷ 2009 Annual Report

-
- School Access project: to facilitate digital lifestyle in the schools – successful execution of the first phase
 - Tertiary Institution Access Project: facilitating connectivity to broadband Internet with speed of up to 1Mbps to tertiary institutions – implemented in 73 institutions in 2009
 - GIS mapping of ICTs Infrastructure, Gap Analysis and Subsidy Estimates in Nigeria

Despite having a well-articulated and conceptualized five year Strategic Plan (2007 – 2011) in place, the USPF Secretariat was not able to fully implement all the respective programmes in the Plan for 2009 for the reasons outlined below:

- There were delays in approval of the USPF 2010 budget⁷⁸ by the National Assembly
- Some USPF projects require existing network infrastructures such as national transmission backbone, Points of Interconnection or Internet Exchange Points for successful project implementation and deployment; for instance, the backbone transmission infrastructure project of the USPF is designed to connect rural areas from the national transmission backbone infrastructure, which is difficult to implement without a national transmission backbone in place
- The lack of suitable buildings to house network infrastructure and the unavailability of adequate public infrastructure such as accessible roads in rural areas are a challenge, as well as difficulties in acquiring land for projects due to the prevalence of family and communal feuds over land ownership
- Unavailability or inadequate public power supply, including power outages and security concerns.

Between 2009 and 2012, the Fund focused on:

- USPF BTS Support Project
- Community Communications Centre
- Computer for the Girl Child
- Large Scale ICT Projects
- ICT for All Nigerians Project
- Accelerated Mobile Phone Expansion Project
- Backbone Infrastructure Project
- School and University Access Projects to Digital Lifestyles

As mentioned previously, the main focus of the Fund has been the BTS Support Project for unserved and underserved areas. This particular focus has been quite successful, as operators have leveraged on the initiative to extend services to locations considered to be commercially disadvantageous. Major mobile operators participated in the BTS projects, receiving a subsidy of 25% of the cost of building a base station (approximately N 8, 897,040.00 – USD 54,300).

The other projects that delivered some results have been the School and University Access to Digital Lifestyle Project, which brought internet connections, expected to improve learning and research by the teachers and students, to Federal Universities; and the Computer for the Girl Child project facilitating access to ICT by pupils in secondary schools across the country.

⁷⁸ Authors' assumption is that delay in 2010 budget impacted 2009 projects requiring additional funding

1.8.5.6 Other elements of interest

The highly competitive telecommunications market is the main reason behind the achievement of the country's current coverage levels rather than the Fund initiatives. Much of the remaining addressable market is in the country's rural areas where network rollouts and operations are expensive mainly due to the poor infrastructure in place, lack of reliable electricity, security risks and unreliability of the incumbent's fixed network. Given that rural penetration in Nigeria is still low, with over 40 M inhabitants still residing in rural areas, there is a need to develop more complex incentives that will address the above factors and help to decrease operators' capital and operating expenses.

To their credit, the Fund administrators, as well as the new Minister of Communications, appear to recognize that the Fund is not performing as it should and that some major adjustments are required. To that end, they are currently (as of May 2012)⁷⁹ in the process of redefining how the Fund should operate. It is hoped that with this initiative, some major changes and improvements to the Fund will be implemented.

⁷⁹ <http://www.piftikhar.com/2012/05/my-first-visit-to-nigeria/>

1.8.6 RSA



1.8.6.1 Country overview

The Republic of South Africa, generally referred to as South Africa, covers a massive land area of over 1 million sq. km. The country is situated at the southern tip of the African continent and borders Botswana, Lesotho, Mozambique, Namibia, Swaziland and Zimbabwe. South Africa's population is estimated to be over 48 M. Urban population accounts for over 60% of the population. Population in the major cities is: 3.6 M in Johannesburg; 3.3 M in Cape Town; 3.1 M in Ekurhuleni; 2.8 M in Durban; and 1.4 M in Pretoria, the capital city⁸⁰.

South Africa's GDP per capita (PPP) is USD 11,000 (2011 estimate).⁸¹

1.8.6.2 Current status of telecom market

General Assessment⁸²: the system is the best developed and most modern in Africa.

Domestic Telecommunications: combined fixed-line and mobile-cellular teledensity is roughly 110 telephones per 100 persons; consists of carrier-equipped open-wire lines, coaxial cables, microwave radio relay links, fiber-optic cable, radiotelephone communication stations, and wireless local loops;

- Approximately 4.2 M fixed lines (2010)⁸³
- Wireline market penetration⁸⁴(YE2011): 9.0%
- 1 main fixed line operator: Telkom South Africa

Mobile (cellular) communications:

- 63.3M subscribers⁸⁵ (YE2011)
- Wireless market penetration YE 2011: 125.1%⁸⁶
- 3 Main Operators⁸⁷:
 - Vodacom with approximately 50% market share

⁸⁰ CIA World Factbook 2012

⁸¹ *Id.*

⁸² *Id.*

⁸³ CIA World Factbook 2012

⁸⁴ Global Wireless Matrix 1Q2012

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ *Id.*

-
- MTN, with approximately 35% market share
 - Cell-C, owned by Oger Telecom, with approximately 13% market share
 - the most recent entrant 8ta, owned by Telkom
 - Virgin Mobile, the MVNO using Cell-C network

Internet⁸⁸:

- Hosts: 4.8 M (2011)
- Users: 4.4 M (2009)

The South African telecommunications market is one of the most modern and best developed markets in Africa. In 1996, the Telecommunications Act was amended and formed the basis of the market liberalization and privatization of the state owned fixed line provider Telkom. The Independent Communications Authority of South Africa (ICASA) was set up in 2000 and has been tasked with the administration of government policy, issuing licences, frequency management and the implementation of the Telecommunications Act. The Electronic Communications Act of 2005 introduced a converged unified licensing regime and witnessed the surge of hundreds of alternative service providers.

Today, there are fixed lines provided mainly by Telkom, the state owned operator who had a monopoly through to 2006. The second fixed line operator, Neotel, majority-owned by India's Tata Communications, has only recently started to pick up and currently boasts with a market share below 15%.

Despite government efforts to enhance the broadband offering through the newly created Broadband InfraCo⁸⁹, a national infrastructure company, which is to provide cheap backbone network capacity to service providers, fibre to the home is yet to become a reality. However, hopes are put into 3G mobile broadband which is slowly surging ahead of DSL.

1.8.6.3 Fund background

The original Universal Service Access Fund (**USAF**) was originally set up in 1997 in accordance with the 1996 Telecommunications Act, as amended in 2001, and the associated USAF Regulations of 1999. The Electronic Communications Act of 2005 (**ECA**) established the Universal Service and Access Agency of South Africa (**USAASA**), a separate legal entity responsible for promoting universal service and access in the country, to administer the USAF. The Universal Service and Access Fund Contributions Regulation (Government Gazette No. 34010 of 10 February 2011) prescribe the annual contributions to be paid to the USAF. The Minister of Communications appoints the USAASA Board, who retains the full and effective control and monitors the executive management and decisions of the Agency.

USAASA is funded by contributions from licensed operators of electronic communication services and networks. Broadcasting licensees also contribute to the Fund or offset the contribution against a contribution to a broadcasting sector Media Development and Diversity Fund ("MDDA"). The NRA, ICASA collects the contributions from licensees and sends them to the National Treasury.

⁸⁸ CIA World Factbook 2012

⁸⁹ Broadband InfraCo is still in search of an appropriate structure for funding the required investment

ICASA determines the basis of operators' contributions, which may not exceed one per cent of their annual turnover. Currently, based on the 2011 USAF Contributions Regulation, the contribution is set at 0.2% of annual turnover, paid on an annual basis, which is defined as total revenue from licensed activity, less service provider discounts, agency fees, interconnection, facilities leasing charges, government grants and subsidies.

Section 88 of the ECA stipulates that the Fund should be used exclusively for payment of subsidies in the following manner:

- To assist needy persons towards the cost of provision to, or the use by, them of broadcasting and electronic communications services
- To public schools and public Further Education and Training (FET) Institutions for the procurement of broadcasting and electronic communication services and access to electronic communication networks
- For the establishment and operation of broadcasting services and for the establishment and operation, including training of and the payment of allowances to personnel, of centres where access to electronic communication networks can be obtained
- To any broadcasting service licensee and electronic communications network service licensee for the purpose of financing the construction or extension of electronic communications networks in under-served areas

Projects are awarded through a competitive bid. USAASA manages the funds and identifies suitable projects in terms of the requirements of ECA that are eligible for a subsidy.

One of the main areas has been to provide incentives to electronic communications network service licensees to construct operate and maintain electronic communications networks in underserved areas through the award of project grants. For the disbursement of universal service funds under this approach, USAASA applies a range of criteria including:

- the scope of the electronic communications network service licensee's proposal, including the electronic communications network proposed for construction in the underserved area and the specific technologies proposed
- any electronic communications services the electronic communications network service licensee proposes to offer in terms of its electronic communications service licence or other licence held by the electronic communications network service licensee
- terms and conditions relating to any proposed services, including wholesale and retail pricing, considering the lack of competitive electronic communications networks and services in the targeted under-served area

1.8.6.4 Current status of the fund

The USAF was relatively active until late 2011, at which time the Board was dismissed in its entirety and interim executive caretakers appointed. The Minister responsible for the USAF, the Honourable Dina Deliwe Pule, stated the

following in the 2011 – 2012 Annual Report⁹⁰.” *To this end, the 2011/2012 was a difficult year for USAASA, marked with suspension of the Executive leadership of the agency due to maladministration and corruption. Owing to this status, the USAASA board was dissolved on the 23rd November 2011. A forensic audit is underway along with a review of actions, compliance and skill sets within the USAASA.*

However, the fund is currently involved in the following projects that were initiated prior to the dissolution of the board⁹¹:

1. **Handover Project** for unsustainable access centres that are not self-efficient (Tele-centres and School Cyber labs), including rehabilitation, training and skills development, governance and operational structures, and deployment of more access centres
2. **Rapid Deployment Project** designed to, via public bids, rapidly deploy sustainable public access technologies, ensure the deployment of innovative technologies and stimulate entrepreneurship in under-serviced areas
3. **Set-Top Box** Subsidy project seeking to ensure an efficient process of providing subsidies to poor TV-owning households (there are over 810,000 concessionary TV licence holders) to facilitate the “Broadcasting Digital Migration Policy of South Africa”

The amount currently held in the USAF is not publically available and various estimates exist. According to the USAASA 2009/2010 Annual Report, the latest published surplus for the year 2010 was **R15.4M (USD 1.8M)**. Estimated operator contributions in 2010 from other sources are in the neighbourhood of **R 225.0M (USD 27.1M)**. The most recent report for 2011 to 2012⁹² indicated that the budgeted amount for 2011 was R 260.9M (**USD 28.8M**) with virtually the whole amount: R 256 M (**USD 28.2M**) remaining unspent. This is largely due to the dismissal of the Board as referenced above and the suspension of additional projects until the forensic review has been conducted. It is important to note that the amounts displayed in the annual reports (when published) refer to ‘**budgeted** amounts’ as opposed to **total amount collected**. It cannot be determined at this stage whether budgeted and collected amounts are the same. Due to the overall lack of transparency in the reporting, there have been many estimates made regarding the amount of money sitting in the fund. A number of sources believe that there is somewhere in the neighbourhood of R 1.7B – 2.2B (**USD 187.5 M – 242.7 M**) remaining in the fund, with **estimated** contributions by the mobile operators alone totalling approximately R 1.45 B (**USD 159.9 M**).

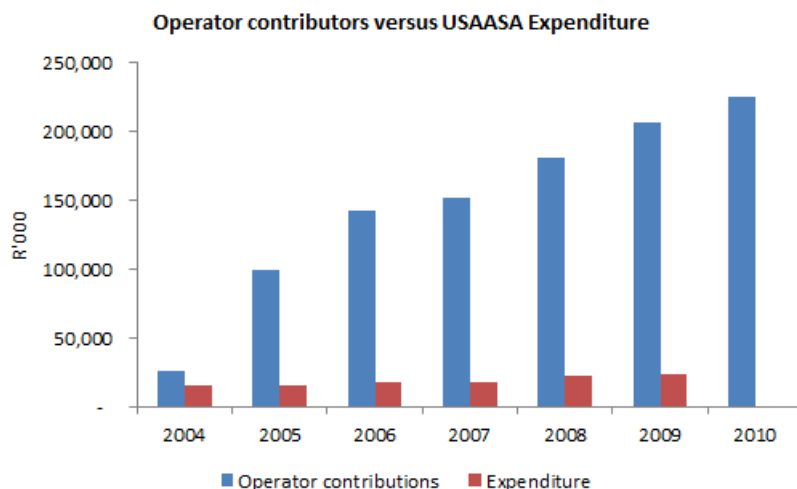
The following graph shows one assessment of the relationship between the level of operator contributions received versus the level of disbursements achieved by the Fund⁹³. This translates into an estimated amount of between **USD 27.4M** and **30.4M**. Irrespective of whether this graph reflects the correct amounts,

⁹⁰ USAASA Annual Report 2011 - 2012

⁹¹ USAASA's website

⁹² USAASA Annual Report 2011 - 2012

⁹³ The relevance of public access services and universal service obligations in light of increased mobile market penetration – Dr. Kammy Naidoo
Lirneasia November 2011



Source: Limeasia

The overall Governmental Policy on Universal Service and Access Obligation has been under review and subject to a consultation process published by ICASA on August 17, 2010. At the heart of the debate is whether South Africa should retain a system of imposing Universal Service and Access Obligations on licensees or whether it should adopt a purely competitive process using funds from the USAF and letting operators voluntarily assume obligations through selected subsidized projects. However, based on the additional reviews announced after the Board dissolution, the outcome of the consultation is likely to take longer.

1.8.6.5 What the fund has achieved to date

The USAF has been active with mixed results. It started its activity, including funds disbursement in 1998. Historically, USAASA has been seen as a 'Tele-centre' Agency and involved only in small initiatives such as Tele-centre and Cyber lab projects and the funding of Under-Served Area licensees. These did not achieve the penetration levels expected.⁹⁴

Under-served Area Licences

In November 2001, amendments to the Telecommunications Act created a new licence category, the "under-served area licence" (USAL). The goal was to stir the growth of telecommunications services in under-served areas, which were defined as areas with less than five per cent teledensity during a period of three years. Under the scheme, certain small and medium-sized enterprises were allowed to apply for licences to provide telecommunications services in these under-served areas. The USAL allowed them to offer services such as VoIP, fixed mobile service and public pay telephones. USAL licensees were nevertheless required to transport their long distance traffic through the trunk networks of any of the national fixed and mobile operators and, internationally, through three designated international gateway licensees.

A fixed subsidy of R15 M (approximately USD 2.0M) was given to each of the seven winning bidders for the Under-Served Area Licence (USAL), to be used on infrastructure development for a period of three years⁹⁵. However,

⁹⁴ USAASA 2009/2010 Annual Report

⁹⁵ USAASA 2009/2010 Annual Report

USALs have not proven to be financially viable. After in-depth review, it was decided that funding be suspended until a sustainable model on the business case, regulatory, financial support and policy was developed and in 2007, the government directed ICASA to merge USALs and issue one Provincial Under-Serviced Area Network Operator (PUSANO) licence in provinces where there is more than one licence. The ECA obliged the USALs to convert their licences into one of the new categories established under the Act. Of the seven originally USALS that were licensed, only one was still providing retail services by the end of 2009.

Tele-centres and Cyber-labs:

Tele-centres are intended to provide communities with a wide range of services including computer services, telephones, fax, Internet access, email, typing, printing and photocopying and use of video facilities such as video recorders and DVD players. School Cyber labs are expected to provide ICT services and computer literacy training to the school community. The school owns the Cyber lab and is responsible for all maintenance costs except Internet connectivity for the first 12 months. The intention is that, thereafter, the school becomes completely responsible for the Cyber lab. The USAASA is responsible for the installation of network points, air-conditioners and provides security for the facility.

The USAF was intended to provide support for the development of a Community Digital Hub. This is a concept of community centres deployed in rural areas and is an advanced ICT facility to provide technical support to remote Tele-centres and Cyber labs. The support provided by the hub includes content development and delivery of various applications (such as e-government services, e-education, e-health, e-business development, e-agriculture, etc.).

However, projects have been delayed, roll-out has been inefficient and tele-centres and cyber labs have not been conceptualized to remain sustainable and self-efficient. In its 2008/2009 Annual Report, USAASA reported that it had spent more than R150 million (USD 17.9M) over the previous few years in the rehabilitation and maintenance of these facilities. The assessment showed that access centres face various challenges including lack of technical and management skills, poor sustainability, shortage of resources, governance, public awareness and poor uptake and usage of the facility.

In 2009, USAASA initiated a strategy for the handover of community ICT Access Centres and school Cyber labs to the relevant groups and the Department of Education. The handover was delayed as a result of longer procurement processes. By the end of 2010, only the priority projects had been completed (audit of 154 Access Centres, rehabilitation of obsolete equipment and handover of 100 schools and 38 Access Centres).

During the course of 2010, the USAF engaged in the following:

- Disbursement of Internet access subsidies to facilitate the provision of Internet connectivity to school Cyber labs and Community Access Centres at e-rated⁹⁶ or (50% discounted) prices.
- Tenders for the rapid deployment of new community Access Centres in rural and under-serviced areas (with a target of 100 centres) have been put on hold and delayed.
- The USAF also undertook a project to develop a Universal Service and Access Fund Manual setting down procedures and to provide guidelines to beneficiaries on how to access the Fund

⁹⁶ Special discounted prices for Internet connectivity offered to certain public institutions

-
- Subsidies via USAF were provided to 18 Further Education and Training (FET) colleges in 2008 – 2010 to facilitate connectivity

Overall, tenders have been designed for and subsidies allocated to medium and small size licensees (companies such as Brentlana Technologies, Wi-Link Technologies, Annix Telecomms or Solaria Technologies). For example, by 2009, the USAF had provided R38.4 M (USD 4.6M)⁹⁷ to small and medium black economic empowerment enterprises of which R7 M was spent on women-owned enterprises. The four major operators (MTN, Vodacom, Cell-C and Telkom) do not appear to have benefited from financing by the USAF.

South Africa's success in achieving high population coverage and penetration is due to factors such as a liberalized and competitive mobile telecommunications market since 1996, original roll-out and public access obligations in the mobile licences and high density population concentrations with mid-level per capita income. It cannot be attributed at this stage to the actions of the USAF.

Major operators were obliged to provision a high number of Community Service Telephones in Under-Serviced Areas under their original Mobile Cellular Telephone Service ("MCTS") licences issued under the Telecommunications Act, 1996 (subsequently substituted or converted into EC Act licences). In exchange for the 3G spectrum, obligations were imposed to provide Internet access to institutions of persons with disabilities, plus terminal equipment to facilitate such access, and Internet connectivity to thousands of public schools located in rural, under-served and non-serviced areas, plus terminal equipment to facilitate such access. In exchange for the right to the 1800 MHz spectrum, operators were mandated to provide and distribute millions of SIM card connection packages in under-serviced areas.

1.8.6.6 Other elements of interest

USAASA stated in 2009 that it was supposed to be allocated R400 M (USD 47.8M) by the National Treasury over the following three years to manage the subsidization of set top boxes for needy communities. Government has recently announced that it will use the USAF to subsidize acquisition of set top boxes by needy households in order to facilitate the process for digital migration. However, to date, the Digital Broadcasting Migration programme (along with other planned projects) has not been launched and no detailed information is available on the implementation of this plan likely due to the current frozen state of the USAF.⁹⁸

⁹⁷ USAASA 2009/2010 Annual Report

⁹⁸ Digital Migration Policy, General Notice No. 97 Government Gazette No. 35014 of 7 February 2012

1.8.7 Uganda



1.8.7.1 Country overview

A landlocked country in East-Central Africa, Uganda borders the Democratic Republic of the Congo, Kenya, Rwanda, South Sudan and Tanzania. Its area is made up of mainly plateaus with a rim of mountains and many lakes and rivers. Uganda's estimated 35.9 M population is mainly rural with only 13% living in cities, out of which Kampala, the capital, has 1.5 M inhabitants.

Uganda's GDP per capita (PPP) is USD 1300 (2011 estimate).⁹⁹

1.8.7.2 Current status of telecom market

General Assessment¹⁰⁰: mobile cellular service is increasing rapidly, but the number of main lines is still deficient; work underway on a national backbone information and communications technology infrastructure; international phone networks and Internet connectivity provided through satellite and VSAT applications

Domestic Telecommunications¹⁰¹: intercity traffic by wire, microwave radio relay, and radiotelephone communication stations, fixed and mobile-cellular systems for short-range traffic; mobile-cellular teledensity about 40 per 100 persons in 2010.

- Approximately 327,100 fixed lines (2010)
- 2 main fixed line operators: UTL and MTN

Mobile (cellular) communications:

- 12.8M subscribers¹⁰² (YE2010)
- Market Penetration YE 2011: 34%¹⁰³
- 5 Main Operators
 - MTN Uganda, with slightly more than 60% market share
 - Zain, with just under 20% market share
 - the balance is divided between Warid, UTL and Orange respectively

Other entrants include: Hits Telecom, i-Telecom and Smile Telecom¹⁰⁴.

⁹⁹ CIA World Factbook 2012

¹⁰⁰ Id

¹⁰¹ Id.

¹⁰² CIA World Factbook 2012

¹⁰³: GSMA Wireless Intelligence

Internet¹⁰⁵:

- Hosts: 33,082 (2011)
- Users: 3.2 M (2009)

Although Uganda is one of the smallest markets in the region, it is also one of the fastest growing markets in Africa. It started to liberalize its telecommunications market in the early 1990's when Celtel (now Airtel), as the first mobile company in Uganda, obtained a Cellular Telecommunications Operator licence in 1993 and launched service in 1995. The Uganda Communications Commission (**UCC**) was established in 1998 by the Uganda Communications Act (Cap 106 Laws of Uganda) to facilitate and enable the development of a modern communications sector and infrastructure in the country. MTN entered the market in 1998, followed by Uganda Telecom (**UTL**) in 2001, Warid Telecom in 2008 and HiTS Telecom, in which France Telecom's mobile unit Orange bought a majority stake in 2009.¹⁰⁶

Despite the intensified competition leading to price wars, which have accelerated subscriber growth, the market penetration is still well below the African average.

1.8.7.3 Fund background

The 1997 Uganda Communications Act outlined the principles of universal service and envisaged financing through a universal service fund. These principles were then incorporated in the first Rural Communications Development Fund Policy of 2001. The current Rural Communications Development Fund (**RCDF**) was established under the Communications (Establishment and Management of the Rural Communications Development Fund) Instrument, 2002, and has been fully operational since 2003. The 2005 Communications (Universal Service) Regulations outline a comprehensive universal service policy for Uganda.¹⁰⁷ The regulations noted that the Uganda Communications Commission (UCC) was to support the provision of universal service obligations by the operators, and that the UCC shall implement the universal service obligations through the RCDF.

The Rural Communications Development Fund is an internal unit and account managed by the Manager of the RCDF under the UCC who is responsible for the establishment and overall administration of the Fund. The UCC appoints a Board that consists of representatives of the UCC, including the Chairman of the Board and the Executive Director, the Uganda Postal sector, Uganda Consumer Protection Association, Uganda Institution of Professional Engineers, the Uganda Institute of Bankers and the Ministry of ICT. The Board is responsible for the execution of the strategy for the RCDF. The Board reports to the UCC and manages the Fund in accordance with UCC's approved policies and procedures. UCC also appoints a RCDF manager and allocates its staff. The key role of the RCDF manager and his unit is to manage the RCDF programme and activities, to implement and administer the programme and the related activities and to manage the finances of the RCDF.

¹⁰⁴ Ratio Magazine, <http://www.ratio-magazine.com/201009223662/Uganda/Uganda-Where-is-the-Space-for-Competition-in-Uganda-s-Mobile-Market.html>

¹⁰⁵ CIA World Factbook 2012

¹⁰⁶ Insights to the African telecom market 2011: Analysis, forecasts and commentary, by TelecomsMarketResearch.com, in association with Buddecomm, August 2011

¹⁰⁷ The Communications (Universal Service) Regulations of 2005

One of the main objectives of UCC is the enabling of Universal Access (UA) to communications in Uganda. Prior to liberalization of the communications sector, Universal Service Obligations were included in licences of operators and service providers for areas and services that were not economically viable. Under the liberalized environment, operators are generally free to choose areas that they operate in. These areas are mainly determined by their economic viability, while those areas that they chose not to operate in become underserved or unserved.¹⁰⁸

The universal service obligation is defined in the 2005 Regulations as a minimum set of services of specified quality, which is available to all users independent of their geographical location at an affordable price, in particular:

- Connection to a fixed communications network able to support voice telephony, fax and data transmission
- Reasonable geographic access to public call boxes throughout Uganda
- Ability of consumers to access emergency and free services, operator assistance and directory enquiry services
- Ability to meet the needs of people with disabilities
- Delivery of affordable basic communication services to all customers upon reasonable request
- Provide customers with disabilities with the same or equivalent services as all other customers so as to have access to the same level of universal service
- Reasonable geographic access to basic postal services across the country; as well as reasonable levels of access to payphones for all in Uganda on an equitable basis

Currently, all operators, including the postal service couriers and ISPs, contribute one per cent (1%)¹⁰⁹ of their Gross Annual Revenue, net of interconnection payments, to the RCDF. The RCDF may also receive financing appropriated by the Ugandan Parliament through the national budget, as well as donations and grants from development partners, and gifts and loans deemed acceptable to the Minister of ICT and the Finance Minister. The World Bank has provided about 30% of the financing through its grants¹¹⁰.

According to the 2005 Regulations, the UCC can designate an operator as a universal service provider who would then have an obligation to provide universal services on a nation-wide basis or in a specified universal service area and ought to establish a mechanism for sharing the net costs of supporting the universal service obligation (i.e., difference between the net cost of operating for an operator with the universal service obligation and operating without the universal service obligation) such that the universal service obligation does not represent an unfair burden. UCC determines subsidies for each universal service area with respect to each service obligation.

The RCDF develops appropriate ICT projects for the underserved and un-served areas. RCDF then forms Public and/or Private Partnerships to implement those projects. Normally, the RCDF contributes technical support and a subsidy into the partnership. The partner contributes ownership and financial support amongst other things. The partners are selected on a competitive basis in accordance with provisions of the Public Procurement and Disposal Act of 2003 and the projects are normally operated for a period of five years.¹¹¹ Operators can access the funds

¹⁰⁸ RCDF Statement 2011

¹⁰⁹ UCC Determination based on the 2005 Communications (Universal Service) Regulations outline a comprehensive universal service policy for Uganda

¹¹⁰ ICT Regulation Toolkit, www.ictregulationtoolkit.org/en

¹¹¹ RCDF Statement 2011

through a competitive public open bidding process when a request for a bid is issued by the RCDF. The bids are awarded mainly based on the least subsidy requested from qualified bidders. Although operators are not included in the governance structure of the RCDF, in practice, the project selection is shared with operators, e.g., for roll out requirements, operators can indicate areas that are already covered or that they plan to cover.

1.8.7.4 Current status of the fund

The Fund has been very active and is often cited as an example of a well-functioning Fund in the emerging markets. Building on the success realized in Phase I of the RCDF Policy (2003-2009), Phase II of the RCDF Policy (2010-14) is now underway and aims to increase the scope of projects implemented under RCDF Policy I: enhance internet connectivity across the country and the delivery of content using ICT throughout the country. This includes programmes such as ICT training centres and the internet cafes programme.

The actual Fund's expenditure on RCDF projects for the period 2002/3 to 2010/11 has been approximately **USD 40M** (including the provision for 2010/2011).¹¹² This represents approximately 85% of the total Fund's revenue. As previously stated, the World Bank financing comprises about 30% of the total financing.

1.8.7.5 What the fund has achieved to date

The RCDF has financed projects to provide telephony, Internet access, Internet POPs, and Internet exchange points and content development. Funds have been available for areas where service provision is not feasible or unlikely to be provided by the operators in the next one to two years without a subsidy. In fact, 154 underserved sub counties of Uganda have been identified and divided into three universal access areas. Between 2003 and 2009, the focus of RCDF projects was on ensuring access to ICT services for the underserved areas. Subsequently, the RCDF project focus shifted to ensuring usage of ICT services.

Approximately 5,482 projects have been accomplished by the end of 2010/11¹¹³:

- 106 Internet cafes
- 175 health ICT facilities
- 78 ICT training centres
- 76 Internet POPs
- 13 multi-purpose community tele-centres (MCTs)
- 45 postal tele-centres
- 708 school ICT labs
- 78 web portals
- 4,099 public pay phones
- 90 GSM sites
- 6 content development initiatives
- 2 local governance (provision of ICT to resident District Commissioners and constituency Members of Parliament)

¹¹² RCDF Annual Report 2009/2010

¹¹³ RCDF Annual Report 2009/2010

-
- 6 unique projects (establishment of ICT labs in universities and tertiary Institutions of learning in Uganda)

In the educational sector, there were 823 ICT laboratories completed, with 76 more laboratories under way; 335 Internet connections completed, with 488 more under way and 665 teachers re-trained, with 135 under way by March 2011. By March 2012, there were 252 completed solar powered ICT laboratories for schools and 195 under installation; and 252 completed grid powered ICT laboratories and 72 under installation.

Funds have been distributed to UTL, MTN, some Internet Service Providers and independent companies through competitive bidding. For example: since 2003 to 2011, some 174 Internet connectivity facilities have been established by UCC/RCDF in partnership with MTN throughout the country. MTN had increased the value-added services of such facilities by adding mobile-money, dealership and foreign exchange bureau services to the provision of Internet and ICT training.¹¹⁴ In 2011, UCC contributed USD 12,000 towards the establishment of the Mpondwe ICT Training Centre plus a facility worth USD 24,000 that aims to extend the use of internet services in rural Uganda. MTN won the bid to establish these cafes through a competitive bidding process. Also, MTN has led the MTN Village Phone project, built on the foundation of microcredit and synergies of different partners including the Grameen Foundation, MFIs and Village Phone Operators. 9,000 of these cafes were installed between 2003 and 2007, which was 3,000 above the plan and these are now fully profitable and self-sustaining businesses.

Overall, the RCDF has contributed to bringing communications facilities and services within the reach of the local communities by enlisting private sector players to invest in the underserved areas. Some of the local population has been able to receive ICT training, leading to both direct and indirect employment opportunities for the local population.

According to the UCC Annual Report 2009/2010, the direct impact of the RCDF projects has been the following:

- Extension of the wireless voice network for Uganda from 85% to 100% at the sub county level
- Provision of a wireless Internet network (broadband) in all 80 district towns of Uganda that were in existence as of 2008
- Providing the required ICT infrastructure for ICT integration into the secondary school curriculum of Uganda
- Enabling Tele-medicine usage in all district health facilities of Uganda through the provision of the required ICT infrastructure
- Due to the low energy requirements and the reduced amount of hardware per user, most RCDF projects also provide an exemplification of the more environmentally efficient applications of ICT

Nonetheless, the Fund has been facing numerous challenges:

- Very low incomes of the majority of the rural population
- Lack of or insufficient power supplies
- Illiteracy and ignorance of the benefits presented by ICTs
- High connectivity costs and lack of local content for the Internet

¹¹⁴ RCDF Statement 2011

The impact of the Fund's projects is regularly evaluated and attempts have been made to address these challenges by using low energy (solar-powered) computers, sharing technologies or RCDF-supported Internet Points of Presence.

RCDF has also been recognized among all other USFs in the world for being the only USF that has been able to absorb all funds at its disposal and to attract the biggest amount of development partner funds (USD 15M).¹¹⁵

1.8.7.6 Other elements of interest

Although highly successful in collection and disbursement with its least cost subsidy auction strategy stimulating extensive national network rollout, there is a lack of evidence of a systematic impact of its activities, as rural penetration remains very low and most people in rural areas still do not have access to basic communications. Also, despite the introduction of competition through the unified licensing regime, the Ugandan telecommunications market remains highly concentrated with MTN Uganda having over 60% of the mobile voice market share and Telekom Uganda Limited the majority of the fixed voice market, thereby leaving these two operators as the only main contenders in the universal service project bids.

¹¹⁵ UCC Annual Report 2009/2010

1.9 Asia Pacific

1.9.1 Australia



1.9.1.1 Country overview

The Commonwealth of Australia is the sixth largest country in the world with a total land mass of 7,741,220 sq.km. It is comprised of six states and two territories. The total population is estimated to be 22.0M of which 89% is urbanized (2010). Principal cities include: Sydney 4.4 M; Melbourne 3.9 M; Brisbane 2.0 M; Perth 1.6 M; and Canberra (capital) 0.4 M (2009)¹¹⁶.

Australia's GDP per capita (PPP) is USD 40,800 (2011 estimate).¹¹⁷

1.9.1.2 Current status of telecom market

General Assessment: Excellent domestic and international service

Domestic Telecommunications: Domestic satellite system; significant use of radiotelephone in areas of low population density; rapid growth of mobile telephones¹¹⁸.

- Approximately 8.7 M fixed lines (2010)
- Wireline penetration as of YE 2011: 48.6%¹¹⁹
- Main fixed line operator: Telstra

Mobile (cellular) communications

- 29.6 M subscribers (YE2011)¹²⁰
- Wireless market penetration (YE2011): 131.6%¹²¹
- 3 Main Mobile Operators:
 - Telstra – approximately 45% market share
 - Optus – approximately 32% market share
 - Vodafone – approximately 23% market share

¹¹⁶ CIA World Factbook 2012

¹¹⁷ Id.

¹¹⁸ Id.

¹¹⁹ 1Q2012 Global Wireless Matrix

¹²⁰ Id.

¹²¹ Id.

Internet¹²²

- Hosts: 17.0 M (2011)
- Users: 15.8 M (2009)

The Telecommunications Act of 1997 regulates telecommunications carriage and content whereas television and radio industry content and structure is regulated under the Broadcasting Act of 1992. The Radiocommunications Act of 1992 regulates spectrum. In 2005, the telecommunications regulator, the Australian Communications Authority (ACA) and the broadcasting regulator, the Australian Broadcasting Authority (ABA) were merged into a converged regulator now known as the Australian Communications and Media Authority (ACMA).

1.9.1.3 Fund background

The original Universal Service Obligation (USO) and associated legislative arrangements were incorporated in the Telecommunications (Consumer Protection and Service Standards) Act of 1999 to ensure that all Australians, no matter where they live within the country, would have reasonable access on an equitable basis, wherever they reside or carry on business, to standard telephone services, payphones and prescribed carriage services. The Minister for Communications, Information Technology and the Arts determined that Telstra would be the primary universal service provider for the entire country with regards to these service obligations. As of the July 1, 2005, merger of the Australian Broadcasting Authority and the Australian Communications Authority, the new regulatory authority, the ACMA (Australian Communications and Media Authority) assumed responsibility for overseeing compliance and enforcement of the USO.

Under the same previously referenced Consumer Protection Act, the telecommunications industry contributes funding towards the delivery of the USO through levy arrangements. The USO levy is applied to licensed carriers depending on their market share of eligible revenue. For instance, in June 2011, ACMA issued a written assessment of each carrier's eligible revenue for the 2009-2010 period. This was then used to determine the amounts each carrier had to contribute in the form of the USO levy for the 2010-11 period.

It is important to note that these USO regulatory arrangements as envisaged in the 1999 Telecommunications Act were designed for a market where there was a vertically integrated operator of a national telecommunications network. Given the dynamic changes to the Australian telecommunications environment after the Act was established, namely, the transition from a regulatory regime focused on voice telephony to one covering a wide range of services, including text, images, video and VoIP, these changes resulted in a number of key policy and regulatory issues related to the USO as well as many other matters.

These issues were discussed in regional consultations around the country and the input received seemed to reflect that the existing regime often confused consumers and frustrated industry. In particular, it was found that the 1999 USO scheme was not working well. Nearly all stakeholders were dissatisfied with the USO framework as it was viewed as neither practical nor functional for modern telecommunications¹²³.

¹²² CIA World Factbook 2012

¹²³ Regional Telecommunications Independent Review – September 2008 – Dr. William J. Glasson and others

1.9.1.4 Current status of the fund

Based on the regional consultations and other considerations, the Australian government launched a series of changes to the USO scheme as well as many other aspects of the existing regulatory framework. One of the key elements of the revised framework was the announcement of the creation of the National Broadband Network (NBN) - a new high-speed broadband network comprised of fibre-optics, fixed wireless and next-generation satellite all intended to provide faster, more reliable broadband access to all Australian premises. It should be noted that the concept of a national broadband network remains controversial and there have been several previous failed attempts to introduce a broadband network prior to the introduction of the NBN.

The NBN will be Australia's first national wholesale-only, open access, high-speed broadband network. NBN Co Limited is the company established by the government to design, build and operate the NBN (it is estimated that the will take ten years in total). It will roll out the network and sell wholesale services at a uniform price to service providers, who will, in turn, offer retail services to the consumer¹²⁴. The construction of the network will be funded primarily by the government with some private sector participation. According to the Australian government, this is a significant structural change to Australia's telecommunications industry, aimed at encouraging competition in the market. Under the NBN framework:

- 93 per cent of premises will have access to the NBN through fibre-optic to the premises, capable of providing broadband speeds of up to one gigabit per second
- seven per cent of premises will have access to the NBN through next-generation, high-speed fixed wireless and satellite technologies, providing peak speeds of 12 megabits per second

In addition to the creation of the NBN, the Telecommunications Universal Service Management Agency Bill 2011 forms part of a package of legislation to achieve continuity of key telecommunications safeguards in the transition to the NBN. The other bills in the package are the Telecommunications Legislation Amendment (Universal Service Reform) Bill 2011 and the Telecommunications (Industry Levy Bill) 2011 (the Levy Bill).

This legislation includes the following:

- Provides for the establishment of the Telecommunications Universal Service Management Agency (TUSMA) as the statutory agency that will have the responsibility for the effective implementation and administration of service agreements or grants that deliver universal service and other public policy telecommunications outcomes
- Establishes TUSMA's corporate governance structure and reporting and accountability requirements
- Provides for the Minister, subject to the scrutiny of Parliament, to set the standards, rules and minimum benchmarks for TUSMA's contracts and grants
- Sets out arrangements for consolidating the two current Universal Service Obligation (USO) and National Relay

¹²⁴ <http://www.nbn.gov.au/2012/04/27/what-is-the-national-broadband-network>

Service (NRS)¹²⁵ industry levy regimes into a single regime to contribute funding towards TUSMA's costs.

The principal functions of TUSMA will be conferred on the Chair and members of TUSMA, who will be appointed on a part-time basis. The Chair and members will be able to delegate responsibilities to the CEO and to the staff of TUSMA. The CEO will be the person responsible for the day to day administration of the agency. TUSMA's staff will be appointed under the Public Service Act of 1999.

It was expected that TUSMA would commence operations by July 1, 2012, and from this date, it will have responsibility for delivering, through contracts or grants, universal service outcomes, the emergency call service, the NRS, migration of voice-only customers and the development of any necessary technological solutions for continuity of public interest services. The legislated responsibility for providing standard telephone services to premises within the NBN fibre coverage areas will remain with Telstra until the NBN has been rolled out in the relevant area. Once the NBN fibre network has been rolled out in an area, responsibility for ensuring the delivery of standard telephone services will fall to TUSMA.

The Universal Service Reform Bill also introduces a framework under which, after an initial commencement period for the new regime, the Minister may permit USO regulatory obligations to be progressively lifted from Telstra, subject to a number of preconditions being met in relation to Telstra's contractual and regulatory compliance and performance. Lifting of the regulated USO is linked to the rollout of the NBN and the progressive structural separation of Telstra. The Universal Service Reform Bill also includes a number of related amendments to phase out the USO and NRS levies and to ensure that the Australian Communications and Media Authority (ACMA) can effectively enforce the industry levy arrangements in the Bill¹²⁶. In this regard, the service delivery arrangements for the USO will transition to a model that is similar to the current arrangements for the provision of the NRS, in that the Government will contract with service providers for the supply of these important services. The new Bill also includes the determination of the subsidy amount (USO levy) and the determination of each carrier's contribution, which will be made three years in advance. In June 2011, the Government announced it would contribute budget funding to the costs of universal service. It committed **AUD 50M** (approximately USD 50.7M) for the 2012/2013 period and **AUD 100M** (approximately USD 101.4M) per annum for subsequent years. In 2011, the contributions collected in the fiscal year 2010 - 2011 was a total **USD 146.0M**.

1.9.1.5 What the USF has achieved to date

Telstra, the only provider of the USO prior to the introduction of the new law, achieved its goal of providing basic telephone services to all Australians irrespective of where they live or the economic resources available. The provision of a basic telephone service in a monopoly environment was not difficult to achieve, but by 2002, technological advances had already made this single goal outdated. The ongoing changes in the telecommunications market made the USO less relevant in its current form as it could not necessarily provide all of the competitive new options that were arising with a wider range of products and diverse demands. It is also noted that although mobile penetration in Australia achieved a 98% level, other services, such as internet connections, for example, were accessible to only 45% of the population in remote indigenous communities.

¹²⁵ The NRS is an Australian Government initiative to provide telecommunications and relay services for the hearing impaired. Like the USO, it is funded by a levy on eligible telecommunications carriers; <http://www.relayservice.com.au/>

¹²⁶ Explanatory Memorandum – for TUSMA – aph.gov.au, ACCAM – TUSMA – Comments sent to Senate

1.9.1.6 Other elements of interest

The rollout of the NBN will result in a fundamental change to the structure of the Australian telecommunications market with Telstra's national copper fixed line network being progressively decommissioned as NBN Co. rolls out its next generation fibre network nationally. It is not yet clear as to the role that the USO will play in light of the NBN initiative. Presumably, this will be one of the major issues to be addressed by TUSMA. However, it is expected that Telstra (as the Primary Universal Service Provider) will generally continue to have an obligation to provide standard telephone services and payphone services.

1.9.2 India



1.9.2.1 Country overview

The Republic of India, commonly referred to as India, is located in southern Asia, bordering the Arabian Sea and the Bay of Bengal, between Burma and Pakistan. With an area of 3,287,263 sq. km., India is slightly more than one-third the size of the United States. The total population of 1.2 billion lives primarily in rural areas, with only approximately 30% living in urban areas. India's urban population is concentrated primarily in the cities of New Delhi (the capital) with 21.7 M inhabitants; Mumbai, 19.7 M; Kolkata, 15.3 M; Chennai 7.4 M; and Bangalore with 7.1 M.

India's GDP per capita (PPP) is USD 3700 (2011 estimate).¹²⁷

1.9.2.2 Current status of telecom market

General Assessment¹²⁸: Supported by recent deregulation and liberalization of telecommunications laws and policies, India has emerged as one of the fastest growing telecom markets in the world; total telephone subscribership base approached 800 million in 2010, an overall teledensity exceeding 65%, and subscribership is currently growing more than 20 million per month; urban teledensity now exceeds 100% and rural teledensity is about 30% and steadily growing

Domestic Telecommunications¹²⁹: Mobile cellular service was introduced in 1994 and organized nationwide into four metropolitan areas and 19 telecom circles, each with multiple private service providers and one or more state-owned service providers; in recent years significant trunk capacity added in the form of fibre-optic cable and one of the world's largest domestic satellite systems, the Indian National Satellite system (INSAT), with six satellites supporting 33,000 very small aperture terminals (VSAT).

- Approximately 35.1 M fixed lines (2010)¹³⁰
- Wireline market penetration (YE2011): 3%¹³¹
- Fixed line operators:
 - BSNL
 - MTNL
 - Bharti
 - HFCL (now Quadrant Televentures Ltd.)
 - Sistema

¹²⁷ CIA World Factbook 2012

¹²⁸ CIA World Factbook 2012

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ Global Wireless Matrix 1Q2012

-
- Tata
 - Reliance

Mobile (cellular) communications:

- 893.8M subscribers (YE2011)¹³²
- Wireless market penetration (YE2011): 74.0%¹³³
- Main Mobile Operators:
 - Bharti Airtel – 20% market share
 - RComm (Reliance) – 17% market share
 - Idea/Spice – 12% market share
 - BSNL – 11% market share
 - Others – 40% market share

Internet¹³⁴:

- Hosts: 6.7 M (2011)
- Users: 6.3 M (2009)

The Indian telecommunications market is governed by a number of statutes, rules and regulations that include:

- Indian Telegraph Act 1885
- Prasar Bharti Act of 1990
- National Telecom Policy of 1994, amended in 1999 (NTP)
- Cable Networks Act 1995
- Telecom Regulatory Authority of India (TRAI) Act of 1997
- Broadband Policy (2004)

The Department of Telecommunications, Ministry of Communications and IT (DoT) is responsible for the granting of licences for telecommunications services whereas the TRAI acts as the regulator for both the telecommunications and broadcasting industries.

1.9.2.3 Fund background

In 1999, the Union Cabinet approved the New Telecom Policy (NTP 99), establishing the Universal Service Obligation Fund (USOF) and setting out the goals to be achieved. The Universal Service Support Policy came into effect on April 2002. The Indian Telegraph Amendment Act ITR Amendment) 2003, gave legal status to the USOF on December 2003. The NTP 99 indicated that the USOF was established for the sole purpose of meeting the Universal Service Obligation by providing access to basic telephone services by:

- Provision of telephony and low speed data services to uncovered villages by 2002

¹³² *Id.*

¹³³ *Id.*

¹³⁴ CIA World Factbook 2012

-
- Achieve internet access in all district headquarters by 2002
 - Achieve telephone on demand in urban and rural areas by 2002

As per the Indian Telegraph (ITR) Amendment in 2004¹³⁵, and subsequent Amendments in 2006¹³⁶ and 2008, the following services are supported by the USOF:

- **Stream I:** Operation and maintenance of Village Public Telephones (VTP) and installation of VTP in additional revenue villages as per the 2001 Census. Provision of a second public telephone in villages where the population is more than 2000 and where no Public Call Office exists. Replacement of Multi Access Radio Relay Technology (MARR) VPTs installed before 2002.
- **Stream II:** Provision of household telephones in rural and remote areas as determined by the Central Government of India from time to time
- **Stream III:** Creation of infrastructure for provision of Mobile Services in rural and remote areas
- **Stream IV:** Provision of Broadband connectivity to villages in a phased manner
- **Stream V:** Creation of general infrastructure in rural areas for development of telecommunications facilities
- **Stream VI:** Introduction of new technological developments in the telecom sector in rural areas; pilot projects to establish new developments in the telecom sector

On November 2002, the Government of India, through the Department of Telecommunications, created the “Office of the Universal Service Fund Administrator” (OUSFA) which functions as an Attached Office to the Department of Telecommunications. The OUSFA has an administrator; a deputy administrator; directors as needed and support personnel. The Administrator chairs an Inter-Ministerial Advisory Committee formed by officers from the Ministry of Finance, Planning Commission, Ministry of Law, Department of Telecommunications, the Telecom Regulatory Authority of India and professionals/experts in the area of telecommunications, finance, economics and managers as required by the Administrator. The Administrator has full powers of implementation within the overall approved budget and in accordance with contracts/agreements signed with the successful bidders. However, for operation, technical and financial matters, the Administrator may consult with the Department of Telecommunications.

The USOF raises contributions through a Universal Service Levy (USL) which is fixed currently at five per cent (5%) of the Adjusted Gross Revenue of all telecom service providers, with the exception of operators providing pure value added services. In addition, the Central Government may contribute from time to time, giving grants and/or loans.

The functions of the USOF administration are as follows:

- Formulate USOF projects provided for in the ITR's in consultation with the telecom service providers and various stakeholders
- Design and carry out bidding process
- Enter into implementation agreements with Universal Service providers (USP's)
- Monitor implementation of USOF projects and distribute subsidies in accordance with the USOF agreements
- Design the format of various records and returns to be maintained by the USP's

¹³⁵ Prior to 2004, the USOF was limited to basic telephone services

¹³⁶ This amendment permitted the addition of support of mobile services and broadband connectivity

- Carry out post implementation review of USOF schemes
- Budgeting and auditing of USOF activities
- Interface with international organizations (e.g., ITU) and other USF's

Subsidy disbursement and monitoring is carried out by 22 field offices located throughout India.

1.9.2.4 Current status of the fund

The Indian USOF is fully active. The table below outlines the Collection of Universal Access Levies vis-à-vis the Allocation and Disbursement of the Fund in Crores Rupees (converted into USD in the bottom row). As per the Ministry of Finance, the reimbursement of license fees and spectrum charges, for a total amount of Rs. 6948.64, is taken into account in arriving at the total available balance. The total available Fund balance for the beginning of the Financial Year 2012-2013 is Rs.21839.45 (approximately **USD 3.9B**). The USF amount collected for the 2010- 2011 fiscal year is estimated to be Rs.336.56 (approximately **USD 594.6M**).

Financial Year	Funds Collected as UAL	Funds Allocated	Funds Disbursed	Reimbursement of LF and Spectrum Charges to BSLN	Balance
2002 - 2003	1653.61	300	300	2300	(946.39)
2003 - 2004	2143.22	200	200	2300	(356.78)
2004 - 2005	3457.73	1314.59	1314.59	1765.68	377.46
2005 - 2006	3215.13	1766.85	1766.85	582.96	865.32
2006 - 2007	3940.73	1500.00	1500.00	0	2440.73
2007 - 2008	5405.80	1290.00	1290.00	0	4115.80
2008 - 2009	5515.14	1600.00	1600.00	0	3915.14
2009 - 2010	5778.00	2400.00	2400.00	0	3378.00
2010 - 2011	6114.56	3100.00	3100.00	0	3014.56
2011 - 2012	6723.57	1687.96	1687.96	0	5035.61
Total	43947.49	15159.40	15159.40	6948.64	21839.45
Total In USD	7,877,150,000	2,717,170,000	2,717,170,000	1,245,470,0000	3,914,500,000

Source: USOF

As it has been from the outset, people in rural and remote areas of the country where ICT services are not available due to lack of commercial viability for a variety of reasons (e.g., sparse population, low income, difficult terrain, etc.) are the beneficiaries of the USOF.

On May 2010, the Telecommunication Regulatory Agency of India (TRAI) noted that the USOF's achievements regarding coverage obligations were falling behind and remained too urban centric. The TRAI attributed this to the roll out obligations prescribed in the USP licences which did not stipulate any conditions regarding rural coverage since the USP's were only mandated to provide coverage in the district headquarters or major towns. As a result, 15 years after the introduction of mobile services in the country, the rural teledensity in 2010 was still below 25, as operators licensed for more than five years had yet to cover a large number of villages.

The TRAI recommended a two-fold approach to addressing this challenge. One suggestion was to impose a full service obligation on the USP's for coverage of villages of more than 2000 people in a phased implementation. In order to facilitate the coverage, TRAI recommended that those licensees that had covered 50% of the villages with a population of 500 to 2000 were to be given a reduction of 0.5% in their annual licence fee and those who had covered 90% or more of the villages, should be given a two per cent (2%) discount in the annual licence fee.

Other TRAI recommendations regarding the USOF were as follows:

- To use the money in the Fund to provide broadband services to all villages having a population of more than 1000 to begin with and, later, to begin serving villages of 500
- To use funds to lay optical fibre cable from Block Headquarters to villages so as to fulfil the backhaul bandwidth requirement for provision of broadband in the rural areas
- Any other service use, if a commitment has already been agreed upon.
- Applications such as e-health, e-banking, e-commerce, e-education, e-governance are required to be developed and customized for local needs
- Installation of towers and related equipment in rural areas

All these recommendations have been incorporated in the USOF Plan for the upcoming years.

1.9.2.5 What the USF has achieved to date

- **Village Public Telephones:** Agreements were signed on March 2003 regarding public telephone access in the identified villages – 593,601 villages with more than 2000 inhabitants as per the Census. As of March 2012, 580,556 villages have access to services. Providers: BSNL, Reliance, Tata Teleservices, Bharti, HFCL, and Shyan Telecom.
- **Replacement of MARR based VPTs:** 186,872 village public telephones installed before April 2002 on MARR were to be replaced by reliable technology equipment as most of them no longer functioned. This number was later reduced to 185,121. As of March 2012, this total number of public telephones has been replaced.
- **Provision of Rural Community Phones:** Agreement to provide community phones to rural centres with more than 2000 people were signed in September 2004, in a period of three years. 100% provision was achieved.
- **Individual Access**
 - **Rural Household Direct Exchange Lines (RDELs):** Agreements were signed for installation during the period April 2005 to March 2007. These RDELs were to be installed in 1685 areas, where the cost of telephone connections were more than the revenue earned. The date to fulfil the agreements was later changed to March 2010, at which time the achievement was 100%.
 - **Mobile Infrastructure:** Under this initiative, 7387 mobile sites are being rolled out across 500

districts and 27 states, bringing mobile services to approximately 200,000 villages which had been devoid of service until then. It is a unique initiative as it is based on sharing of subsidized passive infrastructure (tower, boundary walls, electric connections, power backup, security cabin) by three telecom service providers that will put up their own active infrastructure (BTS, antenna, backhaul) and roll out wireless services. As of March 2012, 7306 towers had been commissioned. A second phase of this programme has been planned to be launched to cover even more sparsely populated uncovered areas¹³⁷.

As a result of these initiatives, the telecom providers have acquired better knowledge of the rural areas in India, and have been improving the quality of service and customer service, but there is still a long way to go. In the period from 2002 to 2010, 86.6 per cent of the total projects awarded were allocated to BSNL, with Reliance coming in second at six per cent of projects awarded¹³⁸.

1.9.2.6 Other elements of interest

Based on this proliferation of information and presentations emanating from the USOF, the Fund appears to be active with many planned ambitious undertakings. In its various presentations¹³⁹ the USOF lists many potential projects in the pipeline (e.g., rural office connectivity, improved ICT access for the disabled, renewable energy to sustain delivery of rural telecom networks, gender specific initiatives, etc.), but many of the initiatives appear to be either frozen at the conceptual stage or still in a pilot trial mode. In addition, the reported collection, allocation and disbursement of funds would seem to indicate that the Fund is actually using only about 50% of the monies collected to date.

In addition, while it would appear that some specific USOF programmes are being completed (as indicated in the previous section), the completion dates seem to be long after the initial target date and, in some cases, the service coverage and completion targets have been reduced. In some presentations, the USOF alludes to the need for better coordination amongst the many state agencies involved and these same presentations seem to imply that the 'pure' technical solution is not always the answer and that a more holistic approach including training and support, content development, etc., are also critical. There is no doubt that India presents many unique and daunting challenges from a USOF perspective so it is understandable to some extent that full realization of objectives may be difficult. Nonetheless, there is room for improvement in the speed of allocation and execution of projects.

¹³⁷ www.usof.gov.in

¹³⁸ http://usof.gov.in/usof-cms/usof_subsidy_previous.html

¹³⁹ See, for example, USOF of India – A Brief Overview;; ITU Asia Pacific Centre of Excellence Workshop on Structuring PPP Partnership to Fund Rural Broadband Infrastructure, 14-17 November 2011; Archana.G.Gulati - Joint Administrator (Finance) USOF

1.9.3 Indonesia



1.9.3.1 Country overview

The Republic of Indonesia, commonly referred to as Indonesia, is situated in the southeastern part of Asia, and is an archipelago between the Indian Ocean and the Pacific Ocean. Indonesia extends over a vast 1,904,569 sq.km. The country consists of 17,508 islands and 30 provinces. Of the 284.2 M inhabitants, 44% live in urban areas; Jakarta, the capital, has a population of 9.1 M; Surabaya 2.5 M; Bandung 2.4M; Medan 2.1M; and Semarang 1.3M.

Indonesia's GDP per capita (PPP) is USD 4700 (2011 estimate).¹⁴⁰

1.9.3.2 Current status of telecom market

General assessment¹⁴¹: Domestic service includes an inter-island microwave system, an HF radio police net, and a domestic satellite communications system; international service is good

Domestic: Coverage provided by the existing network has been expanded by use of over 200,000 telephone kiosks, many of which are located in remote areas; mobile-cellular subscribership is growing rapidly

- Approximately 38.0M fixed lines (2010)¹⁴²
- Wireline market penetration ¹⁴³(YE 2011): 3.4%

Mobile (cellular) communications:

- 224.6 M subscribers¹⁴⁴ (YE2011)
- Wireless market penetration YE 2011: 93.4%¹⁴⁵
- 11 Mobile Operators of which the following four are the main operators ¹⁴⁶:
 - Telkomsel – approximately 47% market share
 - Indosat – approximately 23% market share
 - KL Axiata - approximately 21% market share
 - Telkom Flexi- approximately 9 % market share (currently does not have 3G licence)

¹⁴⁰ CIA World Factbook 2012

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ Global Wireless Matrix 1Q2012

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

Internet¹⁴⁷:

- Hosts: 1.3 M (2011)
- Users: 20.0 M (2009)

Separate laws are in place to regulate the telecommunications (Law No. 36 of 1999) and media/broadcasting (Law No, 32 of 2002) sectors. Both telecom and media are under the general jurisdiction of both the Directorate General of Resources and Equipment of Post and Informatics and the Directorate General of Post and Informatics Operation divisions of the Ministry of Communications and Informatics. The Indonesian Telecommunications Regulatory Agency (BRTI) is responsible for regulating, supervising and controlling the implementation of telecommunications networks and services.

The provision of telecommunications services in Indonesia is faced with many challenges given the number of islands, size of the territory to cover, the numerous remote and difficult to reach areas and the number of impoverished and uneducated inhabitants.

1.9.3.3 Fund background

One of the principal challenges in the development of the telecommunications industry in Indonesia is the limited funding capability of both the government and the private sector. As a result, infrastructure development cannot fully meet the demand, and isolated and impoverished parts of the country (both rural and urban) suffer the most. Through the establishment of the USO, the government has been able to direct the funds received from all operators in the rich city niches to provide services to the rural and impoverished areas.

In 1999, the Telecommunications Law No.36 established that every telecom provider has to contribute to universal service obligations to provide infrastructure and service or other compensation to unserved or underserved areas of the country – mostly rural and remote areas as well as low income urban areas. Under the monopoly system that was in place until 1999, the fixed line provider, Telkomsel, was required to use 20% of its revenues to build infrastructure in remote areas. After the market was opened, all providers were required to pay 0.75% of their gross revenues to the Fund. However, in 2009, Government Regulation Nr 7 increased the percentage to 1.25% of all gross revenues. The contribution is paid every three months to the Balai Telekomunikasi dan Informatika Perdesaan (BTIP)¹⁴⁸, the Authority for Rural Tele-communications and Information Technology, a non-profit public service institution which was established to manage the USO Fund. In 2007, Ministerial Regulation No. 11 expanded the services covered by the USO to include information technology and broadband services.

Given that most of the people of Indonesia live in the rural areas and can be described as low income earners living in impoverished settlements with poor access to technology and telecommunications, most projects in the Fund are geared towards the provision of services and education to the rural area, and some low income urban areas.

The illustration below demonstrates the major challenges facing Indonesia with respect to providing adequate access to telecommunications for all of its inhabitants¹⁴⁹.

¹⁴⁷ CIA World Factbook 2012

¹⁴⁸ Subsequently renamed BPT3I

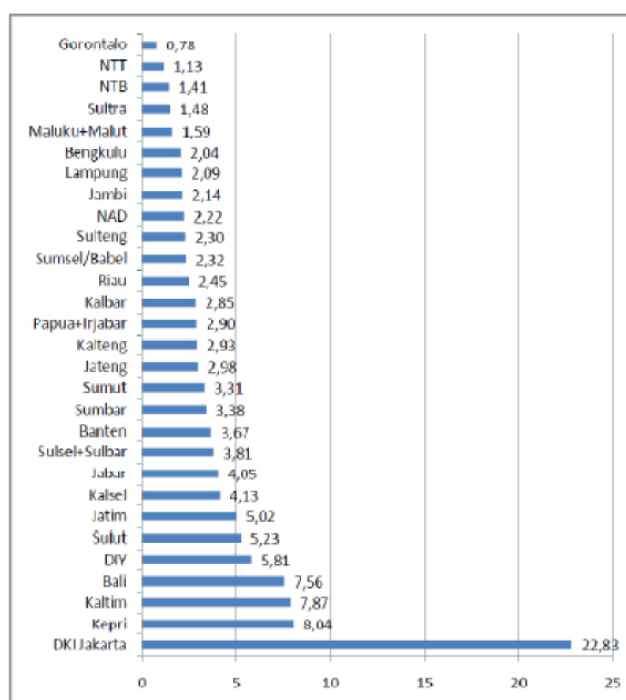
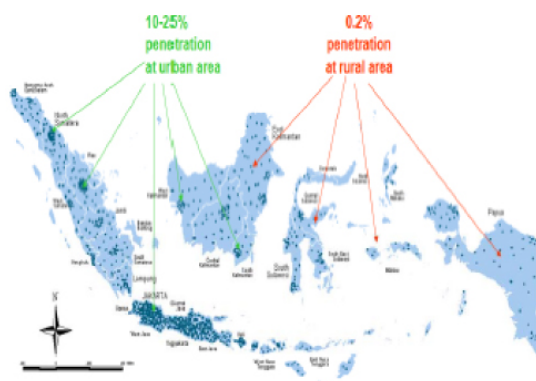
¹⁴⁹ Implementation of USO Program in Indonesia from Regulatory Conformance toward development performance; Beriantho Herlambang; BPT3I - March 24, 2011

Gap Penetration

Teledensity fixed telephone per province

Gap penetration:

- Rural and Urban
- Each Province (east and west)



Source: DGPT Statistic, S1, 2010

THE OFFICE FOR TELECOMMUNICATION AND INFORMATICS FINANCIAL PROVISION AND MANAGEMENT (BP3TI)

Source: BPT3I

1.9.3.4 Current status of the fund

The Fund is active and the schedule of contributions received over the last three years¹⁵⁰ is as follows:

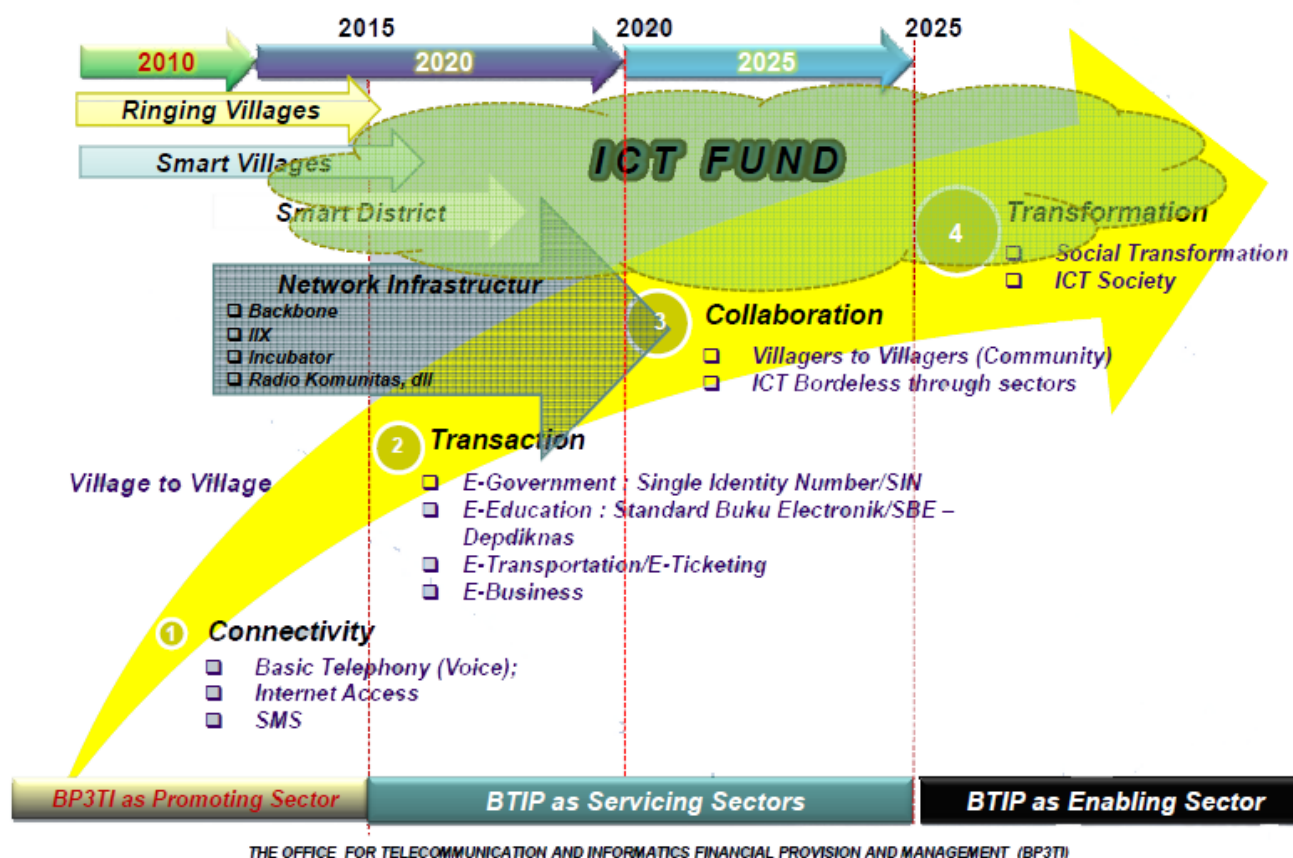
- 2011: IDR 1.34 Trillion - approximately USD 135.0M
- 2010: IDR 1.37 Trillion - approximately USD 140.0M
- 2009 IDR 1.1 Trillion - approximately USD 110.0M

The Fund has an ambitious set of goals for service delivery throughout Indonesia. The illustration below outlines the roadmap as envisaged by the BPT3I¹⁵¹.

¹⁵⁰ Source: BPT3I

¹⁵¹ Implementation of USO Program in Indonesia from Regulatory Conformance toward development performance; Beriantho Herlambang; BPT3I - March 24, 2011

Road map USO Development



The initial goals of the Fund were to provide basic services to the rural areas through two Programmes: “Ringing Village Plan” - telephone services for the rural villages; and “Smart Village Plan” - access to public internet for the same villages. These two plans are to provide access to and service of basic telephony, short message services (SMS/Texting) and internet access with a minimum data transfer rate of 56 kbps.

The USO Operators are chosen by the BTIP through auction processes. The main factors to win an auction are: USO implementation cost and quality of operation and maintenance of the network and service. The licence for the auction winner is awarded by the Ministry of Telecommunications and Informatics. The USO Operators i.e., any Telecom Service Operator licensed by the Government and awarded a contract for their services by BTIP, has the freedom to choose any telecommunications technology based on its compatibility to the demand, target and characteristics of the area.

There is a significant divide in telecommunications infrastructure between the western and eastern parts of Indonesia, mainly due to the availability of fibre-optic based backbone which connects Indonesia’s main islands. There is also a lack of extension of the main backbone network to many of the districts all over the country. The Government tried to close this infrastructure gap through the PALAPA RING development. This programme was awarded to a consortium of service providers, but the consortium failed to achieve the targets required by the government. Consequently, the Ministry of Communication and Information Technology started examining the possibility of applying USO funds to the development of the PALAPA RING but this has been bogged down by differences between the Ministry of Finance and the regulator regarding the use and distribution of funds.

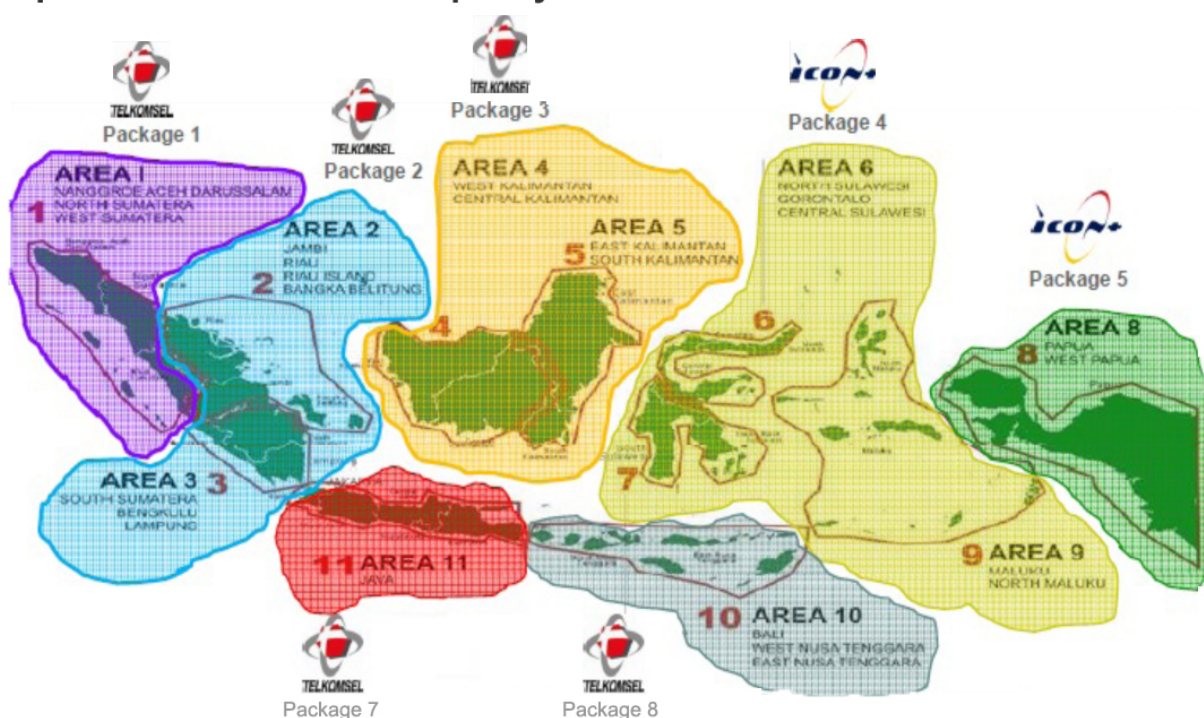
1.9.3.5 What the USF has achieved to date

Some of the achievements of the USO in Indonesia as of YE 2011 are addressed below.

Providing basic services in rural areas:

In the first year of operation, the USO programme targeted 3,010 rural villages for the installation of telephony services. It achieved the goal by the end of 2003. In 2003, the USO programme selected another 2,341 villages to receive telephony services and this target was achieved by the end of 2004. Most of the services used portable fixed satellite technology because of its practicality, wide coverage and lower costs compared to other technologies. Other areas were covered using VSAT technology. Later, in 2008, in order to provide better services, the USO divided the country into 11 “Blocks” as shown below¹⁵²:

Map Area Plan for Basic Telephony Access



USO Areas (11 Packages area 2009 - 2014: 33,824 Village

THE OFFICE FOR TELECOMMUNICATION AND INFORMATICS FINANCIAL PROVISION AND MANAGEMENT (BP3TI)

Source: BPT3I

These 11 Blocks, with a total of 31,824 rural villages, were divided into seven different work ‘packages’ and in 2008, two companies were selected to provide the services: Telkomsel was awarded packages 1,2,3,6 and 7, to provide rural phone networks for 24,051 villages under the auspices of the “Ringing Villages Plan” as well as 69 internet connections for 69 villages under the “100 Smart Villages Plan”. Icon+, the winner of packages 4 and 5, was required

¹⁵² Implementation of USO Program in Indonesia from Regulatory Conformance toward development performance; Beriantho Herlambang; BPT3I - March 24, 2011

to provide rural phone networks for 7,773 villages as well as internet connections for 31 villages under the same plans. Later that same year, Telkomsel was awarded an additional contract that increased the total number of villages to be served to 25,412.

By December 31, 2010, the total achievements for both companies were as shown in the table below:

PT.Telkomsel			PT. Icon+		
Villages awarded	Work done	Work to be done	Villages awarded	Work done	Work to be done
25,412 (100%)	25,405 (99.97%)	7 (0.03%)	7,772 (100 %)	1,348 (17.34%)	6,424 (82.55%)

Source: *Dijten Postel Annual Report 2010*

Providing a national internet exchange to provincial capital cities:

This Nusantara Internet Exchange programme was one of the priority programmes established in compliance with Presidential Instruction N0.1 of 2010. The national traffic distribution exchanges are concentrated in Jakarta; there are few exchanges outside the capital, resulting in higher costs outside the capital.

The tender process for the Internet Exchange Service was carried out pursuant to Regulation No.21 of the Ministry of Communication and Information Technology. Based on the result of the tender, on December 22 and 23, 2010, the bid winners signed a contract to provide the service in eight provincial capital cities as follows:

- Package 1 for Medan and Palembang
- Package 2 for Surabaya and Denpasar
- Package 3 for Balikpapan and Makassar
- Package 4 for Temate and Jayapura

As per information contained in the 2011 Annual Report, these four projects were successfully completed.

Other ongoing programmes have achieved the following milestones:

- Internet service centres at Sub-Districts: 5706 centres out of 5748 completed
- District Mobile Internet service centres: 1073 out of 1907 completed
- Monitoring and Management System for the Internet Service Centre installed at BPT3I office

1.9.3.6 Other elements of interest

The USO in Indonesia has been beset by numerous challenges throughout its history. One of the biggest issues that the Indonesian USO has encountered is the lack of human resources at the local level to maintain, support and educate inhabitants given that the maintenance contract with the government covers only the first year of deployment. The need for multiple year fund allocations for continuous maintenance is being debated at this time. However, as can be noted, there is a need for a more targeted use of funds in order to ensure that specific, realistic goals can be achieved given the enormity and complexity of the territory to cover. There are many underlying issues

(e.g., scope and scale, resource availability) that need to be addressed by the government before many of these projects can be undertaken by the Fund (as illustrated in the chart below). Yet another significant issue are the apparent ongoing differences between different government ministries regarding how the monies in the Fund can be allocated/utilized. The current position of the Ministry of Finance is that the funds may be used only for the acquisition of goods and services and not for the provision of subsidies as is much more the typical application of USFs. This is resulting in some insistence by the Ministry that the government must have ownership in the facilities using a PPP approach. In addition to such an approach being of potentially less interest to potential project bidders, this raises the spectre of re-involving government in the implementation and operation of telecommunications facilities when the regulatory policy to date has been to lessen government involvement.

Medium Term Target for USO¹⁵³

INDICATOR	TARGET				
	2010	2011	2012	2013	2014
% Village with telecommunication access	100%	100%	100%	100%	100%
% Village with Internet Access	5%	20%	40%	60%	80%
% Provincial Capital connected with FO	10%	30%	50%	70%	100%
% City /Kabupaten connected to broadband	25%	30%	50%	60%	75%
% Provincial Capital has <i>regional internet exchange</i>	10%	30%	50%	80%	100%
% Development of <i>international internet exchange</i> in 4 provincial capital	10%	30%	50%	80%	100%
Number of Villages with community radios	15	76	200	350	500

Source: Deputy Assistant for ICT and Utility Coordinating Ministry for Economic Affairs

¹⁵³ National Policy on Intersectoral Approach for Rural ICT Development; Eddy Satriya – Coordinating Ministry for Economic Affairs; ITU Workshop; March 23, 2011

1.9.4 Malaysia



1.9.4.1 Country overview

Malaysia is a constitutional monarchy situated in southeastern Asia, and is made up of 13 states and one federal territory. It has a total land area of 329,847 sq. km. in which 72% of the population of 29.2M lives in urban centres. Kuala Lumpur (the capital) has 1.5 M inhabitants, followed by Klang with 1.1 M and Johor Bahru with just under 1.0 M inhabitants.

Malaysia's GDP per capita (PPP) is USD 15,600 (2011 estimate).¹⁵⁴

1.9.4.2 Current status of telecom market

General assessment¹⁵⁵: Modern system featuring good intercity service on Peninsular Malaysia provided mainly by microwave radio relay and an adequate intercity microwave radio relay network between Sabah and Sarawak via Brunei; international service excellent

Domestic: Domestic satellite system with two earth stations; combined fixed-line and mobile-cellular teledensity 150 per 100 persons.

- Approximately 4.6 M fixed lines in use (2010)¹⁵⁶
- Wireline market penetration as of YE 2011: 14.3%¹⁵⁷
- Telekom Malaysia is the fixed line monopoly service provider

Mobile (cellular) communications

- Mobile subscribers as of YE 2011: 34.6 M¹⁵⁸
- Wireless market penetration (YE2011): 120.5%¹⁵⁹
- 3 Main Mobile Operators¹⁶⁰
 - Maxis – approximately 37% market share
 - Celcom – approximately 35% market share
 - DiGi – approximately 28% market share

¹⁵⁴ CIA World Factbook 2012

¹⁵⁵ CIA World Factbook 2012

¹⁵⁶ *Id.*

¹⁵⁷ Global Wireless Matrix 1Q2012

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

Internet¹⁶¹:

- Hosts: 363,007 (2011)
- Users: 15.4 M (2009)

Both the telecommunications and media sectors are regulated by the Communications and Multimedia Act of 1998 (CMA) which establishes a converged regulatory framework for telecoms, information, multimedia, broadcasting and online activities. The Malaysian Communications and Multimedia Commission (MCMC¹⁶²) is the regulatory body designated to oversee, implement and promote the government's policies for the communications and media industries. The policies and priorities in the legislation are set by the Minister of Energy, Water and Communications who also issues subordinate instructions to the MCMC.

1.9.4.3 Fund background

The Universal Service Provision Fund (USP) is a programme created in accordance with the guidelines established in the Communications and Multimedia Act in 1998, which, under Section 204, envisioned the universal service mechanism to provide collective and individual access to basic telephony and internet services throughout Malaysia. The USP is designed to bridge the "digital divide" that most nations experience when telecom services are not accessible for people living in rural and remote areas, as well as in low income urban zones. The designated service providers are to incur no loss nor make any profit when implementing the programme, as the USP only reimburses the expenses incurred at cost, and as carefully detailed in the template provided by the Malaysian Communications and Multimedia Commission (MCMC). USP targets are divided into underserved areas and underserved groups within the community.

Underserved Areas:

- Broadband access service provided to any area where the penetration rate for broadband subscribers is below the national penetration rate, or where the services are not sufficiently available as may be determined by the MCMC
- Public cellular service provided to any area with a population density of 80 persons per square kilometre or less, or where public cellular services are not sufficiently available as may be determined by the MCMC
- Public switched telephone network (PSTN) service provided to any area where the PSTN subscriber penetration rate is 20 per cent below the national rate, or where they are not sufficiently available as may be determined by the MCMC

Underserved Group within the Community:

- Definition: A group of people linked by similar characteristics from a socio-cultural or economic perspective within a served area which does not have collective and/or individual access to services.
- Category: Persons with disabilities, children under protection, women under rehabilitation, low income urban areas.

¹⁶¹ CIA World Factbook 2012

¹⁶² SKMM in Bahasa

1.9.4.4 Current status of the fund

The initiatives implemented under the USP programmes aim to address the digital divide disparity of the rakyat living in the rural areas from being further marginalized from the nation's development and ICT progress. The USP programme began in 2002 with the pilot basic telephony projects. Since then, the MCMC has identified a total of 462 underserved areas in the country for the purpose of implementing telephony, broadband and cellular access projects. Prior to 2008, the main focus of the USP programme and utilization of the USP Fund had been to build out the communications infrastructure, but due to progress in technology and consumer demands, the shift changed towards addressing content, access and application use as well as affordability of communications and multimedia services.

The USF is active, and since 2008, has been developing a layered approach to implementation to ensure maximum reach to the universal service targets as illustrated in the table below:

TARGET	DESCRIPTION	UNIVERSAL SERVICE
Layer 1: Suburban/Sub-rural	<ul style="list-style-type: none"> Population > than 50,000 people Distance from nearest city/town is up to 15 km radius Power/electricity available Infrastructure & basic facilities available 	Public Cellular services + Broadband Community applications + Collective Telephony access
Layer 2: Rural	<ul style="list-style-type: none"> Population between 5,000 to 50,000 people Distance from nearest city/town is between 15 to 50 km radius Power/electricity – partial Accessibility: via dirt roads/timber tracks Semi-forest 	Public Cellular services + Broadband Community applications + Collective Telephony access
Layer 3: Remote	<ul style="list-style-type: none"> Population < 5,000 people Distance from nearest city/town/exchange more than 50 km radius Power/electricity – non grid Greenfield: no backhaul available Accessibility: difficult-jungle tracks, river Terrain: hilly 	Public Cellular services + Collective Telephony access

There are four principal stages involved in the award of USP projects:

- Identification and notification of USP target areas and groups
- Registration of interest and USP draft plan submission
- Award contract to Universal Service Provider (USP)
- Implementation and monitoring

The USF is supported by the contributions from the designated services of all licensees (excluding content providers), currently six per cent (6%) of their weighted net revenue. The contribution is calculated through the submission of return of net revenues from the designated services from all licensees, which is submitted annually on June 30th each year. The formula is calculated as follows: Contribution amount = Weighted net revenue x Contribution rate. Operators with annual revenues of less than MYR 2.0 M are not required to contribute to the Fund.

As of March 2010, the USP Fund disbursements had totalled MYR 4.5 B or approximately **USD 1.5B**. It is estimated that total contributions to the Fund in 2011 were approximately **USD 341.9M** of which approximately **USD 82.0M** had been disbursed.

1.9.4.5 What the USF has achieved to date

The following is an overview of the Fund's achievements to date as reported by the MCMC.

USP PROJECT	STATUS OF PROJECT	COMMITTED/ BUDGETED AMOUNT (MYR AND USD APPROX.)
Basic Telephony: The provision of basic telephone infrastructure and services to USP designated areas	Pilot project began in 2002 and since then, around 57,500 households have benefited from the telephony project	MYR 629.23 M Approx. USD 198.5M
Telecommunications towers for expansion of cellular coverage: <ul style="list-style-type: none"> ▪ The building of telecommunications towers and facilities across the country including the East-West Highway and Time 3 projects in USP designated areas. ▪ Construction of 873 telecommunications towers across the country including Sabah and Sarawak 	Cellular coverage to popular areas of the country is expected to increase from 71% in 2004 to 97% by 2011.	MYR 1.87 B Approx. USD 589.0M
Community Broadband Centres (CBC) and Community Broadband Libraries (CBL) <ul style="list-style-type: none"> ▪ Communities in underserved areas have access to broadband services and ICT 		MYR 573.7 M Approx. USD 180.7M

facilities <ul style="list-style-type: none"> Basic ICT and content development training provided free at these centres by supervisors appointed from the local communities. 		
1Malaysia Netbook: <ul style="list-style-type: none"> Distribution of 1Malaysia netbooks to qualified Malaysians For Phase 1, recipients of the netbooks are secondary students whose household income is less than MYR 3,000 and the recipients reside in a district where MCMC had established CBCs. It is expected that the project will contribute to an increase of 9% to the 50% broadband penetration target by the end of 2010. 	Distribution in phases 1, 2 and 3: <ul style="list-style-type: none"> Phase 1: 123,000 units of 1Malaysia Netbook allocated for distribution Phase 2: Request for Proposal issued by MCMC on August 2010 and currently undergoing evaluation for award of project. Phase 3: Will be implemented after impact study conducted on Phase 1 and Phase 2 implementation 	MYR 1.00 B Approx. USD 315.4M
Mini CBC/ Pusat Internet Rakyat (PIR) <ul style="list-style-type: none"> Transformation of 121 Information Department regional offices around the country into mini community broadband centres or "Pusat Internet Rakyat (PIR) 	<ul style="list-style-type: none"> Phase 1 of the project has already been completed whilst phase 2 work is in progress and phase 3 was to be commenced by year end 2010 involving 121 sites. 	MYR 10.00 M Approx. USD 3.2M
CBC-to-Home <ul style="list-style-type: none"> Expansion of broadband network coverage areas surrounding CBCs and CBLs to the communities surrounding CBCs and CBLs. 	<ul style="list-style-type: none"> Implementation of project involving 246 CBC areas was to begin by end 2010 	MYR 150.0 M Approx. USD 47.3M
Collective Broadband Network/ Kg. WiFi: <ul style="list-style-type: none"> Provision of broadband network to identified rural communities. 400 villages identified across the country including Sabah and Sarawak. 	<ul style="list-style-type: none"> Pilot project began in July 2010 and 400 sites were to commence implementation nationwide by year end 2010. 7 Kg Wi-Fi have been established including 4 in Sabah and Sarawak 	MYR 520.00 Approx. USD 164,014
Other committed projects	Other collective broadband network projects	MYR 40.00 M Approx. USD 12.6 M
Total Committed/Budgeted Projects		MYR 4.79 B Approx. USD 1.5 B

In its 2010 Annual Report, the MCMC further indicated: “With basic internet and telecommunication services already established in the underserved areas, the MCMC will then embark to implement Next Generation Telecentres (NGT), where small business can harness the knowledge based technologies and infrastructure to create more wealth opportunities”.

1.9.4.6 Other elements of interest

As part of its National Broadband Initiative (NBI), Malaysia was committed to achieving a broadband penetration level of 50% by the end of 2010. High Speed Broadband (HSBB) will be implemented in specific areas to spur business and economic growth and Broadband to the General Population (BBGP) shall be deployed elsewhere.

The Plan segments the nation into three zones.

1. **Zone 1** comprises of high economic impact areas such as the Klang Valley and Iskandar Development Region in Johor: Telekom Malaysia will offer high-speed broadband (HSBB) access of up to 10Mbps. Residents in the zone will also have access to competitive broadband solutions provided by other service providers; the four initial areas to be covered by HSBB TM service include Shah Alam, Subang Jaya, Taman Tun Dr Ismail, and Bangsar
2. **Zone 2** includes towns and suburban areas: service providers will be involved in broadband provisioning
3. **Zone 3** includes rural areas: will be spearheaded by SKMM using Universal Service Provision (USP) funds

Broadband access in these areas will also include Basic Telephony Access (via fixed and mobile networks), broadband connected Community Broadband Libraries (CBLs) and Community Broadband Centres (CBCs) and it is expected that some MYR2.8 B (USD 842.2 M) of the USP Fund will be spent on a number of the NBI programmes that are currently being prepared. It is the view of the MCMC that the enhanced USF and targets will yield the following results¹⁶³:

- Increase rural education levels
- Increase rural ICT literacy.
- Support rural economic growth especially in agriculture and small enterprises
- Extensive communications network coverage nationwide.
- Increase national broadband and cellular penetration rate
- Increase national household computer ownership and mobile phones

¹⁶³ Thailand Seminar on Broadband and Universal Service Obligation (USO) 16 - 18 November 2010 - MCMC

1.9.5 Pakistan



1.9.5.1 Country overview

The Islamic Republic of Pakistan (Pakistan) is located in Southern Asia, bordering the Arabian Sea, between India on the east and Iran and Afghanistan on the west and China in the north. It covers a land mass of 796,095 sq. km. The estimated total population of Pakistan is 190.3 M of which only 36% is urbanized. Principal cities are: Karachi 13.1 M; Lahore 7.1 M; Faisalabad 2.8 M; Rawalpindi 2.0 M; and the capital city – Islamabad 0.8M (2009)¹⁶⁴.

Pakistan's GDP per capita (PPP) is USD 2800 (2011 estimate).¹⁶⁵

1.9.5.2 Current status of telecom market

General Assessment¹⁶⁶: the telecommunications infrastructure is improving dramatically with foreign and domestic investments in fixed-line and mobile-cellular networks; system consists of microwave radio relay, coaxial cable, fibre-optic cable, cellular and satellite networks.

Domestic telecommunications is as follows: mobile-cellular subscribership that has skyrocketed, exceeding 110 million by the end of 2011, up from about only 300,000 in 2000; more than 90 per cent of Pakistanis live within areas that have mobile phone coverage and more than half of all Pakistanis have access to a mobile phone; fibre systems are being constructed throughout the country to aid in network growth; fixed line availability has risen only marginally over the same period and there are still difficulties getting fixed-line service to rural areas.

- Approximately 3.4 M fixed lines (2010)¹⁶⁷
- Wireline market penetration YE2011: 3.6%¹⁶⁸

Mobile (cellular) communications

- 112.8 M subscribers (YE2011)¹⁶⁹
- Wireless market penetration (YE2011) – 64.4%¹⁷⁰
- Five Major Mobile Operators:

¹⁶⁴ CIA World Factbook 2012

¹⁶⁵ Id.

¹⁶⁶ Id.

¹⁶⁷ Id.

¹⁶⁸ Global Wireless Matrix 1Q2012

¹⁶⁹ Id.

¹⁷⁰ Id.

- Mobilink – approximately 30% market share
- Telenor - approximately 25% market share
- Ufone - approximately 19% market share
- Paktel - approximately 12% market share
- Warid - approximately 14% market share

Internet¹⁷¹

- Hosts: 340,834 (2011)
- Users: 20.4 M (2009)

On July 13, 1994, the Pakistani government liberalized the telecommunications market and opened it to competition via the Presidential Ordinance “Telecommunication Ordinance, 1994 (Ordinance LI of 1994)¹⁷²”. In order to promote and maintain fair competition and regulate the telecom industry and telecom services, the Ordinance established the independent regulator, the Pakistan Telecommunication Authority (PTA). The Ordinance also directed the federal government to incorporate the “Pakistan Telecommunication Company Limited (PTCL)”. The PTCL was given the exclusivity to provide the basic telephone services in Pakistan for a period of seven years. Subsequent to the 1994 Ordinance, a number of other acts were issued and repealed until, finally the “Pakistan Telecommunication (Re-organization) Act, 1996 (XVII of 1996)” was passed on October 17, 1996. Under the 1996 Act, the following elements were addressed:

- Creation of telecommunications regulator
- Regulation of the telecommunications industry
- Transfer of telecommunications regime to the private sector
- Power of Federal Government to issue policy directives
- Licensing
- Re-affirmation of PTCL as a company under the Companies Ordinance, 1984
- Creation of the National Telecommunication Corporation (NTC) to provide telecom services to armed forces, defence projects, federal government, provincial governments and local authorities etc.
- Formation of Frequency Allocation Board (FAB) with the responsibility for allocation and management of spectrum.

Further enhancements were subsequently made to the regulatory environment as discussed in the next section.

1.9.5.3 Fund background

The Universal Service Fund Company Limited (USF) was created by the Government of Pakistan at the end of 2006, under Section 42 of the Companies Act 1984. This was established in compliance with the Telecommunications Rules issued on July 2003, the Mobile Cellular Policy issued on January 2004, the Broadband Policy of December 2004, and finally, the Telecommunication (Re-organization) (Amendment) Act, 2006, that provided for the legal establishment of the USF (Universal Service Fund), its administration and utilization making it obligatory also on the part of the Licensees to contribute to Fund. USF Rules 2006 determined that the USF would be controlled and

¹⁷¹ CIA World Factbook 2012

¹⁷² <http://www.pakistanlaw.net/law-articles/telecom-law/telecommunication-laws-in-pakistan/>

monitored by the MoIT&T (Ministry of IT and Telecom) and administered by an independent but wholly state-owned "Company".¹⁷³

The Government's universal service policy was designed to ensure that unserved or underserved designated populations and geographic areas would gradually receive defined adequate services (including e-services) in a sustainable manner as resources permitted. The stated priorities were to make telecommunications service available to the Pakistani people and businesses country-wide, increase teledensity and kick-start broadband penetration. As part of this policy, the MoITT was required to set specific targets for rural teledensity and access.

The USF Company has an independent Board of Directors equally balanced between four members from the Government and four members from the private sector. The CEO is the ninth Board director. Three members from the Government are from the Ministry of Information Technology, including the Minister, and the fourth is the Regulator. Members of the private sector are nominees from fixed line licensees, mobile cellular licensees, Internet licensees and a representative of the Consumer Groups. The Chief Executive Officer is selected by the Board.

The contributions for the Fund could be derived from five sources, but are mainly derived from two primary sources:

- a 1.5% levy on the gross operating revenues of all telcos
- monies obtained from the APC (Access Promotion Charge)

The APC is an amount added to/collected from international incoming calls terminating on mobile subscribers. The amount charged has varied up to 12.5 cents per minute but is currently around one cent per minute. Of the international incoming calls, approximately 20% to 25% are terminated on the fixed line (mostly the incumbent) and the fixed line operators are permitted to keep the proceeds from the APC. The remaining 75% to 80% terminating on mobile numbers is directed to the Fund.

1.9.5.4 Current status of the fund

All projects to be carried out using the Fund's resources are awarded via a transparent USF bidding process as follows.

- All USF auctions are advertised in at least two national newspapers and are also advertised on the Public Procurement Regulatory Authority (PPRA) and USF websites
- All USF bidding documents are placed on the USF website
- All bid submissions and bid openings are public and held in the presence of bidders' representatives.
- All contracts are awarded without exception to the bidder with the lowest demanded subsidies.

All bidding results and evaluation summaries are also placed on the website.

At present (as of May 2012), it is estimated that the Fund has around 60B rupees or approximately **USD 650M** in its coffers, having collected approximately **USD 750M** since inception with estimated disbursements of **USD 100M**. An additional USD 150M+ has already been contracted for ongoing projects. This would indicate that the Fund still has

¹⁷³ Universal Service Fund Policy, IT and Telecommunication Division, Ministry of Information Technology – Government of Pakistan – August 2006

available resources in the neighbourhood of USD 500M. Operator contributions to the Fund via the operator levy and APC for 2011 are estimated to be in the neighbourhood of **USD 90M**.

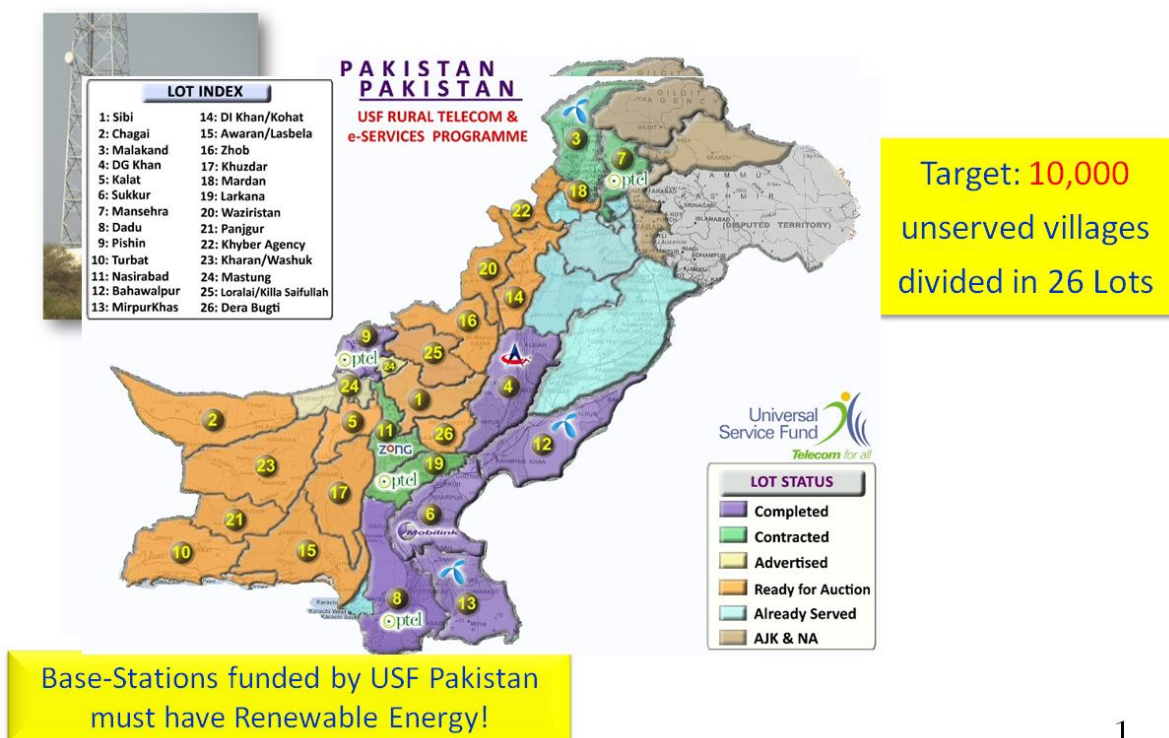
1.9.5.5 What the USF has achieved to date

Although USF efforts have slowed down of late, significant progress has still been made with respect to the four principal types of projects already awarded as well as some special projects. The following provides an overview of their current status.

1. Rural telecommunications and e-services (basic telephony)

This programme targets some 10,000 unserved villages (representing approximately 50 per cent of the country's total area). These unserved villages have been divided into 26 lots (see diagram below) and, to date, ten lots having more than 6,000 villages have been contracted. Out of these, 3,500 villages have been served so far.

1st Programme: Basic Rural Telecom

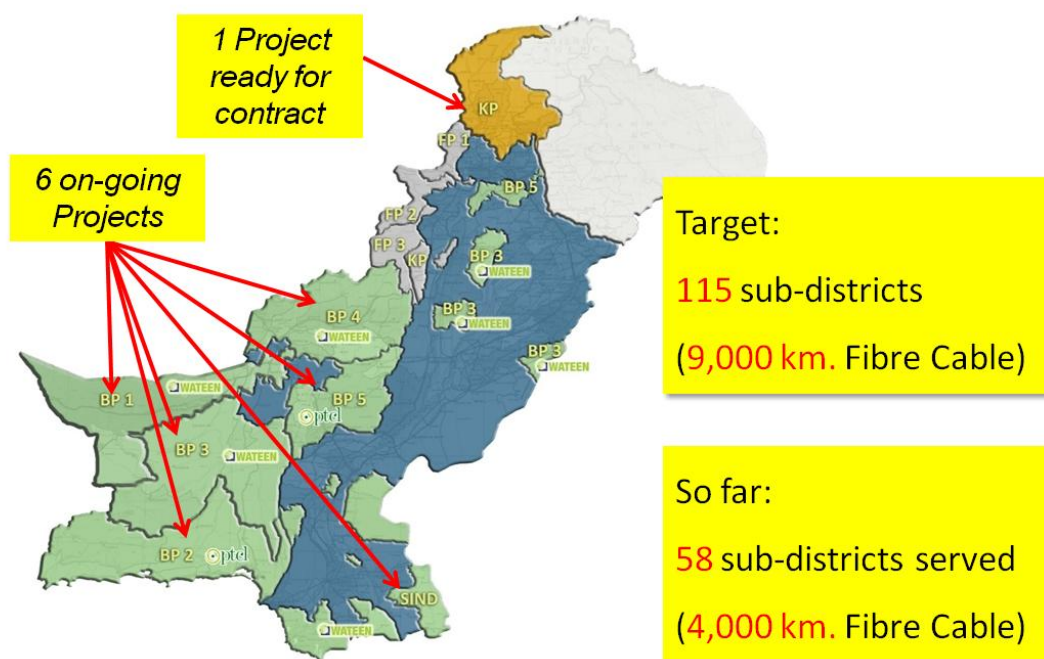


1

2. Fibre-optic cables

This programme aims to provide fibre connectivity to all the 115 sub-districts that currently have no connectivity. To date, 58 sub-districts have been connected (see diagram below) by subsidizing the installation of 4,000 km. of fibre-optic cables.

2nd Programme: Optic Fibre for All

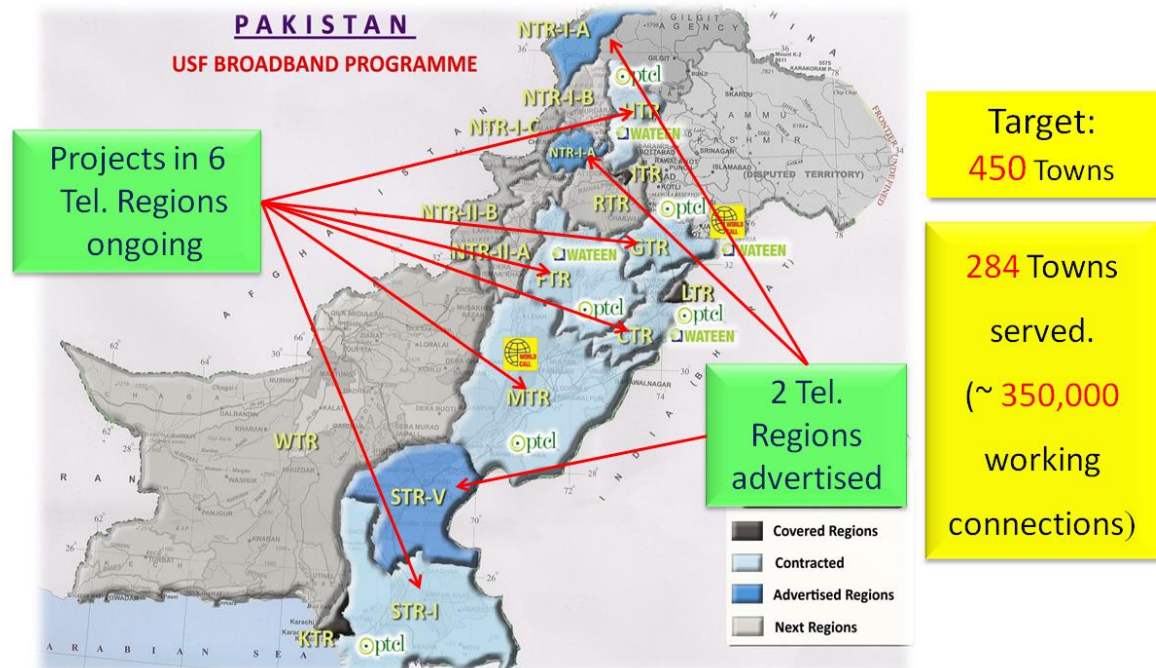


3. Broadband

To date, 284 towns (representing 350,000 additional connections) have received broadband connectivity. An overview of the broadband plan is provided below. That shows how the USF subsidized broadband projects are being rolled out 'telecom-region' by 'telecom-region'.

¹⁷⁴ A tehsil is a local government entity that is the second lowest tier of local government; the tehsil is part of a larger district and sub-divided into a number of union councils

3rd Programme: Broadband – Region by Region



4. Tele-centres in villages

In a pilot project, it is proposed that tele-centres are to be set up by the BSPs (Broadband Service Providers) and then run on a sustainable basis by a variety of organizations such as NGO's, corporate entities, local community organizations, Rural Development Organizations, etc. The referenced sustainability includes almost free electricity using solar power or other alternative means, payment of the monthly broadband tariff by the USF and three year extended warranties on the ICT equipment delivered

- As part of the broadband programme, the subsidy winning BSP must also establish Educational Broadband Centres (EBC's)¹⁷⁵ in every higher secondary school, college and library in that area. The progress to date is as follows:
 - operational – 1,042
 - in progress - 131
- Similarly, the subsidy winners are also required to establish Community Broadband Centres, for those who cannot afford their own computers. So far:
 - operational - 291
 - in progress - 54
- Special projects for the disabled
 - Low vision labs in designated hospitals
 - Equipment to assist in reading and listening for special needs individuals
 - Telemedicine connecting three hospitals via broadband with 12 remote sites

¹⁷⁵ EBC's are provided for every higher secondary institution, college or library in the area and include free provision and installation, no charges for a year, five PC's and two trainers for every centre

1.9.5.6 Other elements of interest

After its initial significant successes, the activities of the Fund have been somewhat curtailed of late, presumably for the following reasons:

- Attention has been diverted from the Fund – likely due to the forthcoming elections
- The remaining unserved areas are in western Pakistan – an area of considerable turmoil; this has significantly dampened operator enthusiasm for and willingness to commit to USF projects there, even if the projects are financially attractive
- In absence of a full-time Minister of IT, having the PM as head of the USF Co board has caused extensive delays in decision making; although the existing governance rules allow the USF Co. Board to move ahead without participation of its full-time Chairman, in reality, having the PM as chairman is likely to cause some hesitation amongst members to take such steps
- The most recent CEO has been fired for alleged incompetence and his dismissal was followed by the departure of the CFO.

In general, at the outset, Pakistan served as an excellent best practice model regarding the initial establishment and administration of a transparent USF that has appropriate guidelines for setting well-defined policy goals and implementing good governance. Nonetheless, no system is fully ironclad or impervious to political turmoil or volatility and it would seem that the current political, social and economic conditions within the country are significantly impeding the overall effectiveness of the Fund, particularly as it relates to funding versus disbursement mechanisms. In addition, the combination of political interference and apparent selection of unsuitable or improperly qualified executives has curtailed its performance. Therefore, the funding and disbursement activities should be revisited with a view to improving the processes.

1.10 Europe

1.10.1 EU Universal Service Directive Overview

1.10.1.1 Summary of Directive

The European Union introduced rules on universal service through the Electronic Communications Framework of 2002, which replaced previous directives related to the subject (EU Directives 90/388/EEC and 97/33/EC). The EU Universal Service Directive 2002/22/EC¹⁷⁶, as amended by Directive 2009/136/EC¹⁷⁷, defines universal service as the “minimum set of services of specified quality to which all end-users have access, at an affordable price in the light of specific national conditions, without distorting competition”. Member States must ensure that the electronic communications services detailed in the Directive are made available to all users in their territory, regardless of their geographical location, at a specified quality level and an affordable price. The following services have been included in the scope of the universal service:

- Provision of access on request with a connection to the public telephone network at a fixed location and at an affordable price, which will allow for voice, facsimile and data communications, at data rates that are sufficient to permit functional Internet access
- Provision of directory enquiry services and publishing of directories
- Provision of public pay telephones and other access points to publicly available telephone services to meet the needs in terms of geographical coverage, the number, accessibility to disabled users or the quality of services
- Provision of services for disabled users which meets their needs and is of an equivalent standard to those enjoyed by other users

Based on the Directive, Member States designate one or more undertakings to guarantee the provision of universal service or they may also designate different undertakings to provide different elements of universal service and/or to cover different parts of the national territory. In practice, given the principle of least cost of the provision of universal service, the designated undertakings have mainly been the formal incumbent operators.

The Directive has also allowed national regulatory authorities (**NRAs**) to compensate designated operators for the provision of the universal service in cases where they deem the provision of the universal service to represent an unfair burden on undertakings. In such cases, they calculate the net costs of the universal service provision, taking into account any market benefit which accrues to the designated undertaking. In order to compensate for the net costs, the NRA may decide to introduce a mechanism to compensate from public funds and/or a mechanism to share costs between providers of electronic communications networks and services. Member States may choose not to require contributions from undertakings whose national turnover is less than a set limit.

Although the accounts for the calculation of the net cost of universal service obligations is supposed to be audited or

¹⁷⁶ Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services.

¹⁷⁷ Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector and Regulation (EC) No 2006/2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws.

verified by the national regulatory authority (or other independent body), the compensation mechanism has been subject to continuous court disputes in several countries.

The 2002 EU Universal Service Directive employs a two prong test for a service to be included in the scope of a universal service policy: a) the service has the ability to become essential for social inclusion; and b) commercial forces are unable to provide the service to all. So, traditionally, both mobile services and broadband have not satisfied both of the tests. Recently, the extension of the definition of Universal Access to include broadband and mobile services has been discussed in relation to the EU Digital Agenda and some countries have considered expanding their policy to include broadband. For example, proposals have been made for the government to develop a social tariff for broadband Internet access for low income households in France.¹⁷⁸ In the EU, the State Aid rules cover any form of public funding, including subsidies, tax rebates and, in some cases, the public ownership of firms. To guide broadband investment, which tends to be an investment ahead of the market, the EU has published State Aid Guidelines that follow a colour-coded map of areas that should be awarded funds:¹⁷⁹

- White areas: no broadband infrastructure exists and none is likely to be developed in the near future. Support measures for broadband deployment in these areas are most likely to be considered compatible with state aid rules.
- Grey areas: only one broadband operator exists. Measures may be compatible if no affordable or adequate services are offered or are likely to be offered to satisfy the needs of citizens or business users and if no less distortive measure is available. The Commission accepts that state aid may be the only alternative where the area is underserved and the inherent profitability of investment is low.
- Black areas: at least two or more broadband network providers are present and broadband services are provided under competitive conditions. Any state intervention in these areas will be viewed negatively as there is in principle no need for intervention, unless the member state is able to establish a clear market failure.¹⁸⁰

In 2010, the European Commission adopted 20 decisions covering aid for broadband development, authorizing the use of over €1.8 B (**USD 2.55B**) of public funds for broadband development.¹⁸¹ In 2011, after a public consultation as a part of its third periodic review of the scope of this service, the European Commission concluded there was no need to change the basic concept, principles or scope of the EU rules on Universal Service to include mobile telecommunications services and broadband connections at the EU level. However, Member States retain the flexibility to include broadband connections in their national USO in justified cases. This may be when broadband take-up is already sufficiently high like, for example, in Finland, Malta and Spain where national laws provide for a minimum broadband speed.

¹⁷⁸ Trends in Telecommunication Reform 2012 Smart Regulation for a BroadBand World, ITU 2012

¹⁷⁹ Communication from the Commission: Community Guidelines for the application of State Aid Rules in Relation to Rapid Deployment of Broadband Networks, 2009/C235/04, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:235:0007:0025:EN:PDF>

¹⁸⁰ Community Guidelines for the application of State aid rules in relation to rapid deployment of broadband networks (<http://eur-lex.europa.eu>)

¹⁸¹ EC decisions at http://ec.europa.eu/competition/sectors/telecommunications/broadband_decisions.pdf

1.10.1.2 Appendix

The Universal Service Directive¹⁸² is part of the "Telecoms Package" which, together with four other directives ("framework", "access and interconnection", "authorization" and "private life and electronic communications"), aims to recast the existing regulatory framework for telecommunications and to make the electronic communications sector more competitive.

Universal service obligations

The Directive defines universal service as the "minimum set of services of specified quality to which all end-users have access, at an affordable price in the light of specific national conditions, without distorting competition".

Availability of the universal service

Member States must ensure that the electronic communications services detailed in the Directive are made available to all users in their territory, regardless of their geographical location, at a specified quality level and an affordable price.

Provision of access at a fixed location and telephone services

A fundamental requirement of universal service is to provide users on request with a connection to the public telephone network at a fixed location and at an affordable price. The connection provided shall enable end-users to take charge of voice communications, facsimile communications and data communications, at data rates that are sufficient to permit functional Internet access, the provision of which may be restricted by Member States to the end-user's primary residence. There should be no constraints on the technical means by which the connection is provided.

Directory enquiry services and directories

At least one comprehensive directory which is updated at least once a year must be available to end-users. Similarly, at least one directory enquiry service must be available to end-users, including users of public pay telephones.

Public pay telephones and other access points to publicly available telephone services

The NRAs must be able to impose obligations on undertakings to ensure that public pay telephones or other access points to publicly available telephone services are provided to meet the needs of end-users, whether in terms of geographical coverage, the number of telephones or other access points, the accessibility of such telephones to disabled users or the quality of services.

Special measures for disabled users

The term "universal" means that the Member States must ensure that disabled users enjoy a service which meets their needs and is of an equivalent standard to those enjoyed by other users. In order to achieve this, access must be the same at a functional level, such that disabled end-users can use the same services as other end-users, but through different means. Member States may require the NRAs to assess the general need and specific requirements of the type of measures particularly for disabled end-users.

¹⁸² http://europa.eu/legislation_summaries/information_society/legislative_framework/l24108h_en.htm

Designation of undertakings

The Member States may designate one or more undertakings to guarantee the provision of universal service. The Member States may also designate different undertakings to provide different elements of universal service and/or to cover different parts of the national territory.

Affordability of tariffs

The Member States shall ensure that consumers with low incomes have access to special tariff arrangements or are given special assistance to enable them to have access to the network and to use it. The special tariffs must either be provided by the designated undertaking, or already be available on the market. Furthermore, the Member States may require undertakings which have universal service obligations to comply with price caps or to apply common tariffs, including geographical averaging, throughout the national territory.

Quality of service

The national regulatory authorities must set performance targets for undertakings with universal service obligations and monitor compliance with these targets by designated undertakings.

Financing of universal service obligations

In order to compensate for the net costs to which the provision of universal service might give rise, compensation mechanisms for operators with universal service obligations may be provided for. This may involve the introduction of a mechanism to compensate from public funds and/or a mechanism to share costs between providers of electronic communications networks and services.

Regulatory control of undertakings with significant retail market power

The aim is to strike a balance between promoting the interests of European citizens and ensuring effective competition, while providing for a minimum of regulatory intervention in order to establish a common level of rights throughout the European Community. The national regulatory authorities must impose obligations with regard to retail services identified as not being effectively competitive, including in particular the requirement that undertakings do not charge excessive prices, inhibit market entry or restrict competition by setting predatory prices.

Users' interests and rights

The users of electronic telecommunications services enjoy a number of rights, including in particular:

- the right to have a contract concluded with one or more undertakings where consumers subscribe to services providing connection to the telephone network. The contract must contain a minimum set of information: the identity and address of the supplier, the types of services provided (including, in particular, if access to the emergency services is provided or not, information on all other conditions limiting access to services and applications and/or their use, and the minimum quality levels of services offered, etc.), the duration of the contract and renewal conditions, the arrangements for procedures for settling disputes, etc.;
- the provision by operators of transparent, up-to-date information on applicable prices and tariffs;
- the setting of minimum requirements in terms of quality of service in order to prevent the deterioration of the service and the obstruction or slowing down of traffic on the networks;
- the publication by undertakings which offer publicly accessible electronic communications services of

comparable, adequate and up-to-date information on the quality of their services;

- the guarantee that, in the event of catastrophic network breakdown or in cases of force majeure, access to the public telephone network remains available to users;
- the provision of operator assistance and directory enquiry services.

The single European emergency call number (112) must remain free of charge, even from public pay telephones. The undertakings involved must make caller location information available free-of-charge to the authority handling emergency calls as soon as the call reaches the aforementioned authority. The Directive also makes it easier to change providers through the ability for users to retain their telephone number (fixed or mobile) when they change operator. Subscribers who have concluded an agreement regarding the porting of a number to a new operator must have this number activated within one working day. However, the pricing between operators and providers should not dissuade a subscriber from a changing provider.

Member States shall promote specific harmonized "116" numbers for services with a social purpose, including the emergency number for "Missing children".

Member States may impose reasonable "must carry" obligations for the broadcast of radio and television channels, in particular, accessibility services aimed at ensuring suitable access for disabled end-users, on undertakings under their jurisdiction which provide electronic communications networks.

General and final provisions

Consultation with interested parties

With regard to end-users' rights, the national regulatory authorities are required to take account of the views of end-users, consumers, manufacturers and undertakings that provide electronic communications networks and/or services. Member States shall specifically ensure that the NRAs establish a consultation mechanism which ensures that the interests of consumers, in terms of electronic communications, are duly taken into account.

Out-of-court resolution of disputes

Simple, transparent, non-discriminatory and inexpensive out-of-court procedures must be made available to users for dealing with unresolved disputes relating to universal service obligations. Where appropriate and warranted, the Member States may adopt a system of reimbursement and/or compensation.

1.10.2 Czech Republic



1.10.2.1 Country overview

The Czech Republic is a medium-sized European country with an area of 79,000 sq. km. It has a population of over 10 M inhabitants, with more than 1.5 M of them living in the capital city of Prague and with 74% of the total population living in urban areas¹⁸³. The country is landlocked and bordered by Austria, Germany, Poland and Slovakia. The Czech Republic became a member of the European Union in 2004.

The Czech Republic's GDP per capita (PPP) is USD 25,900 (2011 estimate).¹⁸⁴

1.10.2.2 Current status of telecom market

General Assessment¹⁸⁵: privatization and modernization of the Czech telecommunication system got off to a late start but is advancing steadily; virtually all exchanges are now digital; existing copper subscriber systems enhanced with Asymmetric Digital Subscriber Line (ADSL) equipment to accommodate Internet and other digital signals; trunk systems include fibre-optic cable and microwave radio relay

Domestic Telecommunications: access to the fixed-line telephone network expanded throughout the 1990s but the number of fixed line connections has been dropping since then; mobile telephone usage increased sharply beginning in the mid-1990s and the number of cellular telephone subscriptions now greatly exceeds the population

- Approximately 2.2M fixed lines (2010)¹⁸⁶
- Wireline market penetration (YE 2011): 17.4%¹⁸⁷
- Czech Telecom is the main fixed line provider

Mobile (cellular) communications

- 13.6 M subscribers YE 2011¹⁸⁸
- Wireless market penetration (YE 2011): 129.4%¹⁸⁹
- Three Main Mobile Operators:

¹⁸³ CIA World Factbook 2012

¹⁸⁴ *Id.*

¹⁸⁵ *Id.*

¹⁸⁶ *Id.*

¹⁸⁷ Global Wireless Matrix 1Q2012 2012

¹⁸⁸ Global Wireless Matrix 1Q2012

¹⁸⁹ *Id.*

-
- O2 (formerly Eurotel, a mobile subsidiary of the fixed line former state owned monopoly provider Czech Telecom) owned by Telefonica – approximately 36% market share
 - T-mobile owned by Deutsche Telekom – approximately 40% market share
 - Vodafone - approximately 24% market share
 - The fourth mobile operator U:fon, owned by Mobilkom, has less than 1% of market share

Internet¹⁹⁰

- Hosts 4.14 M (2010)
- Users: 6.7M (2009)

Although the country started the process of privatization and liberalization of the telecommunications industry in 1990, due to a variety of circumstances, the government was unable to issue laws or find the right partners to move ahead at that time. The 2000 Telecommunications Act established the Czech Telecom Office as the regulatory entity, set up the basis for the overall liberalization of the market and established milestones for the privatization of the state owned Český Telekom (Czech Telecom), the only service provider in the country at that stage. The market fully liberalized after 2004 when the Czech Republic joined the European Union and implemented the EU Electronic Communications Framework Directives.

1.10.2.3 Fund background

The Universal Service Fund (the 'Fund') in the Czech Republic has undergone different stages of development broadly in line with the EU framework legislation. It has been maintained as a dedicated (escrow) bank account with the NRA having control over the account. The balance from one year is transferred at the end of that year to the following year. Account management fees are reimbursed from the state budget and interest represents an income of the state budget. Contributors have the right to receive information about the account and how their contribution was deposited to the account.

Based on its own assessment, the NRA sets out what services from the scope of possible services (pursuant to the applicable law) will be provided as mandatory universal service and, based on this analysis, appoints its providers.¹⁹¹ Operators are allowed to take part in a consultation in which it is discussed whether the particular service is already being provided on a commercial basis to a sufficient extent and quality in the market or whether such service is not provided in sufficient amount and quality and should therefore be provided as a universal service ('US'). The NRA needs to substantiate its decision as well as address all objections arising from the consultation. After the NRA determines whether the service should fall within the scope of the US, it issues a tender for a provider of the service. If there are no applications, the NRA chooses an SMP provider to provide the service.

First USF (2001-2006)

The first USF (2001-2006) was established in 2002 based on Section 32 of Act No. 151/2000 Coll., Telecommunication Act. This Act implemented EU Directives 90/388/EEC (Article 4c (a) of the directive) and

¹⁹⁰ CIA World Factbook 2012

¹⁹¹ Section 32 of Act No. 151/2000 Coll., Telecommunication Act; Section 49 of Act No. 127/2005 Coll. on Electronic Communications; Decisions of NRA with respect to individual US obligations; 2011 Annual Report of CTO, p. 91-98

97/33/EC (Article 5). The intent was to provide a limited scope of services in the whole territory of the Czech Republic for regulated fees as a service to the public that a fully liberalized telecommunication market by itself was not be able to offer. The following services were included in the US in 2001-2006:

- Public telephone service provided via public telephone network
- Operator services
- Free of charge uninterrupted access to emergency calls
- Information service about telephone numbers
- Obligation to periodically issue phone books and to ensure access to those books
- Obligation to offer public pay phone services (phone booths)
- Discounts to the disabled

Under the first USF, funds were supposed to be collected from all holders of a telecommunication licence. The amount the contributors were to pay was established based on their profit from the applicable year (revenues of the contributor minus some costs such as interconnection costs). At first, a “demonstrable loss” (i.e., how much was spent on provision of the US by the provider) was confirmed by the NRA and then, the NRA calculated the share of each contributor on the overall “profit” or “income” and applied the same ratio to determine what part of the “demonstrable loss” should be covered by each operator.

As far as the first USF is concerned, the NRA had an obligation to provide explanations to providers that had a reasonable doubt that their contribution was not properly deposited to the account. The NRA also had the obligation to publish a Statement of Account Management in a Telecommunications Journal every year. In the event that any contributor disagreed with the amount it was assigned to pay, it could file an appeal to the head of the NRA, or, subsequently, a judicial review would be possible if the contributor wished to challenge the decision of the second instance. All contributors took advantage of these provisions and have been involved in legal proceedings concerning the universal service provided during 2001-2005.

As a result, operators have not been reimbursed yet for the “demonstrable losses”. Currently, there are no funds in the 2001-2005 USF. Contributors will pay their shares after respective decisions of the NRA become enforceable and this was expected to happen by the end of 2012.

Second USF (2006 - 2009)

The second USF (for years 2006 - 2009) was established based on Section 49 of the Act No. 127/2005 Coll. on Electronic Communications with similar intentions. This Fund was used for payments for the universal service provided from 2006 (part of the year) until 2009. Since 2006, the NRA has had the mandate to order the USO provider to offer the following services:

- Connection in a fixed location to a public communication network
- Access in a fixed location to a publically available telephone service
- Obligation to periodically issue phone books and to ensure access to those books
- Information service about telephone numbers
- Obligation to offer public pay phone services (phone booths)
- Access to telephone service for disabled

-
- Special tariffs for disabled.

Under the second regulation (2006-2009), the cost of US has been financed from two sources. The cost of US provided to people with “special social needs” (i.e., disabled) pursuant to Section 38(4) of Act No. 127/2005 Coll. in the form of special (i.e., lower) prices is reimbursed directly from the state budget. “Net costs” of other services are paid from the US account, where all operators, including the provider of the US, contribute. Any contributor whose income for the applicable year is below CZK 10 million (EUR 40,000 or USD 50,000) does not have the obligation to contribute. In the event that the contribution should exceed one per cent (1%) of the contributor’s revenues, the rest (above the 1%) was to be paid from the state budget.

The NRA initially calculates the “net costs”. Then it decides whether the net costs of provision of the US represent an “unbearable burden” for the provider. If so, the NRA sets a percentage of profit of individual contributors (from an overall profit of all contributors) and, based on this, it determines a contribution amount that is proportionate to the share of all profits of all contributors.¹⁹²

An important procedural modification is that the NRA issues a decision where shares of individual contributors are determined in the form of a general measure, which means that the decision is not issued in an administrative proceeding carried out with every contributor individually, but rather, in a single proceeding. As a result, the contributors have fewer opportunities to contest the decisions. Based on this, all of the “net costs” from 2006 to 2009 have already been reimbursed.

As to the second USF (2006-2009), the NRA has an obligation to publish a Universal Service Annual Report every year that contains, in addition to other information, a Statement of Management of the account.

As of 2010, there was no USF allocated for future years and universal costs are to be reimbursed directly from the state budget.

1.10.2.4 Current status of the fund

For 2001-2005, the USF still existed but as of today there is no money deposited in the USF (other than about CZK 40,000 that was deposited by mistake by one company). For 2006 – 2009, the Fund also exists given that the NRA is still in the process of settling contributions to the Fund from certain operators who became insolvent. Until 2009, the regulator had been managing the Fund. Once accounts for both Funds are settled, the intention is to cancel the Funds.

Currently, the US costs are reimbursed directly from the state budget based on a decision on the net costs for the year. The net US costs in 2010 were approximately CZK 47 million (**USD 2.4M**).¹⁹³ There is a pattern of decline as to the scope of US services as well as US costs: for comparison in 2008, the costs were approximately CZK 115 million (**USD 5.8M**).

¹⁹² Section 32 of Act No. 151/2000 Coll., Telecommunication Act; Section 49 of Act No. 127/2005 Coll. on Electronic Communications; Decree No. 235/2001 Coll. on Calculation and Reimbursement of Demonstrable Loss; Decree No. 388/2006 Coll. on Net Costs of Universal Service in Electronic Communications.

¹⁹³ 2011 Annual Report of CTO, p. 97

1.10.2.5 What the USF has achieved to date

The first USF 2001-2006 focused on the following services:

- Public telephone service provided via public telephone network
- Operator services
- Free of charge uninterrupted access to emergency calls
- Information service about telephone numbers
- Obligation to periodically issue phone books and to ensure access to those books
- Obligation to offer public pay phone services (phone booths)
- Discounts to disabled

In 2006, the NRA lifted the imposition of two obligations: 1) to provide connections in a fixed location to a public communications network and 2) to provide access in a fixed location to a publically available telephone service, as these services were available on the market and no further regulation was necessary.

Since 2006, when the NRA was given the right to choose any of the listed services as US, only the following services have been found necessary to be provided as US:

- Obligation to offer public pay phone services (phone booths)
- Access to telephone service for disabled
- Special tariffs for the disabled

Since it was the only applicant, Telefónica was chosen by the NRA for the obligation to offer public pay phone services (phone booths) and access to telephone service for the disabled. Telefónica also provided special tariffs for the disabled alongside with Vodafone who provided this service in addition to Telefónica from 2008 until 2011.

However, as of today, the US costs have still not been reimbursed for the years 2001-2005, as the decisions of the NRA ordering contributors to pay were cancelled by the administrative courts during a judicial review initiated by some contributors. Decisions of the NRA were challenged for various reasons, partly for the extent of costs that the contributors were allowed to offset when calculating net profit (e.g., MVNOs were not allowed to offset interconnection fees as they did not own their own network which they claimed was unjust), partly for the costs the NRA included in the US "demonstrable costs" and partly for procedural reasons (the NRA did not consider the US proceedings to be an administrative proceedings where the contributors have the status and rights of a participant of the proceedings). Eventually, the NRA's decisions for USO from years 2001-2006 were cancelled by the administrative courts and there are still no enforceable US decisions based on which the US costs could be reimbursed. It is expected that the NRA will issue new decisions and the already issued but challenged decisions will become enforceable in 2012¹⁹⁴.

In 2008, the NRA excluded from the US scope the obligation to periodically issue phone books and the obligation to provide information about telephone numbers as these services are provided on commercial bases. The obligation to offer public pay phone services was imposed in 2006 and it is valid until today. However, in 2009, the number of

¹⁹⁴ 2011 Annual Report of CTO, p. 91-98; Sections 29-32 of Act No. 151/2000 Coll., Telecommunication Act; Explanatory Report to Act No. 151/2000 Coll.; Section 38-50 of Act No. 127/2005 Coll. on Electronic Communications; Explanatory Report to Act No. 127/2005 Coll.

phone booths decreased and this was followed by further decreases in 2010 and 2011.¹⁹⁵ In mid-2011, the NRA examined the necessity of this obligation and established that phone booths still represent an important access point to the publicly available telephone service.

In 2009, the NRA also examined the obligation to provide access to telephone service for the disabled. The NRA concluded that this service should remain included in the scope of the US. The same applies to the obligation to provide special tariffs for the disabled - this obligation was established in 2008 and was confirmed for another three years in 2011.¹⁹⁶

1.10.2.6 Other elements of interest

In view of the protracted legal disputes, the universal service fund scheme in the Czech Republic has not been able to provide the right incentives to the telecommunications operators, leading to the decision of the NRA to abolish the Universal Service Fund and to continue funding any remaining obligations through the state budget. At the same time, market conditions have evolved and telecommunications operators have extended universal service through competitive offerings to the extent that only limited universal service obligations remain today.

¹⁹⁵ 2011 Annual Report of CTO

¹⁹⁶ 2006 Annual Report of CTO, p. 59; 2008 Annual Report of CTO, p. 61; 2011 Annual Report of CTO, p. 91-93; Section 29 of Act No. 151/2000 Coll., Telecommunication Act; Section 38 and 130 of Act No. 127/2005 Coll. on Electronic Communications

1.10.3 Italy



1.10.3.1 Country overview

Italy is strategically located in the central Mediterranean region, bordered by Austria, France, Slovenia and Switzerland, as well as Vatican City and San Marino. With a relatively small land mass of 294,140 sq. km., Italy is home to some 60 M inhabitants. The urban population is 68% of the total and is spread across major cities such as Rome (the capital) with a population of 3.4 M; Milan with 3.0M, Naples with 2.3 M; Turin with 1.7 M and Palermo with almost 0.9M. Thousands of small, mainly agricultural, communities are located in remote mountainous areas¹⁹⁷.

Italy's GDP per capita (PPP) is USD 30,100 (2011 estimate).¹⁹⁸

1.10.3.2 Current status of telecom market

General Assessment: modern, well developed, fast; fully automated telephone, telex, and data services

Domestic Telecommunications: high-capacity cable and microwave radio relay trunks

- Approximately 21.6M fixed lines (2010)¹⁹⁹
- Wireline market penetration; (YE 2011) 29.5%²⁰⁰
- Telecom Italia is still main fixed line provider

Mobile (cellular) communications

- Approximately 92.4M (YE 2011) subscribers²⁰¹
- Wireless market penetration (YE 2011): 152.4%²⁰²
- Four Main Mobile Operators:
 - Telecom Italia (TIM) with approximately 35% market share;
 - Vodafone with approximately 32.0% market share;
 - Wind Telecomunicazioni with approximately 23.0 % market share
 - 3 (Hutchison Whampoa) with approximately 10.0% market share.

¹⁹⁷ CIA World Factbook 2012

¹⁹⁸ CIA World Factbook 2012

¹⁹⁹ Id.

²⁰⁰ Global Wireless Matrix 1Q 2012

²⁰¹ Global Wireless Matrix 1Q2012

²⁰² Id.

Internet²⁰³

- Hosts – 25.5 M (2011)
- Users – 29.2 (2001)

Italy's telecommunications market experienced many years of a monopoly by the state owned incumbent Telecom Italia before a need for privatization and liberalization was recognized and acted upon. Telecom Italia was formed in 1994 as a merger of five companies: SIP (domestic telephones), Iritel (domestic and long distance telephones), Italcable (inter-continental long distance), Telespazio (satellite communications) and SIPM (maritime communications). Before the privatization and liberalization, Telecom Italia had 25M subscribers and 96.3% of the market share and was a monopoly. In 1995, the mobile communications arm of the sector was set up as Telecom Italia Mobile (TIM) and held 90% of the market. TIM's privatization began in 1997 when the National Regulatory Authority for the industry and for monitoring competition, called Autorità per le Garanzie nelle Comunicazioni (AGCOM), was also set up.

Today, subscribers increasingly access the Internet via mobile devices (15% of all subscribers). Rural penetration remains unequal with 57% of households in the North having Internet access while 48% have access in the South.

1.10.3.3 Fund background

The Universal Service Fund was established by the Decree of the President of the Republic No. 317/98 and, subsequently, by the Electronic Communications Code (ECC – Legislative Decree 259 of August 1, 2003), which transformed the EU Electronic Communications Framework into national law. The Code (Annex 11) and the relevant decisions taken by the NRA, namely decision No. 1/08 specifying several methodological aspects, contain the details regarding the calculation of the net cost of the provision of universal service.

The Fund is managed by the Ministry of Communication. AGCOM controls the amount of the net cost of universal service and, if positive, defines contributions for the supply of universal service. The Ministry for Economic Development (Ministero per lo Sviluppo Economico) is responsible for the allocation of the funds.

All owners of individual licences for fixed and mobile public networks are obliged to contribute up to one per cent (1%) of their annual revenues. Funds are to be collected annually. Contributors participate on a pro rata basis based on their market share up to the level of the 'Net Cost' of the provision of universal service established by AGCOM. Providers of value added services, data transmission services, Internet providers, providers of private networks and providers of services to Closed User Groups are excluded from contribution to the Fund.

The amount due is calculated as the Net Cost (revenues foregone minus avoidable costs) of the provision of Universal Services less the indirect benefits which accrue to the provider of universal service. The amount of the net cost of the USO submitted is usually certified by an independent external auditor who calculates the amount of the "indirect benefits" (the auditor chooses the methodology for this evaluation). The indirect benefits take into account:

- Brand recognition

²⁰³ CIA World Factbook 2012

-
- Lifecycle effects of the customers
 - Availability of a customer Database
 - Directories
 - Ubiquitous presence

AGCOM evaluates and confirms that the Net Cost of the Universal Service constitutes an unfair burden for the universal service provider and establishes a mechanism to share the costs.

Universal service has been defined as including the following obligations to be provided by a service provider designated by ACOM as the most efficient in terms of cost of provision of the universal service:

- Provision of a quality telephone service to everyone at an affordable price
- Free routing of emergency calls
- Provision of directories of all subscribers
- Provision of public payphones throughout the country
- Technical and tariff conditions for people who have difficulty accessing the telephone service as a result of physical handicap or a low income

1.10.3.4 Current status of the fund

The amounts of the Net Cost and of the contributions of all contributing operators have been subject to legal disputes. Based on a court decision, amounts to be contributed between 1999 and 2003, will be released once the amounts for 2004 to 2010 are audited by an independent external auditor.

In 1998, the provision of universal service was not considered as an unfair burden to Telecom Italia. For the following years, Telecom Italia claimed the following amounts as the Net Cost minus the Indirect Benefits: for 1999 – EUR 62.4M, for 2000 – EUR 58.M, for 2001 – EUR 40M, for 2002 – EUR 37M and for year 2003 - EUR 41M. The amounts claimed for 2004 to 2010 have not been released.

The current status of the USF is under a general review. Amongst other things, the extent of services not already provided through competitive markets and a possible financing from public funds (instead of sector contributions) are being discussed.

1.10.3.5 What the USF has achieved to date

Telecom Italia has been the operator charged with the obligation of providing the universal service throughout Italy as the most efficient operator in terms of cost for the designated universal services. Telecom Italia had the following universal service obligations:

- Access to a fixed location (unprofitable areas)
- Payphones (unprofitable payphones)
- Directories and information service
- Special provisions for disabled users
- Special rates for low income users

There have been long lasting litigations between Telecom Italia and the other contributors regarding the financing of the USF as all contributors have appealed against AGCOM's decisions at the Administrative Court.

1.10.3.6 Other elements of interest

Whilst the Universal Service Fund has not managed to stimulate the provision of universal service through the incentive of compensation, Telecom Italia and other major operators have managed to extend universal services to the majority of the population. Today, only a few areas may not have been stimulated / developed by the play of market forces, such as the access in very remote areas, public payphones in certain areas or locations and specific measures for disabled users with low incomes.

In view of the EU Digital Agenda, the possible imposition of Universal Service Obligations for broadband Internet services has been discussed but not concluded. Replicating the surge in competitive offerings and the wide spread of voice services, the telecommunications operators might actually pre-empt any such imposition by extending broadband / Internet services on a commercial basis, especially through mobile broadband. As an example, Vodafone's '1,000 Comuni' (1,000 Municipalities) initiative is an indication of this phenomenon. Since January 2011, Vodafone has committed to cover at least one city per day up to a total of 1,000 municipalities, contributing effectively to the resolution of the problem of Digital Divide in Italy in areas where citizens do not have Internet access or have limited access (i.e., less than 1 Mbps), which is today 7.1% of the population (around 4.3 M inhabitants).²⁰⁴

²⁰⁴ Vodafone Italy website: http://www.vodafone.it/eng/index.html?ty_skip_md=true&ty_key=190english

1.11 Latin America

1.11.1 Argentina



1.11.1.1 Country overview

Argentina's official name is República Argentina. It is South America's second largest country by land area after Brazil. Argentina is a federation of 23 provinces and an autonomous city, Buenos Aires. It is the eighth-largest country in the world in land area and the largest amongst Spanish-speaking nations: 2,780,400 sq. km. The population is estimated to be 42.2M with an average density of 15 inhabitants / sq. km.

The country is highly urbanized, with the ten largest metropolitan areas accounting for approximately half of the population, and with fewer than one in ten inhabitants living in rural areas. About three million people live in the capital, Buenos Aires, and the Greater Buenos Aires metropolitan area totals around 13 million (around one third of the total population), making it one of the largest urban areas in the world.²⁰⁵

1.11.1.2 Current status of telecom market

General Assessment²⁰⁶ In 1998, Argentina commenced liberalization of the telecommunications sector and opened its telecommunications market to competition and foreign investment, thereby encouraging the growth of modern telecommunications technology. Fibre-optic cable trunk lines are being installed between all major cities; major networks are entirely digital and the availability of telephone service is generally good or improving.

Domestic Telecommunications consist of²⁰⁷: a trunk network consisting of microwave radio relay, fibre-optic cable and a domestic satellite system with 40 earth stations; fixed-line tele-density is increasing gradually and mobile-cellular subscribership is increasing rapidly; broadband Internet services are gaining ground.

- Approximately 10 million fixed lines
- 2 main fixed line operators: Telefónica and Telecom

²⁰⁵ CIA World Factbook 2012

²⁰⁶ CIA World Factbook 2012

²⁰⁷ *Id.*

-
- Wireline market penetration ²⁰⁸(YE2011): 21.7%

Mobile (cellular) communications:

- 55.4M subscribers²⁰⁹ (YE2011)
- Wireless market penetration YE 2011: 135.4%²¹⁰
- 4 Main Operators²¹¹:
 - Movistar (Telefónica) – approximately 30% market share
 - Personal (Telecom) – approximately 33% market share
 - Claro (América Móvil) - approximately 34% market share
 - Nextel - approximately 3 % market share (currently does not have 3G licence)
 - 1 Mobile Virtual Network Operator (MVNO): MovilSur/Nuestro, commercially operated by Southern Telephone Cooperatives using Personal's network and spectrum band.

Internet²¹²:

- Hosts: 10.9 M (2011)
- Users: 13.7 M (2009)
- Nationwide, 41% of homes have a PC; Buenos Aires City - 68.6 % and in the Greater Buenos Aires area, 53.8%)²¹³

Liberalization of the Argentine telecommunications market commenced in 1990 with the privatization on ENTel, the state-owned fixed line operator, which was split into north and south operating entities. This was followed by the award of mobile licences initially allocated on a regional basis. Telecoms policy is regulated by the federal government through the laws of Congress which are communicated via Executive Orders issued by the Administration. A new law, the Audiovisual Communications Services Act #26,522 (ACSA), was issued in October 2009 and the related regulation Decree 1225/2010 was issued in the first half of 2010²¹⁴. The Comisión Nacional de Comunicaciones (CNC) is the telecommunications regulator charged with managing service provider compliance.

1.11.1.3 Fund background

In August 2000, Annex III, one of the four Annexes of Telecom Market Liberalization Decree 764/2000, established Universal Service Obligations for the first time since ENTel's privatization in 1990. Article 10 of this Annex, established the creation of a Fund (FFSU = Fondo Fiduciario del Servicio Universal) to be effective January 1, 2001.

For a variety of reasons, including but not limited to, financial crises, changes of government and a general reluctance to participate on the part of some operators, operators did not contribute to the Fund from 2001 through

²⁰⁸ Global Wireless Matrix 1Q2012

²⁰⁹ *Id.*

²¹⁰ *Id.*

²¹¹ *Id.*

²¹² CIA World Factbook 2012

²¹³ 2010 Argentine Census

²¹⁴ Telecoms and Media 2011 – Law Business Research Ltd.

2007. In April 2008, Decree Nr. 558 replaced the Universal Service Fund regime that had been created on August 2000 via Decree Nr.764. The new Decree established the new administration, supervision and management of the Fondo Fiduciario del Servicio Universal (FFSU) and provided guidelines regarding the way in which the different telecommunications companies would contribute to the Fund. This was apparently intended to avoid the issues generated by the previous Decree from 2000. However, no supporting regulation was ever issued for Decree 764 and, thus, the guidelines were not enforceable.

In defining “Universal Service”, the new regulation established the requirement as those areas with uncovered or unsatisfied needs, and where access must be provided to all inhabitants regardless of where they live or their financial situation.

It also determined that the Secretary of Communication (SeCom) would have exclusive responsibility for the issuance of general and specific resolutions regarding the new regulation, as well as for its interpretation and application, and would guarantee the continuity of Universal Service programmes already in progress and implementation of the ones that had been under review. However, it would seem that up until 2009/2010, there were no actual programmes in progress. The Decree also required Telecom Argentina and Telefónica to extend the coverage of their fixed line networks within their original region of activity to cover the underserved pockets in their areas. However, this was contested by both operators given that such a Decree cannot legally modify existing licence terms and conditions.

The level of financing of ongoing universal service programmes established under the previous regulation was to be determined by the SeCom, whereas telecom providers appointed to participate in future programmes were to be selected via a competitive bidding process. The Decree requires telecommunications service providers to contribute 1% of their revenues (from telecommunications services, net of taxes) to the Fund and keeps the “pay or play” mechanism for compliance with the mandatory monthly contribution to the Fund or, to claim the corresponding receivable, as the case may be.

Telecommunications services providers are to act in their capacity as trustees for this Fund and are to rely on the assistance of a Technical Committee made up of seven members:

- two members appointed by the SeCom
- one member appointed by the Comisión Nacional de Comunicaciones (CNC)
- three members appointed by the telecommunication services providers with one each being appointed by Telecom Argentina and Telefónica and one by the rest of the telecommunications service providers
- one member appointed by independent local operators

This Technical Committee is to be informed by the SeCom of the programmes that will be financed and is responsible for managing and controlling the Fund, carrying out technical-economic evaluations of existing projects and supervising the process of competitive bidding as well as the adjudication of new programmes, with prior approval by the SeCom.

1.11.1.4 Current status of the fund

One of the major objectives assigned to the FFSU was to promote digital inclusion for groups of people who are deprived of access for geographical, social or economic reasons. However, the FFSU in Argentina has encountered many political and private interest obstacles, not to mention bureaucratic hurdles, since its inception. Even though the Technical Committee considers the Fund to have a key role to play in achieving Argentina's communication goals, it would appear that the Fund has had limited activity and indeed, success, to date. The single project launched prior to the issuance of Decree 1552 in 2010, was in 2009, when operators were invited to respond to a universal service bid (Res 88/2009) to provide VoIP and Internet (originally, up to 250 kbps) to some 15,000 homes located in 397 small communities. The bids were expected to be awarded at some stage in 2012 (some three years after submission) for implementation by 2013.

Other than the afore-mentioned bid, it was only in 2010 (two years after the issuance of Decree 558/08 and nine years after the introduction of 764/00), that the Technical Committee called for two bids for ISP services. One bid was to provide internet service to 4900 schools and the other for 790 public libraries (respectively, Res.147 and Res. 148/2010). Also, in order to address the issue of the lack of operator contributions from 2001 to 2007, a resolution issued in 2011 (Res 9-2011), called for infrastructure and equipment projects. The three main mobile operators duly submitted their project proposals and are still awaiting the outcome of their submissions for Res 9-2011 as well as Res 148/2010. This means that, in total, since the initial establishment of the Fund, only four projects has been announced.

1.11.1.5 What the USF has achieved to date

The Fund is intended to build local infrastructure to provide services to specific population groups and to institutions such as schools and public libraries but, as indicated in the previous section, there are few tangible results to date other than the issuance of several bids, the associated bidder responses and one project award as outlined below.

- Provision of wideband IP for homes in 397 remote towns (Res 88/2009) was derived from a list of 1497 towns without telephone service. After two years of field survey analyses, selection of towns and bid paperwork, this project would appear to be reaching the bidder selection phase and was to have been awarded in the last quarter of 2012.
- The project for Internet provision for 4,900 schools project is an ISP programme (Res.147/2010), as mentioned in the previous section. Bidders offered their best price for the installation charge and a monthly fee to be paid by the Fund for five years in order to provide 3 Mbps Internet service to each school. Because of access problems, the programme was reduced to less than 4,200 schools and 80% of them (3,400) are already receiving service from the winning bidders. The average monthly fee is USD 58 (250 pesos) and it includes USD 20 (85 pesos) for the mandatory content control software. Almost all technologies were accepted e.g., ADSL, WiFi, WiMax, fibre optic cable, VSAT and other satellite links. Installation charges in USD were from USD 75 for ADSL up to USD 750 for satellite links. The project also permitted speeds other than 3 Mbps, ranging from 1 to 50 Mbps. The following table shows the corresponding monthly fees:

Speed	Mbps	1	3	5	10	20	50
Monthly fee	USD	36	60	64	72	150	630

-
- The project for service to 790 public libraries project is also an ISP programme (Res. 148/2010). Bidders offered their best price for the installation charge and monthly fee to be paid during a five year period by the FFSU in order to provide a 3 Mbps Internet service to each library (originally envisaged at 1024 kbps). This is still not awarded.
 - The Infrastructure and Equipment project (Res 9-2011) is also without any noticeable progress since 2010 when the three main cellular operators submitted their proposals. Each one offered to cover remote areas at USD 250,000 for each new base station near the community to be served. The bids submitted were as follows: Personal (USD 30M), Movistar (USD 28M) and Claro (USD 22M).

The Fund would appear to be receiving monthly contributions of around **USD 5M - 6M** from the different telecommunications operators. Even though the Fund has not yet received full payment for the period 2001 – 2007 (the two fixed line operators are said not to have submitted their payments), knowledgeable sources estimated the amount collected by the Fund at this time to be approximately **USD 220M**.

1.11.1.6 Other elements of interest

Given the current political and economic situation in Argentina, it would seem unlikely that there will be significant progress in expanding the use of the Fund. Recently introduced government regulations regarding imports, banking and numerous other matters are unlikely to encourage participation in USF projects. In addition, irrespective of the amounts being collected from the operators, there are questions regarding how the government may choose to utilize these funds going forward.

1.11.2 Brazil



1.11.2.1 Country overview

The Federal Republic of Brazil (in Portuguese, República Federativa de Brasil) is the largest country in South America - some, 8,514,877 sq. km. Brazil shares a common boundary with every South American country except Chile and Ecuador. Brazil's total population is estimated to be 205.7M with a density of 24 inhabitants/km.² As of 2010, Brazil's urban population is approximately 87% of the total population. Sao Paulo is Brazil's largest city with a population of 19.6M; followed by Rio de Janeiro (11.8 M); Belo Horizonte (5.7 M); Porto Alegre (4.0 M); and Brasilia (capital) 3.8 M²¹⁵.

Brazil's GDP per capita (PPP) is USD 11,600 (2011 estimate).²¹⁶

1.11.2.2 Current status of telecom market

General assessment: In general, Brazil has a well-functioning telecommunications system including an extensive microwave radio relay system and a domestic satellite system with 64 earth stations; mobile-cellular usage has more than tripled in the past five years.

Domestic telecommunications²¹⁷: Fixed-line connections have remained relatively stable in recent years and number about 20 per 100 persons; less Capex expensive mobile-cellular technology has been a major driver in expanding telephone service to the lower-income segments of the population with mobile-cellular tele-density reaching 100 per 100 persons in 2010.

- Approximately 42.1 M fixed lines (2010)
- Wireline market penetration ²¹⁸(YE 2011): 23.7%

Mobile (cellular) communications

- 244.2 M subscribers²¹⁹ (YE2011)
- Wireless market penetration YE 2011: 125.3 %²²⁰

²¹⁵ CIA World Factbook 2012

²¹⁶ CIA World Factbook 2012

²¹⁷ *Id.*

²¹⁸ Global Wireless Matrix 1Q2012

²¹⁹ *Id.*

-
- 4 Main Operators with 99.0 % market share²²¹:
 - Vivo - 29% market share
 - TIM – 26% market share
 - Claro – 25% market share
 - Oi – 19% market share
 - Remaining operators with less than 2% market share

Internet ²²²

- Hosts: 23.8 M (2011)
- Users: 76.0M (2009)

The underlying law for the Brazilian telecom sector is the General Telecommunications Law 9472 of July 16, 1997. The law addresses two main objectives: competition and universalization. This law establishes that the Executive Branch is responsible for establishing telecom policy whereas the National Telecommunications Agency, ANATEL, is responsible for implementation of the law through regulations and oversight. Privatization of the state owned telecommunications companies took place in the late 1990's and the government no longer holds relevant stakes or management control in any of the telecom companies. However, in 2010, the government recreated Telebras (the former holding company for all of the state-owned telecom companies prior to their privatization) via Decree 7.175/10 for the purpose of providing broadband access to public institutions.²²³

1.11.2.3 Fund background

Brazil was one of the last of the larger Latin American countries to open its telecom market when, in July 1997, via Telecommunications Law 9472, it mandated the privatization of the two main government owned telecom monopolies: Telebras and Embratel. With the USF experiences from other Latin American markets in mind (e.g., Argentina, Peru and Chile), Brazil elected to insert the Universal Service obligations as part of the potential Licensees' mandatory development requirements. Network deployment obligations in low density areas were used as a licensing condition in order to fulfil Universal Service goals. Given that the Telecommunications Law mandated that the government issue a Universal Service Plan, Decree 2592 was duly published in May 1998 and defined universal access obligations by imposing such obligations on fixed line licensees through target plans regulated by ANATEL, the financially autonomous national telecommunications regulatory agency. As an autonomous organization, ANATEL's decisions can be challenged only through the courts.

In Decree No. 4733 of 2003 (Public Policy Decree), the Brazilian legal framework for universal services was outlined, establishing universal service as one of the primary objectives of the telecommunications policy. This original Universal Services Plan Decree was amended on April 4, 2008, and provided that all fixed service licensees (excluding national and long distance licensees), must install backhaul infrastructure in municipalities and localities that had not yet been covered, as well as in their respective concession areas, in accordance with the predetermined targets as listed below.

²²⁰ *Id.*

²²¹ *Id.*

²²² CIA World Factbook 2012

²²³ Telecoms and Media 2011 – Law Business Research Ltd

Coverage Plan Target	Coverage (by municipality in which have concession)	Coverage Timeframe
First target	40 %	by 12/31/2008
Second target	80 %	by 12/31/2009
Third target	100 %	by 12/31/2010

Source: Universal Services Plan Decree No. 4769 as amended by Decree No. 6424 (Apr. 4, 2008 at Article 13, I-III).

In accordance with this amended Universal Service Plan Decree, the scope of universal service was to increase access to telecommunications to individuals and public institutions, as well as providing access to public telephones; availability of services for people with disabilities; access for rural, remote and frontier urban areas; and access to emergency services. Two weeks after, on April 22, 2008, and separate from the Universal Service Plan Decree, the Ministry of Communications issued a directive with a new public policy instruction mandating that ANATEL adopt policies for broadband in order to increase Internet access to all citizens in the country, including rural areas²²⁴.

ANATEL supported ICT projects consistent with these development objectives but, instead of FUST, it legally bound new licensees to also deploy their networks in rural and low density areas, providing internet-enabled PCs and broadband connection services to schools, health centres, municipalities and community centres.

1.11.2.4 Current status of the fund

FUST relies on contributions levied on subscribers to cover the one per cent (1%) of gross revenues collected from all telecommunications service operators (fixed service, mobile service, multimedia, etc.), and also from percentages collected from concessions, licences, services authorizations and other sources. In addition, Telecommunications Law 9.472 allows the telecommunications providers to fulfil their universal service obligations through subsidies and additional revenues from interconnection payments. As previously indicated, the only operators that could utilize FUST funds were the fixed line operators. The funds, however, cannot be used to cover the costs of build-out requirements of fixed service providers in their concession agreement, but rather, can be used only to cover the portion of costs incurred by licensees to provide service to areas which are not served because they are unprofitable. Having collected one per cent of service providers' gross operational revenues earned from the provision of telecom services, FUST has collected a very large amount of money, but due to conflicting legal interpretations regarding the use of the Fund's resources, particularly for other non-telecom agencies' plans, very limited funds have been disbursed to date, at least to telecommunications projects (please see further discussion in **sub-sections** 4.4.2.5 and 4.4.2.6). Some of the major stumbling blocks were (and continue to be) the antiquated definition of fixed line telephony restricting speeds to 64 kps and the provision that the Fund can be used only for fixed line services in rural, non-commercial areas.

The FUST collected RS\$ 986.6 M (approximately **USD 485 M**)²²⁵ in 2010. Since 2001, the Fund has accumulated

²²⁴ Diretrizes para Implementação das Políticas Públicas em Telecomunicações, Portaria No. 178 (Apr. 22, 2008) at Art. 1).

²²⁵ ANATEL Brazil Relatório Anual 2010 p. 85 - 86

more than R\$ 9.6 B” (approximately **USD 4.7B**)²²⁶.

1.11.2.5 What the USF has achieved to date

In July 2001, Anatel called for its first FUST bid, called “FUST Educacao”, to provide Internet services and 290,000 computers to 16,000 schools (almost all in urban areas). However, the bid raised so many legal issues (some of which is discussed above) that it was cancelled until 2008, FUST resources were directed towards a single project. This project, called the Universal Service Plan of Switched Fixed Services for People with Disabilities” (“Plan for People with Disabilities”) was established by Decree 6039 on February 7, 2007. This was implemented by the Ministry of Communications and operated in partnership between ANATEL and the National Coordinator for Integration of People with Disabilities (“Corde”). The Plan’s objective was to provide the use of fixed line phone services in institutions for the deaf. Communication between deaf people is possible by text messages exchanged through a device called the Telecommunications Terminal for Deaf People (“TTDP”). Operators had to provide TTDPs to Corde member institutions within their concession areas that were selected to benefit from the plan in accordance with a three stage timeframe to install the TTDP’s within nine months in 100% of the selected institutes for the deaf..

1.11.2.6 Other elements of interest

Brazil is an example of a country which has repeatedly struggled with its Fund. Although established in August 2000, to date, the FUST has been unable to achieve its stated goals. Although FUST was established with the purpose of creating a financial resource that could complement the deployment of universal obligations of the fixed line operators, in reality, the cost of expanding services has been borne directly by the operators even while they continue to contribute to the Fund.

One of FUST’s most critical limitations is that it favours fixed service operators over other telecommunications providers and thus, the funds can be applied only towards fixed service projects. However, all telecommunications service providers are required to contribute, thus resulting in the inability of many contributing operators to subsequently access the funds. As far back as 2008, acknowledging that this is not the best approach for a funding mechanism, the Ministry of Communications highlighted this fact in its public consultation on ‘Reforming the Brazilian Telecommunications Framework’ and proposed that the FUST should be, at the very least, technologically neutral in its funding distribution mechanism²²⁷. In addition, the Ministry started considering a variety of other ways to distribute funds and to determine appropriate projects. However, no additional changes have been made to the structure of the FUST. Given that operators have continued to build out their networks in accordance with their licence roll-out obligations and without compensation for the most part, this would seem to indicate that the government should have a very substantial coffer of FUST funds available and various publications have either estimated the funds remaining or ways in which the funds have allegedly been misappropriated²²⁸.

One of the best examples of how the FUST goals are not achieved nor the funds utilized is the PGMU (Plano General

²²⁶ *Id.*

²²⁷ Atualizações das Políticas Públicas em Telecomunicações, Consulta Pública No. 179 (Apr. 22, 2008) at p. 9.

²²⁸ It was stated in the June 2005, edition of Brazil –The Technology Magazine that there was more than USD 1B in unused funds in the FUST; It was alleged in 2008 that the Brazilian government used more than USD 1B to pay off the public debt; Fabiana Monte, - COMPUTERWORLD July 3, 2009 - 18h08)

de Metas para a Universalização do Serviço Telefônico Fixo Comutado Prestado no Regime Público) or Master Plan for Universal Service Goals. This plan articulates the universal service obligations for the wireline operators primarily in terms of how many payphones per 1000 pops must be installed in low density areas. The last and third decree, Decree 7562 (June 30, 2011), repeals the second one (4769/2003) and all of them ignore the use of ANATEL funds. Instead of the FUST, they clearly state that the costs of installing and operating the payphones are part of the capex and opex of the licence winners.

Further complicating the whole matter are the understandable legal disputes arising from the various plan anomalies as perceived by the telecom operators as well as the ongoing debates between the Ministry of Communication, the Ministry of Education and the Ministry of Finance regarding how the Fund should be utilized.

Brazil is one of the noticeable examples of a country that has not used its planned funding mechanism effectively but which has instead almost always achieved its universal objectives through the coverage obligations imposed on its licensees. In fact, one could argue that Brazilian licensees' coverage obligations have been more effective at achieving universal service goals than any of the projects envisaged by FUST. (Please refer to further discussion in **Section 8.3**).

In brief, Brazil is one of the best examples of the legitimate and understandable concerns regarding USFs, fuelled mostly by its unfortunate examples of bureaucratic hindrances and allegedly questionable management of the funds. Government control agencies delay and hinder an unnecessarily complex system of establishing and managing a USF. Under such conditions, negotiating fair USF contributions for all operators, which are equitable between all and accepted as fair, definitely it is not an easy task.

As mobile penetration rates are higher than fixed line penetration rates, Brazil is also an example of the mobile technology as the dominant and preferred method for providing universal service/access. Furthermore, as advances in mobile technology have also benefited public access to broadband communications, Anatel's policy demonstrates the possibility of successfully extending universal service and access to remote rural villages by means other than a universal service fund.

1.11.3 Chile



1.11.3.1 Country overview

The Republic of Chile extends southerly along the west coast of South America bordering the Andes and is the longest north-south extending country of the world, covering an area of 756,102 sq. km. The country is divided into 15 administrative divisions known as 'regiones' (regions). Chile has an estimated population of 17.1M with a density of 22.6 persons per sq. km. Approximately 89% of the population is urban. The principal cities are: Santiago (capital) 5.9M and Valparaíso 0.9M²²⁹.

Chile's GDP per capita (PPP) is USD 16,100 (2011 estimate).²³⁰

1.11.3.2 Current status of telecom market

General Assessment:²³¹ Privatization in Chile began in 1988 – one of the first such initiatives world-wide; it has the most advanced telecommunications infrastructure in South America.

Domestic Telecommunications²³² consist of: a modern system based on extensive fibre optic cable and microwave radio relay facilities; the domestic satellite system has three earth stations. The number of fixed-line connections has stagnated in recent years as mobile-cellular usage continues to increase.

- Approximately 3.5M fixed lines million (2010)
- Wireline market penetration: 20.5%²³³ (YE2011)

Mobile (cellular) communications

- 19.9M subscribers (2010)
- Wireless market penetration (2011): 140.4²³⁴
- 3 main operators (as of YE 2011)²³⁵:
 - Entel - approximately 38% market share
 - Movistar - approximately 39% market share
 - Claro - approximately 23% market penetration

²²⁹ CIA World Factbook 2012

²³⁰ *Id.*

²³¹ *Id.*

²³² *Id.*

²³³ Global Wireless Matrix Q12012

²³⁴ *Id.*

²³⁵ *Id.*

Internet²³⁶:

- Hosts: 1.8M (2011)
- Users: 7.0M (2009)

In October 1982, through the publication of Telecommunications Law Nr. 18168, the General Telecommunications Law (GTL), Chile became the first country in Latin America (and one of the very first in the world) to privatize the state owned telephone companies and to open the long distance market to competition. Although the process in Chile started earlier than in many other countries, the liberalization process took more than ten years to complete, due, in part to stalling tactics of the incumbent monopoly operators. The Law was subsequently modified by decrees in 1987 and 1994.

1.11.3.3 Fund background

The GTL did not establish a Universal Service Fund, but rather, it created a Telecommunications Development Fund (Fondo de Desarrollo de las Telecomunicaciones) referred to henceforth as the FDT. Instead of adopting what could be referred to as the 'traditional' USF fundraising approach whereby telecom operating companies were expected to contribute to the Fund, Chile's solution was to provide special government subsidies to commercial operators for installing and operating telecom services in rural areas i.e., a Universal Access programme. As a result, the FDT is the oldest fund of its kind in Latin America. It is managed by the Sub Secretary of Telecommunications.

In 1994, Law 19302 and Decree 470 modified the original FDT goals stated in Telecom Law 18868 and mandated the Fund to promote the increase of public telephone service in low income rural and urban areas. In 2001, Law 19724 and Decree 353/01 created the second subsidy system: FDT II (the first subsidies now being referred to as FDT I). This new Fund, in addition to the former objectives of FDT I, allowed the subsidization of tele-centres.

In all cases, the subsidies are awarded through a competitive tender process. The FDT pays the subsidy in two instalments. The first instalment is paid when the project is ready for service and the second is paid one year later. In the interim, operators must finance the entire cost of their project plus the guarantees (two per cent or three per cent of the overall value) until the full subsidies are paid.²³⁷

1.11.3.4 Current status of the fund

Each year, the subsidy amounts are allocated in the national budget and must be spent in the year allocated. Any money not spent during the fiscal year must be returned to the federal government. Telecom operators have no input in suggesting projects but they are permitted to provide input regarding new technologies and practices. Unofficial estimates indicate that up until 2010, the FDT programmes used around 54% of the budgeted subsidies in its main rural telecom projects. It is difficult to calculate precisely because, officially, in the national budget, the amount of the subsidy of a cancelled tender is calculated as allocated. The allocated budgetary amount for the Fund in the 2011

²³⁶ CIA World Factbook 2012

²³⁷ http://www.subtel.gob.cl/prontus_subtel/site/artic/20090806/pags/20090806105001.html

Ministry of Transportation and Communications budget was 9.3B Chilean pesos or **USD 18.5M**.²³⁸

1.11.3.5 What the USF has achieved to date

The original goal of the FDT was to provide public telephone service to about 7,400 underserved localities. This target was achieved in 2001 (6,000 towns having been covered by 1999). Funds were then directed to support the tele-centre projects, a broadband backbone and mobile network expansion. In 2009, the Fund began supporting rural broadband expansion. Inverca Telecom won the USD 57M contract to extend broadband to an additional 3 M rural residents. At the same time, the FDT was also supporting telecom services for schools, libraries and health centres. In 2010, Telefónica agreed with the Ministry of Education to provide connectivity to 7,000 schools. As Chile has more than 10,000 schools, the 3000+ schools remaining will be connected via FDT subsidies.

Because the FDT programmes were implemented primarily during the second half of the 1990's, when mobile services were still in the development and expansion stage, the FDT did not really take into consideration or target wireless services. However, the FDT is now addressing to mobile services solutions in the relatively few underserved mobile coverage areas. In 2009, Entel, the largest mobile operator, was granted USD 1.4 M to extend mobile services to underserved, remote areas.

1.11.3.6 Other elements of interest

In May 2011, the services that could be addressed by the FDT were re-defined by the government, allowing it to provide the following services as evidenced by the 2011-2014 development plans:

- Broadband:
 - Improve covered households from 40% to 70%
 - 100% Schools connected at 10Mbps – with 98% to be completed by March 2012
 - From 10% to 22% of population connected to broadband
- Mobile Internet:
 - Mobile Internet – 3G reaching 1474 rural communities in the Magallanes Region, ensuring redundancy and sustainable service and quality

²³⁸ Ley de presupuesto 2011

In addition, the FDT announced the following regional initiatives²³⁹:

Project	Objective	Subsidy \$ MM
Arica Parinacota		1.668
<ul style="list-style-type: none"> Quebrada de Acha (Arica) Guatanave – Guañacagua – Chitita (Camarones) Ruta Internacional 11Ch (Chile - Bolivia) 	Provide mobile telephony and internet access	141 244 1283
Aysén		3.701
<ul style="list-style-type: none"> Localidades 	Mobile telephony and internet access	1952
Maule		1500
<ol style="list-style-type: none"> Ruta Pehuenche 2. Talca-Ramal* (+1) 	Mobile telephony and internet access	830 670
Coquimbo		3.900
<ul style="list-style-type: none"> Valle de Hurtado Cuenca del Choapa Oeste Cuenca del Choapa Este Los Vilos Higueras 	Data transmission service and mobile telephony	946 803 906 1.135 110
Los Lagos		679
<ul style="list-style-type: none"> Islas Desertores 	Mobile telephony and internet access	679

During the almost 20 years of operation, the government subsidy system adopted by Chile's FDT has demonstrated some advantages. Because the FDT is not dependent on operator contributions and outside intervention (or management), there are no disputes regarding the allocation and use of funds. One of the main advantages is that there is no need for telecom services operators (or their users) to pay for funds that they may not necessarily have access to. In addition, this system gives the FDT the flexibility to switch to new technologies or change the prioritization of the subsidies as may be identified by the various ministries from time to time. Nonetheless it is worthwhile to point out, however, that such an approach would not work successfully in all countries. It requires a country that is fiscally stable enough so as to permit a budget allocation for telecom subsidies and it also requires a transparent internal process for deciding what telecommunications services require bolstering and then deciding how the budget should be allocated.

²³⁹ Informe Subtel October 2011

1.11.4 Colombia



1.11.4.1 Country overview

The Republic of Colombia is situated in northern South America, bordering the Caribbean Sea, between Panama and Venezuela, and bordering the North Pacific Ocean, between Ecuador and Panama. Colombia's total land mass is 1,138,910 sq. km. The population is estimated to be approximately 45.2 M and approximately 75% of total population is urbanized. Colombia's major cities in order of population size are: Bogota (capital) 8.3 M; Medellin 3.5M; Cali 2.4 M; Barranquilla 1.8M; and Bucaramanga 1.1 M.

Colombia's GDP per capita (PPP) is USD 10,100 (2011 estimate).²⁴⁰

1.11.4.2 Current status of telecom market

General Assessment²⁴¹: The Colombian government commenced liberalization in the 1990's and the current telecommunications system is modern in many respects with a nationwide microwave radio relay system, a domestic satellite system with 41 earth stations, and a fibre-optic network linking 50 cities.

Domestic Telecommunications: fixed-line connections stand at about 15 per 100 persons; mobile cellular telephone subscribership is 100 per 100 persons; competition among cellular service providers is resulting in falling local and international calling rates and contributing to the steep decline in the market share of fixed line services

- Approximately 6.8 M fixed lines as of 2010
- Wireline market penetration: 19.5%²⁴² (YE 2011)
- Colombia's fixed local market is still controlled by three key operators: Telefónica Telecom, ETB and UNE-EPM; together, they accounted for 73.9% of all fixed line customers in the country at the end of March 2010

Mobile (cellular) communications

- 45.1 M as of YE2011²⁴³

²⁴⁰ CIA World Factbook 2012

²⁴¹ Id.

²⁴² Global Wireless Matrix 1Q2012

²⁴³ Global Wireless Matrix 1Q2012

-
- Wireless market penetration 95.7% ²⁴⁴(YE 2011)
 - 3 Main Operators:
 - Comcel (América Móvil) – approximately 64% market share
 - Telefónica (Movistar) – approximately 25% market share
 - Tigo (Millicom) – approximately 11% market share

Internet²⁴⁵

- Hosts: 4.3 M (2011)
- Users: 22.5 M (2009)

The Colombian telecommunications market, initially liberalized in 1991, is growing rapidly, based on strong foundations and bolstered by good policy and strong economic growth. The government's Plan Vive Digital is expected to increase broadband penetration rapidly. In 2012, the Ministry received the Digital Leadership award in recognition of its forward looking ICT policy.

Colombia was one of the first countries in the region to launch LTE services, and the first to auction the 2.6GHz spectrum. It was also one of the first countries globally to auction 700MHz spectrum and is planning to double the amount of assigned spectrum in the next three years.

1.11.4.3 Fund background

An initial Fund concept was established by Decree Nr. 129 in 1976 but, in reality, it was simply an accounting system. The concept was that this Fund would be the depository for proceeds from operators to the Ministry with respect to payments of concession fees and other collections as well as fines. However, in 1994, Colombia established the Communications Fund (FCM) for the purpose of covering the cost of stations/equipment providing telecommunications services as well as the costs of participation in international organizations and technical consultancy services for the Ministry of Communications.

In 1999, the objective of the Communications Fund was defined as that of financing plans, programmes and projects to facilitate access for the entire population of Colombia to telecommunications and postal services, as well as supporting the activities of the Ministry of Communications and enhancing its administrative, technical and operating capacity for the fulfilment of the Ministry's functions.

One of the main targets of the Fund was the promotion of 'Social Telephony Programmes', for which the Fund submitted annual plans for approval by the National Council on Economic and Social Policies within the framework of the National Development Plan. The programme was aimed at guaranteeing the provision of community telecommunications services to all unserved or underserved locales, particularly those in rural areas.

In 2009, Law Nr. 1341 significantly expanded the telecommunications services goals and also established the Fondo de las Tecnologías de la Información y las Telecomunicaciones (FTIC). The objective of the FTIC is to support all programmes and projects which would allow all residents of Colombia to have universal access to information and communications technologies.

²⁴⁴ *Id.*

²⁴⁵ CIA World Factbook 2012

1.11.4.4 Current status of the fund

The FONTIC is an independent agency working under the auspices of Ministerio de Tecnologías de la Información y las Comunicaciones (MINTIC). Although the Ministry provides the staff and operates and manages the Fund, the Fund has full financial and legal autonomy. The Fund does not receive any monies from the national budget, but rather, it is a self- financed organism receiving contributions from all telecommunications operators. Under Law Nr. 1341²⁴⁶, the required contribution is 2.2% of operating revenues derived from the provision of telecommunications networks or services (excluding terminals); however, operators could opt to stay with the contributions as provided for under the previous regulation i.e., 3%, 4% or 5%, but eventually all providers will migrate to the 2.2% regime. In addition to the afore-mentioned contribution based on a percentage of gross operating revenues, the Fund currently collects additional funds each year from the use of scarce resources such as spectrum. The Fund also receives financial contributions from any successful bids for any new services including value added services. It is estimated that in 2012, the Fund was expected to receive about USD 55M from these new service awards.

The annual amounts collected for the Fund since 2007²⁴⁷ are as follows:

- 2011: COL 695,263,688,96 - approximately **USD 384.2 M**
- 2010: COL 571,531,728,716 - approximately USD 315.9 M
- 2009: COL 577,573,882,727 - approximately USD 319.2 M
- 2008: COL 517,400,877,897 - approximately USD 286.0 M
- 2007: COL 468,997,304,122 - approximately USD 259.2 M

It is also important to note that all projects to be financed by the Fund are awarded in a public bidding process open to all interested participants. The bidding and award process generally takes about two and a half months to complete. Planning for the Fund generally encompasses a four year period.

The Fund basically has three main components:

- COMPARTEL - the telecommunications arm of the Fund
- Government on Line (Gobierno en línea)
- MiPyme Digital - programme to improve competitiveness and productivity of SME's²⁴⁸

In its 2010 report covering 2009 achievements and results, Compartel demonstrated that it had expended 82 per cent of its 2009 budget allocation²⁴⁹. In the case of 2011 (fiscal year 2010), expenditures versus budget allocation are in the neighbourhood of 94 per cent.²⁵⁰

²⁴⁶ <http://www.archivo.mintic.gov.co/mincom/faces/index.jsp?id=2674>

²⁴⁷ Source: FONTIC

²⁴⁸ Small and medium enterprises

²⁴⁹ Rendición de cuentas 2010 Compartel

²⁵⁰ Información presupuestal de ejecución de gastos FONTIC 2011

1.11.4.5 What the USF has achieved to date

The accomplishments of the revamped Fund in just less than three years are nothing short of impressive. Through its Compartel arm, the FONTIC has developed many initiatives designed to significantly improve the access of Colombian citizens to telecommunications services, especially with respect to telephony and the internet. For example, Compartel has installed 12,797 rural community telephony lines/access points using 9,745 sites situated in these rural locations. With this infrastructure, all of the country's municipalities are covered, including low population areas, police headquarters and villages with more than 100 inhabitants that did not have any form of communications prior to introduction of the programme.

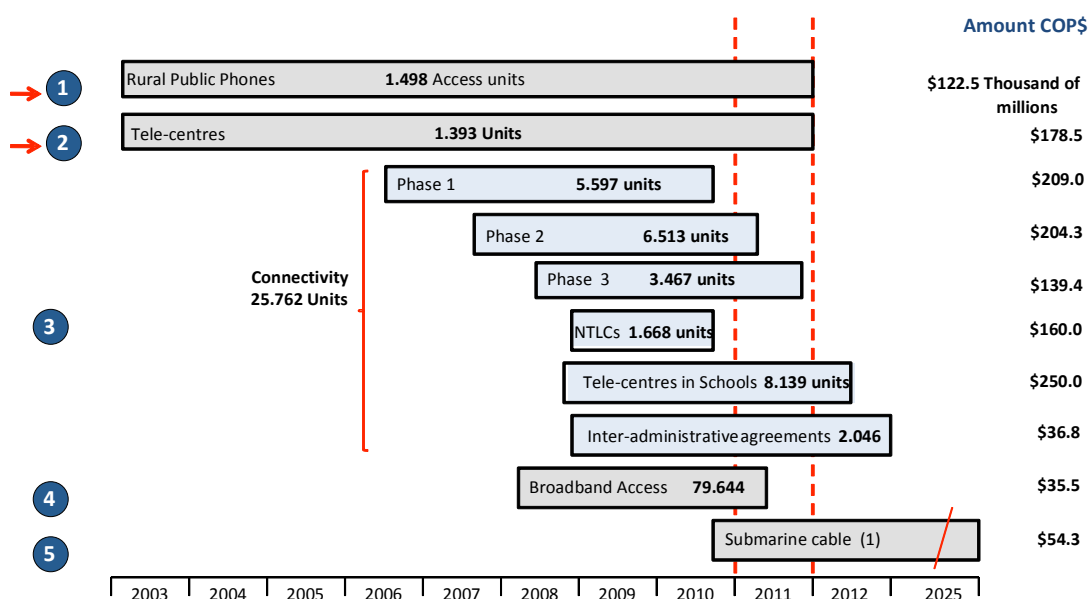
In the same vein, the programme promotes the provision of internet services through 1,440 tele-centres located in all of the country's cities and in locales with a population of more than 1,700 people. The programme also facilitates access to the internet via dial-up to forty cities of more than 30,000 inhabitants who pay only the local telephone rates for the service. As a result, Compartel has been addressing and resolving the challenges of providing telecommunications services, including internet, to around 5.2 million 'hard to serve' inhabitants.

The programme also considers that the provision of infrastructure alone is not enough given that, in most of these regions, this is the first time that inhabitants have access to advanced telecommunications services. As a result, the internet programme includes a training component which focuses on a basic introduction of: (1) the use of computers, faxes, scanners, web cameras, etc., (2) use of computer tools such as spreadsheets, word processors, etc., and (3) the use of e-mail and internet navigation. In addition, content generation is promoted as well as the access to such content through websites with links to newspapers, institutional magazines, local cultural events, museums and libraries, search engines, links with consumer complaint entities, etc.

Depending on the size of the population and its needs, the tele-centres offer between two to 12 computers with internet access and two to 12 telephone lines. At the same time, most of the centres also offer fax services, scanner, printers and web cameras. Additionally, 500 of these tele-centres have a training room with capacity for 20 people with a television, VHS, and a computer with internet access. With the Compartel Programme, these marginalized zones have adequate access to telephony and internet services, thereby encouraging citizens' participation in the decision making process at the local, municipal and national level (e.g., referenda, town hall meetings, etc.).

In addition to these remote telecommunications links and tele-centres, there are other achievements, all of which are highlighted in the figure below. One of the accomplishments that has received considerable (and well-earned) attention is the 'computadoras para educar' – 'computers to educate' initiative in which there is one computer for every 15 students in the schools. The government target is to increase the number of computers to reach a ratio of one computer for every ten students. A budget of USD 45M has been allocated to this project.

Achievements



Source: Compartel

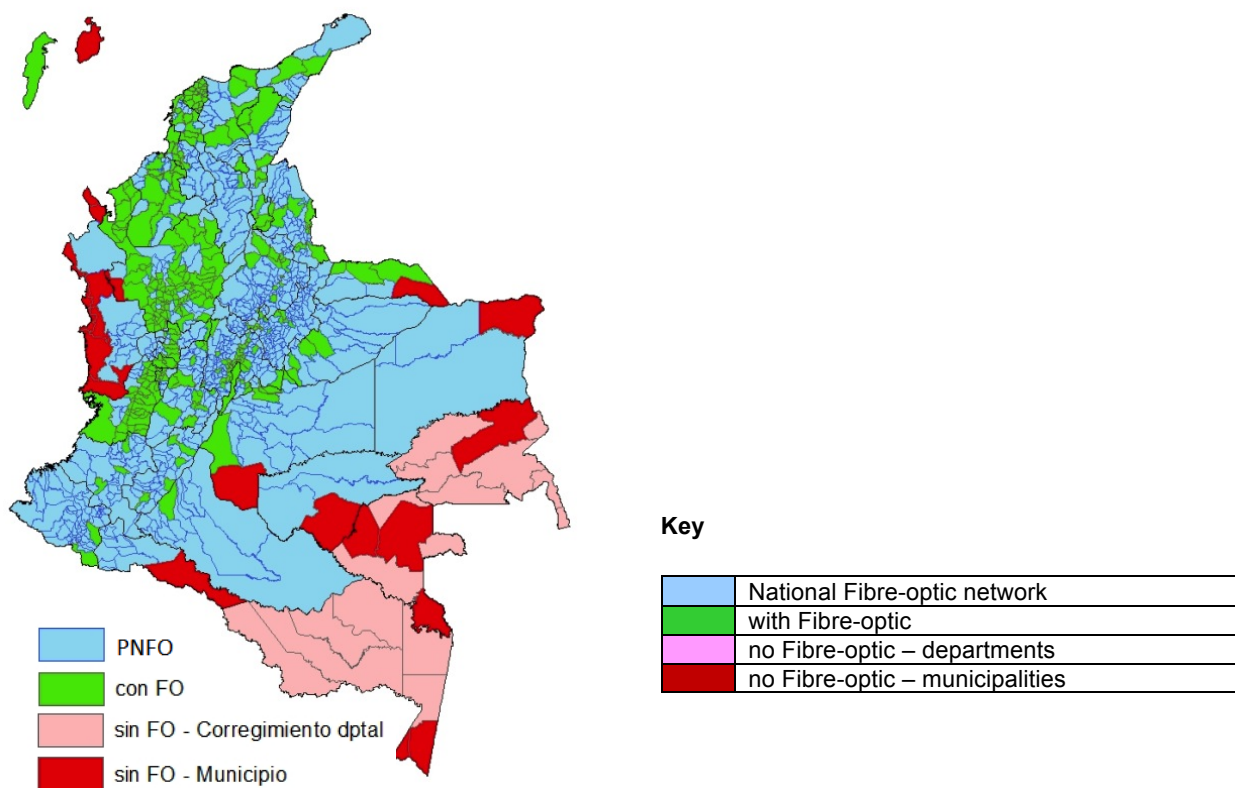
1.11.4.6 Other elements of interest

In 2012, Compartel commenced an ambitious major national connectivity project that encompasses four major elements.

- National Fibre-optic Project - PNFO (approximate budget – USD 226.8M)
 - Coverage for the 39M Colombians who belong to the three lowest socio-economic strata
 - Coverage for the SME's constituting 96% of all companies in the country
 - Quadruple the number of internet connections
 - Triple the number of connected municipalities
- Complementary High Speed Connectivity Project
 - To address some 44 communities totalling approximately 359,000 inhabitants that will not be covered by PNFO above
 - Connectivity to be provided by microwave, satellite, etc.
 - Free access to the internet in educational institutions and tele-centres for a three year period
- Puntos Vive Digital (approximate budget – USD 60M)
 - 800 mega-centres serving the two lowest socio-economic strata; the centres will be dedicated to training individuals in the use and application of new technologies and connectivity to increase the development of telecommunications and information
- Community Access in Population Centres
 - Ensure that 100% of the DANE²⁵¹ population centres have a community access point by 2013

²⁵¹ El Departamento Administrativo Nacional de Estadística (National Administrative Department of Statistics) is the entity responsible for the planning.

The map below illustrates the planned PNFO:



Source: Compartel

The current status of funds earmarked for the 2012 programme is as follows:

Activity	Budget Amount (COP)	Per cent Funding Committed
SOCIAL TELECOMMUNICATIONS PROGRAMME		
Compartel Broadband Connectivity Programme		
Public School Connectivity	54,308,298,764	100%
Extending access to digital households	11,889,131,233	50%
Inventory and monitoring systems	20,000,000,000	10%
Infrastructure Projects		
National Fibre-optic	106,000,000,000	100%
Complementary microwave network	18,600,000,000	0%
Internet Community Access Centres		
Telephone and Internet access points	19,922,500,000	100%
Community Access Points - populated centres	45,000,000,000	0%
Tele-centre operations	14,000,000,000	100%
Techno-centres	92,000,000,000	10%
TOTAL	381,719,929,997²⁵²	

Source: Compartel

²⁵² Approximately USD 211.3M

In summary, Colombia serves as a commendable model for best practice in the re-engineering and updating of existing funds due to the following Fund characteristics as summarized below:

- The Fund has been structured to be financially autonomous
- Projects to be addressed by the Fund are identified and clearly spelled out in a four year planning cycle in which a project budget is also allocated
- The Fund not only finances telecommunications delivery media (e.g., fibre-optics, internet access) but also finances complementary services including, but not limited to, tele-centres, training, etc., that help to ensure that the previously unserved are able to suitably use and benefit from the services provided
- The source and use of the monies in the Fund are clearly identified
- All Fund projects are awarded in a highly transparent manner via a public bidding process open to all interested parties
- Projects are implemented in a timely and transparent manner

1.11.5 Dominican Republic



1.11.5.1 Country overview

The Dominican Republic, with an area of 48,670 sq. km. is situated in the Caribbean and comprises the eastern two-thirds of the island of Hispaniola. It consists of 31 provinces and one district. The country has a total population of 10.1M with 69% of that population living in urban areas. Santo Domingo, the capital, has a population of 2.3 M.

The Dominican Republic's GDP per capita (PPP) is USD 9300 (2011 estimate).²⁵³

1.11.5.2 Current status of telecom market

General Assessment²⁵⁴: relatively efficient system based on island-wide microwave radio relay network

Domestic Telecommunications: fixed-line teledensity is about 10 per 100 persons; multiple providers of mobile-cellular service with a subscribership of roughly 90 per 100 persons

- Approximately 1 M fixed lines (2010)²⁵⁵
- 3 main fixed line operators: Claro Codetel, Tricom and Wind Telecom

Mobile (cellular) communications:

- 8.9M subscribers²⁵⁶ (2010)
- Wireless market penetration YE 2011 93.9%²⁵⁷
- 4 Main Operators²⁵⁸:
 - Claro Codetel (América Móvil)
 - Orange (France Télécom)
 - Tricom
 - Centennial Dominicana (Centennial Communications)

²⁵³ CIA World Factbook 2012

²⁵⁴ Id.

²⁵⁵ Id.

²⁵⁶ Id.

²⁵⁷ GSMA Wireless Intelligence

²⁵⁸ Global Wireless Matrix 1Q2012

Internet²⁵⁹:

- Hosts: 404,057 (2011)
- Users: 2.7 M (2009)

The General Telecommunications Law (GTL) Nr. 153 of May 1998, established an independent, administratively decentralized regulator, Instituto Dominicano de las Telecomunicaciones (INDOTEL). INDOTEL is charged with regulating and promoting the delivery of services to benefit Dominican society in a framework that allows free, fair and effective competition. The regulator is also required to adopt a 'minimum regulation' approach in the development of the regulatory framework. There is considerable competition in the telecommunications market and mobile teledensity has skyrocketed, being somewhere in the neighbourhood of ten times more than the fixed line teledensity.

1.11.5.3 Fund background

Under the GTL of 1998, INDOTEL was given the mandate to regulate and administer the Fondo de Desarrollo de las Telecomunicaciones (FDT), the USF established under the same Law. INDOTEL is overseen by an Executive Council – the highest authority of the Agency - and by the managers of the different departments. The Executive Council is composed of five members appointed by the President of the Republic:

1. The President with the rank of Secretary of State
2. The Technical Secretary of the Presidency
3. One member selected from three candidates proposed by the telecommunication service providers
4. One member selected from three candidates proposed by broadcasters; the proposed candidates must include two candidates nominated by the television companies with nationwide reach and the third nominated by the radio stations and cable television companies
5. One member is to be a qualified professional with expertise in the telecommunications field but not affiliated with any of the telecom service providers

All the members of the Executive Council serve for four years, with the exception of the Technical Secretary of the Presidency.

Financial resources for the FDT resources are derived primarily from the Contribution to the Development of Telecommunications (CDT) which is currently two per cent (2%) billed to users in their public telecommunications services bills (both telephone and cable companies).

The FDT's strategy is established by the Bi-annual Project Plan, which includes the identification of telecommunications development projects that INDOTEL awards via a fair tender process within the two year plan time period after a fair tender process to the company offering the highest service quality levels and requiring the least subsidy amount. A "development project" is any project targeting communities in the rural and urban low-income areas and allowing access to services with high social returns (benefits). It also includes market development and expansion of services at more affordable pricing using technological innovations required by INDOTEL. FDT also covers "Special Projects" i.e., projects promoting universal services but not considered in the Bi-annual Project Plan.

²⁵⁹ CIA World Factbook 2012

1.11.5.4 Current status of the fund

FDT is an active Fund, dedicated to providing services with the best connectivity possible at a reasonable cost, fostering the expansion and upgrading of the infrastructure and technological innovation. The Fund has been and is a tool to promote education, development of e-government programmes and ICT penetration in rural and marginal urban areas, primarily through the use of broadband technologies. Public rural telephony projects, community telecentres, tele-education, telemedicine and private initiatives such as the Dominican Network of Computer Laboratories (LEC) and the Virtual Classrooms for Teaching (AVE) are some examples of the areas where efforts have been and are conducted to “bridge the digital divide” as declared by INDOTEL.

Subsidies to provide the services are paid to the service providers as follows:

- 20% at contract signing
- 40% upon completion of installation
- the remaining 40% over a period of five years paid in six month instalments

In 2007, the last financial audited report available via the internet, INDOTEL reported that contributions to the Fund were **USD 18.5M**. However, since then, Indotel has reported to the authors that operator contributions in 2010 totalled RD\$1,128,194,362.38 (approximately **USD 30.1M**) and RD\$1,167,643,168.33 (approximately **USD 29.9M**) in 2011. The remaining Fund balance as of YE2010 was RD\$460,521,817.82 or approximately **USD 12.3 M**. A balance as of YE 2011 has not yet been released.

1.11.5.5 What the USF has achieved to date

In 2007, there were 357 CAC (Community Tele-centres) operating in all 31 provinces and the national district. These centres were used for the LEC Project (24%), the AVE project (16%) – these give access preference to students, teachers and professionals - and the rest were open to all. In 2008, 635 CACs were added and another 135 by the end of 2010. Each of these centres allows access to an average of ten PCs, depending on the area in which they are located, and in accordance with the number of inhabitants served.

Another programme, Digital Libraries, installs computers with internet access and other media resources which include digital education content, in public school and high school libraries in the underserved areas of the country with a total of 109 virtual libraries having been selected and implemented. FDT has also expanded this project to include the provision of broadband to the schools involved. The provision of this upgrade will be tested in 100 schools, and is considered a pilot project. Depending on the results, INDOTEL plans to expand the service to other schools. The pilot project will take 12 months to complete at a cost of RD\$ 1,258,600.00 – approx. USD 33,000.00.

In 2005, INDOTEL launched the first version of the E-Dominican Strategy. The development of this initiative is still a current project of the FDT.

For the period 2009 – 2011, FDT spent more than USD 6.1M in the second phase of the provision of broadband to improve rural connectivity as well as in providing services to the hearing impaired. In 2007, only 56 communities had access to broadband services whereas by September 2011, INDOTEL reported more than 500 communities as

having received broadband access.

1.11.5.6 Other elements of interest

Based on the published information, the Fund would appear to have achieved some improvements in the service provided to the underserved and disadvantaged sectors of the country with a particular focus on access to education and ancillary services such as training. It is also important to note that unlike many USFs, the funds can be used for the deployment of broadband.

1.11.6 Peru



1.11.6.1 Country overview

The Republic of Peru is situated in western South America, bordering the South Pacific Ocean, between Chile and Ecuador. The country covers a surface of 1,285,216 sq. km. and is comprised of 25 departments and one province – Lima. Peru has an estimated population of 29.5M with a population density of 23 inhabitants per sq. km. The population is 77% urban. Major cities are: Lima – the capital (9.3M); Trujillo – 0.9 M; Arequipa 0.8M; and Iquitos 0.6M.

Peru's GDP per capita (PPP) is USD 10,000 (2011 estimate).²⁶⁰

1.11.6.2 Current status of telecom market

General Assessment²⁶¹: Peru's overall telecommunications system is regarded as adequate for most requirements; nationwide fibre optic cables and microwave radio relay networks and a domestic satellite system with 12 earth stations.

Domestic Telecommunications characteristics²⁶²: fixed-line tele-density is only about 10 per 100 persons; mobile-cellular tele-density, spurred by competition amongst multiple providers, is exceeding 100 telephones per 100 persons.

- Approximately: 3.16 M fixed lines (2010)²⁶³
- Incumbent operator - Telefónica de Perú

Mobile (cellular) communications:

- 26.7M subscribers (YE2011)²⁶⁴
- Wireless market penetration: (as of YE 2011) 88.9%
- 3 Main Mobile Operators²⁶⁵:
 - Movistar (Telefonica Moviles) – 53.0% market share
 - Claro (America Movil) - 42.0% market share

²⁶⁰ CIA World Factbook 2012

²⁶¹ *Id.*

²⁶² *Id.*

²⁶³ CIA World Factbook 2012

²⁶⁴ Global Wireless Matrix 1Q2012

²⁶⁵ *Id.*

-
- Nextel – 5% market share

Internet²⁶⁶

- Hosts: 232,515 (2011)
- Users: 9.2 M (2009)

The Peruvian Regulatory Agency, OSIPTEL (Organismo Supervisor de la Inversión Privada en Telecomunicaciones - Supervisory Agency for Private Investment in Telecommunications) was created in November 1991, by Legislative Decree (LD) 7020. This LD 702 was the legal framework for the full privatization of the state owned telephone services in 1994. The market was fully liberalized in 1998, but fixed line services are provided by what is still an almost virtual monopoly, Telefónica de Perú, and the penetration rate continues to stagnate. Impediments to fixed-line growth include widespread poverty, fixed-to-mobile substitution, the cost of service and geographical inaccessibility in the Andean mountains and lowland Amazon jungles. An additional problem is in the theft of copper cables, which often leaves hundreds of subscribers without telephone service.²⁶⁷

Peru is a world leader in terms of people who access the Internet in public places. About 56% of users²⁶⁸ still access the Internet from the cabinas públicas, but the number is decreasing in favour of home access. The country's mobile penetration is higher than average for Latin America, but there are significant geographical disparities between the extremely high penetration on the southern coast versus the much lower penetration in the Andean and Amazonian regions.

1.11.6.3 Fund background

The afore-mentioned Legislative Decree 702 was the basis of a Decree called the Telecommunications Law (DS N° 013-93-TCC) which, in its Articles 12 and 77, creates the Telecommunications Investment Fund, FTEL (Fondo de Inversion de Telecomunicaciones). FTEL's stated main goal was to finance telecommunications services in rural areas and in places considered to be of high social interest. Article 12 also established FTEL funds as being derived from one per cent (1%) of the gross revenues of all companies providing public telecommunications services and Item 11 of Article 77 mandated that OSIPTEL administer FTEL. Based on this mandate, OSIPTEL assigned a director to manage the Fund and to initiate the research to fund potential projects. As a result of this initial research, in 1995, it was estimated that more than 70,000 rural locales lacked telephone service, with most of the inhabitants living in poverty. It was anticipated that their communication needs were unlikely to be met by private companies without subsidies.

In 1996, after due analysis, OSIPTEL/FTEL decided on a lowest subsidy auction mechanism for allocating the funds. Another important decision was that the FTEL projects would be valid for any technology available. The bidder, as the potentially final user, was free to choose the technology (e.g., fixed, wireless, satellite, etc.).

Through this system, FTEL/OSIPTEL staff devised projects designed to maximize the social profitability of the allocated funds. These then had to be approved by the Ministry of Transportation and Communications, as it was

²⁶⁶ CIA World Factbook 2012

²⁶⁷ <http://www.budde.com.au/Research/Peru-Telecoms-Mobile-Broadband-and-Forecasts.html#execsummary>

²⁶⁸ *Id.*

responsible for granting concessions for the operation of telecom services. Once such projects were approved, OSIPTEL conducted a bidding process to turn over implementation of the final projects to the private bidders with the contracts being awarded to the company requesting the lowest subsidy for installing and operating the project in the towns to be served. The subsidy payout schemes varied according to the nature of the project but generally were as follows:

- 30% at contract signature
- 20% when the installation is finished and approved by FITELE
- the remaining 50% in ten bi-annual instalments if the service is correctly provided.

In August 1998, the Peruvian government issued the Guidelines for Opening the Telecommunications Market (SD020-98-TCC), which called for the installation of telecommunications services in 5,000 unserved rural villages, as well as an Internet access in certain rural areas, by 2003. These goals were far surpassed with approximately 6,500 payphones and more than 500 narrowband Internet centres installed in rural village facilities by 1998 as part of Telefonica's licence obligations.

Until 2001, OSIPTEL was responsible for administering FITELE and for selecting the projects to fund. Subsequently, FITELE underwent a significant change when its administration was transferred from OSIPTEL to the Ministry of Transportation and Communications (MTC). Finally, in April 2007, Law No. 28900 and its complementary Decree (DS N° 010-2007-MTC) converted FITELE into an independent agency that manages its own funds. Since then, FITELE has been classified as a Technical Secretariat at the MTC run by a Board of three Directors: the Ministry of Transport and Communications as Chairperson, OSIPTEL's President and the Ministry of Economy and Finances (MEF)²⁶⁹. Below the Board of Directors, there is a Technical Secretary appointed by the Council of Ministries and a group of six telecom experts appointed by the Ministry of Transportation and Communications. In addition to these administrative changes and to some new rural definitions, one of the major changes associated with Decree DS 10/2007 is that in addition to the one per cent of the licensees' gross revenues, the Fund must also receive a part of the telecom public services radio electric spectrum usage fee administered by the MTC. The amount is determined by the MTC every fiscal year and cannot be less than the 20%. As a result, in 2010, FITELE received an additional USD 14 M over and above the USD 26 M received from the one percent levy, resulting in total contributions of **USD 40M** in that year.

Since 2007, FITELE also manages projects presented by the different levels of government. Furthermore, third party projects presented in accordance with FITELE's requirements can also be considered for funding if the community or municipality endorses them. However, it would seem that the major changes to the administration of FITELE as a result of DS 010-2007 have led to increased bureaucracy and delays in carrying out projects due to the extensive reviews and approvals required regarding project feasibility prior to calling for the bid.

²⁶⁹ The composition of the FITELE Board of Directors is a tenuous compromise between the 3 government agencies that lobby to handle FITELE's funds: MEF, MTC and OSIPTEL. It is likely that these internal disagreements are one of the main causes of FITELE projects delays.

1.11.6.4 Current status of the fund

According to FITEI's Financial Reports²⁷⁰, from 2007 to 2010, FITEI's balances had a yearly surplus ranging from USD 100M to 120M and almost the same amounts in the trust funds.²⁷¹ FITEI's cash and money assets and the trust funds had an average yearly increase of USD 11M. Using the 2010 balance sheet figures (in USD) as an example, the following results are derived:

- FITEI had USD 295 M in the cash account of which USD 140M was committed to the operational trust funds, resulting in a surplus of USD 155M.
- Total income was **USD 50M**: (26M from the operators' 1% + 14M from MTC spectrum fees + 8M interest + 2M in guarantees)
- FITEI's 2010 subsidy expenditures were **USD 27M**

During the 15 year period from 1996 to 2010, FITEI received approximately **USD 360M**, yet from 1998 to 2010 FITEI committed only **USD 158M**²⁷² to 11 different projects (USD 54M in the last four years from 2007 – 2010) – a total Fund utilization in the neighbourhood of only 44%.

1.11.6.5 What the USF has achieved to date

At the beginning of FITEI's activities, between 1998 and 2001, after a pilot project, there were three lowest-subsidy auctions which resulted in the first public telephone coverage to 6500 rural localities²⁷³ that had previously not been connected to the telephone network. In the served areas, these projects reduced tenfold the average distance to reach a payphone which, before the FITEI programme, ranged from 25 to 90 km. After the FITEI payphones programmes, the average distance was less than 5 km. In all cases, the technical solution achieved was having payphones connected to VSATs at an average cost of USD 8500 per town.

In 2001, FITEI started with projects oriented to provide Internet services: the first one, also with a VSAT solution, was basically a pilot project covering district capitals at an average cost of USD 16,800 per town. Following this initiative, projects were more ambitious in terms of the number of locales to serve and the requirement that tele-centres must be installed to provide an effective use of the internet access. These projects for expanding internet access included an additional allocation of resources (training subsidy) for teaching multimedia usage to local residents, creating local content and fostering the development of micro enterprises responsible for the management and operation of the tele-centres.

After 2004, all Internet service auctions requested broadband and included the training subsidy. As rural residents successively gained access to mobile services, resulting in basic telephony service and low speed Internet, some operators considered the build-out of rural or nationwide WiMax/WiFi networks to provide wireless broadband Internet as a basic service and with VoIP as an added benefit.

²⁷⁰ http://www.fitel.gob.pe/documentos.php?ID=75&tipo=H&pagina=contenidos/Transparencia/pres_ejec_fitel/Pres_FITEI_2011/Info_fin_pres_FITEI_noviembre_2011.pdf 1 USD = 2.78 Soles

²⁷¹ Most USF in Latin America that use a subsidy mechanism, place the allocated subsidy amounts in a bank as a trust fund (Fideicomiso), after the contract is awarded and until it is finished.

²⁷² Including USD 20 M it was compelled to divert for non FITEI government projects.

²⁷³ The goal of the Guidelines of Decree SD020-98-TCC was 5000 rural villages.

When FTEL issued its main tenders (1998 – 2001) to provide payphones in rural and remote locations, only the incumbent operator, Telefonica, and VSAT providers responded because mobile services were not yet widespread and were not financially attractive from either a subsidy or consumer perspective. However, around 2005, FTEL started a review of how mobile operators could be involved in future tenders without biasing the technology of the proposals. In 2010 FTEL issued some mobile services projects called “Rural areas integration to the mobile service network”. These projects were awarded in December 2010, at the same time as two broadband projects: one delivered via VSAT and the other via mobile.

The following table shows the number of towns served by each of the 11 FTEL programmes from 1998 to 2011 for rural town coverage.

Programme	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
Year	1998	2000	2002	2005	2007	2009	2010	2011	2011	2011	2011
Towns	213	2,231	2,526	1,616	68	1,050	3,878	3,852	370	683	776

The towns listed above total 17,263 but, in fact, they number only slightly more than 13,000 because some towns have been in more than one FTEL programme and thus are double or triple counted. For example, some towns were included in the initial payphones programme and then subsequently in the telephone service programme as well as the Broadband Internet programme. Be that as it may, although it does not have precise numbers, FTEL estimates that coverage of some sort based on additional towns served is likely in the area of 3.0 M inhabitants.

1.11.6.6 Other elements of interest

Although FTEL has had some success in improving services to specific segments of the population, it has also been able to recognize that coverage obligations imposed on the licensees are often more effective at achieving universal service goals than the USF funds created to subsidize telecommunications services. Some examples of FTEL imposing Universal Access/Service Obligations coverage obligations are illustrated in the following operator licences:

- In 1994, when Peru privatized the government owned National Enterprise of Telecommunications (ENTEL) which provided long distance services and with the exception of Lima, the local services in the rest of the country and offered the Peruvian Telephony Company (CPT) for sale, Telefonica of Spain won the tender to purchase and then merge both entities. One of the conditions of the tender was that Telefonica install public payphones in 1,525 rural villages²⁷⁴ by 1999, a task it accomplished by 1998 when the telecommunications market was finally opened to competition.
- In 2004, the Telefonica Group acquired Bell South Latin America. Peruvian authorities conditioned merger approval on the obligation to install mobile services in 2,000 unserved or underserved areas by 2008 and to return to the Peruvian Government the spectrum formerly licensed to Bell South in the 800 MHz frequency band. (Addendum to Telefonica’s Mobile Services Licensing Contract).
- In 2006, Telefonica Móviles and América Móviles accepted the obligation to expand mobile services during a five-year period to 236 districts that were without residential telephony in exchange for a reduction in their spectrum fees.

²⁷⁴ Selected villages of more than 500 inhabitants

In Latin America, FTEL was the first successful example of a USF administration adopting innovative approaches, now widely respected, to achieve access in rural areas i.e., lowest-subsidy and technology neutral auctions. Despite the shortcomings elaborated above, FTEL's pioneering programmes resulted in a number of social benefits and activities that have since been expanded from public telephony to include broadband internet access and many of these concepts have been used as models in other jurisdictions.

Until around 2005, when mobile services started to become recognized as a potentially better approach to deliver services to rural and other hard to serve areas, the original FTEL model was highlighted by the ITU, World Bank, APEC and other international agencies as an outstanding solution and a good example to be followed by other developing countries. Perhaps when the Peruvian Congress is able to effect some meaningful changes to the current problematic structure and cumbersome governance framework, FTEL will be able to once more position itself as one of the few best practice models in USF design and implementation.

1.12 Middle East

1.12.1 KSA

1.12.1.1 Country overview



Saudi Arabia's official name is Kingdom of Saudi Arabia (KSA). It is located in the Middle East, bordering the Persian Gulf and the Red Sea, with a total area 2,149,690 sq. km. Saudi Arabia is formed by 13 provinces, and its capital is Riyadh. A harsh, mostly uninhabited dry desert with only 1.67% of arable land, the country has 82% of its 26.5 M inhabitants living in urban areas. Major cities: Riyadh with a population of 4.7 M; Jeddah 3.2 M; Mecca 1.5 M; Medina 1.1 M; Ad Dammam 0.9 M.

Saudi Arabia's GDP per capita (PPP) is USD 23,000 (2011 estimate).²⁷⁵

1.12.1.2 Current status of telecom market

General assessment²⁷⁶: Modern system including a combination of extensive microwave radio relays, coaxial

cables, and fibre-optic cables

Domestic telecommunications: Mobile-cellular subscribership has been increasing rapidly

- Approximately 4.2M fixed lines (2010)²⁷⁷
- Wireline penetration (YE 2011): 14.5%²⁷⁸
- Saudi Telecommunications Company (STC) is the main fixed line provider

Mobile (cellular) communications

- 51.6 M subscribers (2010)²⁷⁹
- Wireless market penetration (YE 2011): 192.2%²⁸⁰
- 3 Main Mobile Operators:
 - STC – approximately 45% market share
 - Mobily (Etisalat) – approximately 41% market share

²⁷⁵ CIA World Factbook 2012

²⁷⁶ *Id.*

²⁷⁷ *Id.*

²⁷⁸ Arab Advisors Group Saudi Arabia Indicators July 2011

²⁷⁹ CIA World Factbook 2012

²⁸⁰ GSMA Wireless Intelligence

-
- Zain – approximately 14% market share

Internet²⁸¹:

- Hosts: 147,202 (2011)
- Users: 9.7M (2009)

1.12.1.3 Fund background

The Universal Access and Service Policy approved in June 2006, by the Ministry of Communications and Information Technology, set out the basis, principles and conditions related to the provision of universal services and universal access in the Kingdom of Saudi Arabia. The vision was to promote greater social equity and inclusion, to contribute to national economic, social and cultural development through access and use of the new information technologies and to achieve improved overall communications throughout the country. The main objectives established in the Policy were:

1. Achieving universal access to voice services within a period of no more than three years
2. Achieving universal service for voice services within a period of no more than five years
3. Achieving universal access to internet service within a period of no more than five years
4. Achieving universal service for internet services within a period of no more than seven years

Ministerial Decision Nr. 165/1428 on June 2007, created the Universal Service (USF) as an independent administrative unit within the Communications and Information Technology Commission (CITC) with the primary goal of implementing and achieving the objectives set forth by the Policy. The Ministerial Decision also established the financial independence of the Fund. Contributions to the Fund come from a fee of one per cent (1%) of the net revenues of the designated service providers as well as from funds received from the national budget.

The Executive Rules and Administrative Rules were issued in January, 2008.

1.12.1.4 Current status of the fund

The Fund is still very new. At present, a seven year programme is envisaged with a total estimated cost of USD

1.3B. The Fund programme is divided into two segments

- Universal service to all locales with greater than 100 inhabitants
 - voice and broadband Internet with a target 512 Kb
- Universal access to locales with fewer than 100 inhabitants
 - for Internet - data access within a maximum distance of 10 km

The initial, exploratory pilot project of the USF was aimed at assessing alternative methods for the provision of services such as voice and broadband services; evaluating technical, financial and administrative options; and

²⁸¹ *Id.*

measuring quality of service challenges, economic feasibility, market response, service models and technical specifications²⁸².

The first project of the Fund was launched in the last quarter of 2009. It also served as the starting date of the Universal Service Fund's programmes for universal access to voice and broadband internet services as required by the Policy. The services are intended to cover all underserved population settlements in the Al-Mahd municipality in the Madinah province, and the municipalities of Kholais and Al-Kamil in the Makkash district. Proposals were received and evaluated; the project awarded; and the services agreement signed with the winning bidder, Etihad Etisalat Company (Mobily). The total value of the project is approximately USD 13 M²⁸³ and work commenced in the year of award.

A second project aimed at providing mobile telephony and broadband services to more than 500 housing compounds in the Al Jawf and Jizan Districts and all municipalities of the Northern Border district of the country, with a value of approximately USD 10.7 M was awarded to Zain KSA²⁸⁴.

The third such project entailed providing broadband voice and internet services to all the municipalities of Al-Baha district (Al-Aqiq, Al-Baha, Al-Mandag, Al-Mukhwah, Al-Qurah, Belgorashi, Qolwah), municipalities of Asir district (Al-Nammas, Belgarn, Bisha), and Qonfothz municipality in Makkah district. This project, with an approximate value of USD 7.9 M, was awarded to STC.

A fourth project with respect to providing broadband voice and internet services to the municipalities of Riyadh Province (Al-Majma'ah, Rammah), in addition to the municipalities of Eastern Province (Al-Khafji, Hafr Al-Batin, Olayah village) with an approximate value of USD 4M, was awarded to Zain KSA. It is estimated that more than 890,400 people in 3,415 locales belonging to 25 administrative areas will benefit from these projects.

The Fund has reported collections and corresponding disbursements of **USD 131M** in 2010.

The USF intended to tender its Projects 5 and 6 in the Third Operational Plan (1433/1434H corresponding to 2012G) during the first half of 2012.²⁸⁵

1.12.1.5 What the USF has achieved to date

The first two projects mentioned above have been completed and the CITC is proceeding to evaluate and test the services offered.

1.12.1.6 Other elements of interest

In an effort to supplement the USF projects, the Ministry of Communications and Information Technology has been undertaking some initiatives to increase knowledge and awareness for the populations that will be served under the

²⁸² CITC Universal Service Fund Annual Report 2010

²⁸³ Id.

²⁸⁴ CITC web site news January 10, 2011

²⁸⁵ CITC Universal Service Fund Annual Report 2010 and CITC web site

USF scheme. One such example is the use of E-training caravans.

These caravans travelled to various Saudi villages to provide much-needed computer literacy and Internet courses for both young and old²⁸⁶. The caravans are intended to help the elderly overcome their fear of using modern technology and to assist children who want to learn how to use the Internet.

The elderly have had an opportunity to use the Internet and benefit from the wealth of information available online, in sciences, culture, business and entertainment. They have also been trained how to sign up for emails, how to use chat and video programmes to contact and see their children studying abroad, how to set up accounts for business purposes and how to access cultural, social and marketing sites. Assistance to high school students has included learning how to register on various sites, including universities, Ministry of Higher Education, language learning centres, and how to chat with their friends and exchange photos and video files.

Being the first initiative of its kind in the Kingdom, the E-training caravans' initiative focused primarily on eradicating computer illiteracy in Saudi villages using a modern approach to education and training.

The caravans stopped for a week at each village to give residents ten hour training sessions. Each caravan has specialized trainers and classes with a capacity for 16 students, young and old.

To date, the caravans have been to six regions, 12 governorates, 34 rural complexes and have conducted 100 courses which have benefited 1,550 students over a period of three months.

Given the fact that the Saudi USF programme is still quite new, the conclusions presented are quite preliminary. However, the Fund would appear to be functioning well so far given the consultation process being utilized with bidders, the transparent nature of the operator bidding processes, its technology and service neutral approach and its concentration on broadband solutions.

²⁸⁶ As reported by Saudi Press Agency and MITC

1.12.2 Oman



1.12.2.1 Country overview

The Sultanate of Oman is situated in the Middle East, bordering the Arabian Sea, the Gulf of Oman and the Persian Gulf between Yemen and the UAE. Oman has over 2000 km. of coastline and covers a land mass of 309,500 sq. km. The total population of the country is 3.1M of which approximately 73% is urban. There is only one major city, Muscat, with a population of just over 0.6M.

Oman's GDP per capita (PPP) is USD 26,200 (2011 estimate).²⁸⁷

1.12.2.2 Current status of telecom market

General assessment²⁸⁸: modern system consisting of open-wire, microwave, and radiotelephone communication stations; limited coaxial cable; domestic satellite system with 8 earth stations.

Domestic telecommunications consist of: fixed-line and mobile-cellular subscribership both increasing with fixed-line phone service gradually being introduced to remote villages using wireless local loop systems.

- Approximately 283,900 fixed lines (2009)²⁸⁹
- Fixed line penetration (YE 2011): 9.5%²⁹⁰
- Two wireline operators: Omantel and Nawras (Nawras launched service 2010)

Mobile (cellular) Communications

- 4.6M subscribers (2009)
- Wireless market penetration YE 2011: 165.3%²⁹¹
- 2 Mobile operators (YE 2011)²⁹²:
 - Omantel – approximately 47.0% market share
 - Nawras – approximately 42.0% market share
 - 5 MVNOs – approximately 11% market share

²⁸⁷ CIA World Factbook 2012

²⁸⁸ Id.

²⁸⁹ Id.

²⁹⁰ Arab Advisors Group Oman Indicators July 2011

²⁹¹ GSMA Wireless Intelligence

²⁹² http://omanpocketguide.com/index.php?option=com_content&task=view&id=98&Itemid=133

Internet²⁹³:

- Hosts: 13,488 (2010)
- Users: 1.5M (2009)

1.12.2.3 Fund background

The provision of universal service is enshrined in the Telecommunications Regulatory Act issued by Royal Decree No. 30/2002. In accordance with Article 38 of the Act, the Minister of Transport and Communications is required to consult with the Council of Ministers in order to:

1. Expand the telecommunications services and networks in defined areas according to their geographical location, or number of inhabitants; and to establish public telecommunications centers including the installation of public payphones in these areas
2. Specify the basic public telecommunications services which the licensee is obliged to provide to any requesting beneficiary at a reasonable price as decided by the Authority in the service areas
3. Provide maritime telecommunications services
4. Provide telecommunications services to persons with special needs

The act further states that” the Authority²⁹⁴ shall be notified of the requirements of the universal service specified in this clause, which shall be funded by the Public Treasury pursuant to the provisions of the last paragraph of Article (39) of this Act.”

Based on a public consultation conducted with all stakeholders, the TRA issued an implementation policy in 2009²⁹⁵ in which it defined the following policy with respect to what constituted universal service and the markets/population elements to be covered in unserved and under-served areas. This policy was viewed as being a reflection of the Digital Oman strategy:

- Basic Telephony services (voice) should be provided on reasonable request (either through the fixed or mobile telephony networks)
- Dial-up internet access should be provided at minimum dial-up speeds of at least 28 Kbit/s at the beginning, where practicable (FIA) and the speed should reach minimum 512 Kbit/s within three years of the USO licence effective date
- Broadband services to be provided to institutions (for schools, hospitals, Wali offices, government offices, post offices and police) in a phased approach, by region or area
- Operator services (directory and fault reporting) should be made available. Fault reporting should be free of charge and directory enquiries should incur an affordable, ideally cost based, charge; in addition, an on-line directory should be provided to consumers free of charge
- Emergency Service Access; Police, Fire, Ambulance & Coastguard should be available free of charge
- Public Call Boxes should be provided in hospitals, health centres, police stations and other locations where use of mobile telephones is prohibited.

²⁹³ CIA World Factbook 2012

²⁹⁴ The Authority is the Telecommunications Regulatory Authority of Oman (TRA)

²⁹⁵ Universal Policy and its Implementation Strategy – June 2009

-
- Tele-centres – staffed centres where voice, fax and broadband internet services are available to members of the public.
 - Maritime services: should be provided along the Omani coast line; implementation through separate tender for the provision of maritime services

The intent was to target specific segments/areas (using a pre-defined set of selection criteria) as follows:

- The presence of institutions such as schools, hospitals, government offices, police stations and post offices
- Potential welfare increases through demand (consumer surplus) and economic development potential
- Current lack of provision of USO services (unserved and under-served areas)
- High cost areas
- Low likelihood of commercial viability

1.12.2.4 Current status of the fund

In identifying the proposed new USO framework, the TRA identified three principal methods in which the USO coverage would be achieved:

- Issuance of USO tenders and then, subsequently, licences to the successful bidders
- Modifications to licence conditions to add or change the parameters relative to USO
- Introduction of additional market competition (e.g., broadband)

In addition, the TRA identified the need to establish a USF in lieu of the existing requirements to have USO funded from the national Treasury (although the Treasury would make use of contributions from the licensed operators that are submitted as part of the existing licence royalty fee payment requirement). However, the approach and changes to US recommended by the TRA have, for all intents and purposes, not been carried out to date other than the introduction of additional fixed line competition in the form of a second fixed line licence).

1.12.2.5 What the USF has achieved to date

After the issuance of the USO policy in 2009, there was little activity of note with respect to either USO in general or with respect to specific USO projects. However, over the last year, the TRA has issued a number of RFTs, working closely with exiting operators to ensure USO objectives are met. The TRA is also introducing a satellite to schools initiative and working on specific remote projects in remote communities such as the Mussanadam.

1.12.2.6 Other elements of interest

Based on recent announcements, it would seem that the government intends to stick to the original USO approach as outlined in the Telecommunications Law rather than adopting a USF approach. On June 9, 2012, the Ministry of Transport and Communications announced plans to increase the Internet broadband access service (National Broadband Plan) over the next five years to cover more than 60 per cent of the Omani population at affordable prices. The ministry's plan is to provide government departments, universities, industrial estates and commercial complexes with a broadband download speed of 1GB/second, while 80 per cent of urban areas will get speeds of

between 20MB/sec to 100MB/sec. Other areas are slated to receive between 5MB/sec and 20MB/sec download speeds, while the target for remote areas is to deliver Internet access speeds of 3MB/sec to 5MB/sec.

The announcement by the Ministry was followed by a statement on June 13, 2012, in which the TRA announced that it is working with both Omantel and Nawras to provide services to more than 150 outlying villages in rural and remote areas of the sultanate. The project was expected to begin in the third quarter of 2012, and be completed by the end of 2013. This project is expected to bring telecom services to some of the most remote areas in Oman. As part of the initiative, Omantel and Nawras have agreed to build a total of 120 mobile sites in rural areas.

During an interview, Dr. Hamed Al Rawahi, chief executive of TRA, said: "Telecommunication companies usually target areas with high population density that have economic returns in order to develop their networks and provide various services. However, TRA appreciates the response of telecom operators to this social initiative which aims to provide telecommunications services to citizens and residents in the rural areas. He also said the new mobile sites would cover more than 150 villages that are currently deprived of telecom services."²⁹⁶

²⁹⁶ Arabian Business.com - June 15, 2012

1.13 North America

1.13.1 Canada



1.13.1.1 Country overview

Canada is the second largest country in the world, strategically located between Russia and the United States. It is a federation formed by ten provinces and three territories. Approximately 90% of the population is concentrated within 160 km. of the US border. Canada is also highly urbanized, with 81% of its total population of 34.3M living in cities. The principal cities are: Toronto (5.4 M); Montreal (3.8 M); Vancouver (2.2 M); Ottawa, the national capital (1.1.M) and Calgary (1.2 M)²⁹⁷.

Canada's GDP per capita (PPP) is USD 40,300 (2011 estimate).²⁹⁸

1.13.1.2 Current status of telecom market

General assessment: Excellent service provided by modern technology

Domestic telecommunications²⁹⁹: Domestic satellite system with about 300 earth stations

- Approximately 17.0 M fixed lines (2010)
- Wireline market penetration³⁰⁰ (YE 2011): 55.2%
- Six principal fixed line operators operating in designated provinces:
 - Bell Canada
 - Bell Aliant
 - Telus
 - SaskTel
 - MTS Allstream
 - Northwestel

Mobile (cellular) communications:

- 26.6M subscribers³⁰¹ (YE2011)
- Wireless market penetration YE 2011: 77.3%³⁰²

²⁹⁷ CIA World Factbook 2012

²⁹⁸ CIA World Factbook 2012

²⁹⁹ Id

³⁰⁰ Global Wireless Matrix 1Q2012

³⁰¹ Id.

³⁰² Id

-
- 3 Main Operators³⁰³:
 - Rogers Wireless – 35% market share
 - Bell Wireless – 29% market share
 - Telus Mobility – 28% market share
 - MTS Mobility and other Bell affiliates – 4% market share
 - New entrants – 4% market share

Internet³⁰⁴

- Hosts: 8.5 M (2011)
- Users: 27.0 M (2009)

Telecommunications in Canada is governed by three main statutes:

- Telecommunications Act – telecommunications
- Radiocommunications Act – licensing of radio spectrum and certification on associated wireless equipment
- Broadcasting Act – broadcasting and broadcasting distribution

The Canadian Radio-television and Telecommunications Commission (CRTC) has oversight of both the Broadcasting and Telecommunications Act and has considerable authority to establish detailed policy initiatives and regulatory frameworks to carry out the objectives of the afore-mentioned Acts. Industry Canada is the organization responsible for policies related to and the oversight of the Radiocommunications Act.

Most Canadian telecommunications companies were privately owned and publicly traded long before the market was liberalized. The CRTC gradually deregulated the market from 1992 (long distance competition) through 1997, when local telephone markets were opened to competition. The only telecommunications carrier that is not privately owned is Sasktel – the carrier in the province of Saskatchewan.

Canada has one of the most sophisticated and accessible telecommunications infrastructures in the world and one of the highest (if not the highest) fixed line penetration levels in the world. Although high, the mobile penetration level is lower than in many other countries, primarily due to the historical absence of any need for fixed to mobile substitution.

1.13.1.3 Fund background

Many Canadians live in rural and remote areas where it is more expensive to provide basic residential telephone service. When the Canadian telecommunications market was basically de-regulated, it was determined that companies operating in these remote and rural areas would receive a subsidy. These smaller telephone companies operated (and continue to operate) in rural and remote areas in the provinces of Ontario, Quebec and British Columbia. They have traditionally held a monopoly in their home markets for the provision of home telephone service.

³⁰³ *Id*

³⁰⁴ CIA World Factbook 2012

Telecom Decision 92-12 entitled *Competition in the provision of public long distance voice telephone services and related resale and sharing issues*, dated June 1992, established a mechanism for long distance competitors to contribute towards subsidizing primary exchange (fixed) residential services, creating a per-minute contribution mechanism. Subsequently, in 1997, based on Telecom Decision CRTC 97-8, a telecom industry consortium, Canadian Portable Contribution Consortium Inc. (CPCC), was formed for the purpose of establishing and supervising the mechanisms to implement the contribution Fund.

In 1999, the CRTC established a basic service objective that reflected the level of telecommunications service available to Canadians at that time. The objective applied to the large telephone companies that had built extensive networks to reach the majority of the population, namely: Bell Aliant, Bell Canada, MTS Allstream, SaskTel, Telebec and Telus. It also applied to Northwestel³⁰⁵ and the smaller telephone companies that operate mostly in rural and remote areas. In March 1999, the Commission issued Telecom Public Notice 99-6 entitled *Review of contribution collection mechanism and related issues* establishing a national revenue-based contribution regime and stated that it would retain a central independent administrator for the collection of contribution and distribution of subsidies under a national Fund. Pursuant to subsection 46.5(2) of the *Telecommunications Act*, the Commission was required to designate a person to administer the Fund.

The CRTC is responsible for determining total subsidy requirements (TSR) on an annual basis. This is calculated using a formula that calculates the costs³⁰⁶ to the local exchange carriers of providing residential Network Access Service (NAS) in high cost areas.

The National Central Fund Administration agreement of January 2001, established the operation and administration of the National Contribution Fund (NCF). Canadian telecommunications companies with annual revenues over CDN 10M (approximately USD 10M) are required to contribute to the Fund.

The Fund has three primary objectives:

- Basic services extended to unserved areas;
- Upgraded services provided to all underserved areas
- Ensure that the level of services would not erode under competition.

The services receiving subsidy from the Fund are:

- Telephone access in high cost service areas (HCSA), and voice relay services to the hearing impaired, with access to 9-1-1, directory assistance services, long distance services and a copy of the local telephone directory
- Internet access in high cost service areas³⁰⁷

³⁰⁵ Fixed line telecommunications operator serving the vast geographically but sparsely populated Northwest Territories

³⁰⁶ Calculated using forward looking costs plus a moderate mark-up of 15%; this is adjusted annually based on filings from the local exchange carriers

³⁰⁷ High speed service was not included originally and was only considered (but not implemented) in 2011.

1.13.1.4 Current status of the fund

Over the last decade, competition in the provision of home telephone service in Canada grew steadily, with the CRTC deregulating 80% of home telephone lines in markets where consumers have access to competing providers. As a result, the former monopoly companies operating in those markets no longer needed to obtain the CRTC's approval to set local telephone rates or introduce new services and packages.

Given these developments, via Telecom Notice of Consultation CRTC 2010-43, the CRTC reviewed three measures related to the basic services that the large companies must offer to Canadians in regulated and unregulated markets. They were:

1. The requirement to serve existing customers as well as new customers requesting telephone service, referred to as the 'obligation to serve'.
2. The basic service objective, which is a minimum target for residential service that includes the following features:
 - local service on an individual telephone line
 - access to low-speed Internet at local rates
 - operator and directory assistance services
 - access to the long-distance network
 - enhanced calling features
 - a copy of the current local telephone directory.
3. The regulatory regime that provides subsidies to companies providing local telephone service to residential customers in rural and remote areas.

In addition, the CRTC reviewed the local competition framework in the markets served by smaller telephone companies.

As a result of that consultation, the CRTC issued Telecom Regulatory Policy CRTC 2011-291 last year in which it determined that competition was flourishing in 80% of residential telephone markets and, as a result, lifted the requirement to meet the basic service objective in these deregulated areas. The CRTC determined, however, that large telephone companies must continue to offer residential subscribers a basic telephone line at a reasonable rate. Companies will have the flexibility to gradually increase rates for this service over the next three years, to a maximum of \$30 CDN (approximately USD 30) per month.

In regulated areas, the CRTC maintained the obligation to provide basic residential telephone service and to meet the basic service objective. Most incumbent telephone companies will continue to receive a subsidy to ensure basic telephone service is offered to all consumers in rural and remote areas and to help offset higher costs.

The CRTC intends to phase-in a new subsidy formula, which will reduce subsidies available to companies in regulated areas. In most instances, the new formula will be based on the difference between the costs to provide basic residential telephone service and a rate ceiling that will be phased-in over the next three years. To offset lost subsidies, companies will have the option of gradually raising rates to a maximum of \$30 per month by 2013.

However, to ensure that the smaller companies are able to provide reasonable access to residential telephone service, the CRTC introduced the following measures:

- Smaller telephone companies will continue to receive subsidies for their subscribers until competitors can offer service to 75 per cent of the market
- Smaller telephone companies will be able to claim half of the subsidy they would normally receive for subscribers that switch to a competitor during the first three years of competition
- New entrants will be required to pay the start-up costs in markets where the smaller telephone company has fewer than 3,000 subscribers. Start-up costs can include those associated with ensuring that consumers are entitled to number portability or connecting the competitor's network with that of the smaller telephone company.

In the same decision, the CRTC set a target for broadband Internet access services across Canada whereby it expects that by the end of 2015, all Canadians must have access to broadband speeds of at least 5 megabits per second (Mbps) for downloads and 1 Mbps for uploads. It also indicated that it expected this target would be reached through a combination of private investments, targeted government funding and public-private partnerships. Furthermore, the CRTC's view was that the launch of new satellites and advances in wireless technologies will make it possible to provide Canadians in rural and remote regions with reliable broadband connections at reasonable rates and higher speeds than those available today.

The CRTC stated that it would closely monitor the industry's progress in reaching the target. In announcing the decision, CRTC Chairman, Konrad von Finckenstein, Q.C stated: "A well-developed broadband infrastructure will serve as a gateway for Canadians to participate in the digital economy. The target we have established is the minimum speed we believe consumers in rural and remote areas should be able to receive. The industry is actively responding to market demands and we have every confidence in its ability to meet the target."³⁰⁸

1.13.1.5 What the fund has achieved to date

The Fund is fully operational and has been administered by Welch Fund Administration Services since 2003³⁰⁹. The administrator is responsible for issuing quarterly and annual reports. The report below reflects year end 2011 results with basically a full allocation (**USD 42.7M** to Northwestel and small local operating companies and **USD 111.3M** in network access subsidies) with the exception of a CDN 5M surplus on contributions of CDN 154.9M (approximately **USD 154.9M**).

³⁰⁸ Acting Chairman of CRTC until January 24, 2012

³⁰⁹ The administrator is awarded a three year mandate and requests for renewal are submitted to the CRTC, with the most recent renewal taking place in January 2012; the details of the renewal request are not publicly released

Central Funds Administration

Quarterly Report (Abridged)

Quarter Ending December 2011 **Quarter** Fourth Quarter **Report Year** 2011

	Current Quarter	Year to Date
1. Canadian Telecommunications Services Revenues	\$10,556,817,193	\$41,469,293,521
2. Contribution-Eligible Revenues	\$5,865,332,246	\$23,944,939,947
3. Contributions Owed to National Fund	\$26,055,467	\$158,036,602
Uncalled Contributions	<u>\$9,918,152</u>	<u>\$(2,764,186)</u>
Contribution Payments Received	\$35,973,619	\$155,272,416
4. Prior Period Revisions & Adjustments	\$2,913	\$(424,685)
5. Interest Earned and Late Payment Charges	<u>\$8,775</u>	<u>\$35,006</u>
Total Contributions	\$35,985,307	\$154,882,737
6. CFA Operating Costs	\$(332,135)	\$(920,549)
7. Payments to NWTel & Small ILECs	<u>\$(10,280,274)</u>	<u>\$(42,715,471)</u>
Contributions Available for Distribution	\$25,372,898	\$111,246,717
8. NAS Subsidy Payments Distributed to Eligible Recipients	<u>\$(25,372,898)</u>	<u>\$(111,246,717)</u>
Current Quarter Surplus/(Deficit)	<u><u>\$0</u></u>	<u><u>\$0</u></u>
Fund Surplus January 1, 2011		<u>\$5,000,000</u>
Fund Surplus December 31, 2011		<u><u>\$5,000,000</u></u>

Source: Welch - Central Funds Administration

1.13.1.6 Other elements of interest

Despite Canada's unique and often challenging geography, 95% of households currently have access to Internet download speeds of at least 1.5 Mbps through telephone, cable or fixed-wireless networks. Over 80% of households already have access to download speeds of 5 Mbps or higher.

For all intents and purposes, the National Contribution Fund is merely an independently administered subsidy fund providing direct compensation in the form of subsidies to telecommunications service providers that are obligated to provide basic service below cost. As indicated above, Canada already has a highly sophisticated and widespread telecommunications system available to most inhabitants and thus, there has been no need to introduce other universal service mechanisms.

1.13.2 United States



1.13.2.1 Country overview

The United States of America (US) is the second largest country in North America with a land area of 9,826,675 sq. km. (based solely on the 50 states and the District of Columbia). The population is estimated to be 313.8M with the urban population representing 82% of the total (2010). Major US cities are as follows: New York-Newark 19.3 M; Los Angeles-Long Beach-Santa Ana 12.7 M; Chicago 9.1 M; Miami 5.7 M; and Washington, D.C. (capital) 4.4 M (2009).

The US' GDP per capita (PPP) is USD 48,100 (2011 estimate).³¹⁰

1.13.2.2 Current status of telecom market

General Assessment³¹¹: A large, technologically advanced, multipurpose communications system

Domestic telecommunications: A large system of fibre-optic cable, microwave radio relay, coaxial cable, and domestic satellites carries every form of telephone traffic; a rapidly growing cellular system carries mobile telephone traffic throughout the country.

- Approximately 151 M fixed lines (2010)
- Wireline penetration as of YE2011: 37.3%³¹²

Mobile Cellular

- 332.7M subscribers (YE2011)³¹³
- Market penetration (YE2011): 106.3%³¹⁴
- There 6 main mobile operators:
 - Verizon Wireless – 33% market share
 - AT&T – 31% market share
 - Sprint – 17% market share
 - T-Mobile USA – 10% market share
 - Leap – 2% market share
 - MetroPCS – 3% market share

³¹⁰ CIA World Factbook 2012

³¹¹ *Id.*

³¹² Global Wireless Matrix 1Q2012

³¹³ *Id.*

³¹⁴ *Id.*

-
- Others – 5% market share

Internet³¹⁵

- Hosts: 498 M (2011)
- Users: 245 M (2009)
- the US Internet total host count includes the following top level domain host addresses: .us, .com, .edu, .gov, .mil, .net, and .org

The Communications Act of 1934 (subsequently amended many times) gives the Federal Communications Commission (FCC) the authority to implement and oversee the Communications Act across a broad spectrum of communications industries including telecoms, wireless communications, broadcast television, cable television, satellites and equipment manufacturers. Another organization, the National Telecommunications and Information Agency (NTIA), which is part of the US Department of Commerce, has a role in spectrum management. The telecommunications market in the US is highly competitive.

1.13.2.3 Fund background

The Universal Service Fund (USF) was created by the United States Federal Communications Commission (FCC) in 1997 to meet Congressional universal service goals as mandated by the Telecommunications Act of 1996. The 1996 Act states that all providers of telecommunications services should contribute to federal universal service in some equitable and non-discriminatory manner; there should be specific, predictable, and sufficient Federal and State mechanisms to preserve and advance universal service; all schools, classrooms, health care providers, and libraries should, generally, have access to advanced telecommunications services; and finally, that the Federal-State Joint Board and the FCC should determine those other principles that, consistent with the 1996 Act, are necessary to protect the public interest.

Following the Telecommunications Act of 1996 and the subsequent creation of the Universal Service Fund, the FCC designated the **Universal Service Administrative Company** ('USAC') to manage the contribution of revenue to and distribution of funding from the Universal Service Fund. USAC is an independent corporation whose purpose is to impartially distribute funds from the USF in a manner that will best meet the goals of Universal Service as set by the Telecommunications Act.

The major goals of Universal Service as mandated by the 1996 Act are as follows:

- To promote the availability of quality services at just, reasonable and affordable rates
- To increase access to advanced telecommunications services throughout the Nation
- To advance the availability of such services to all consumers, including those in low income, rural, insular, and high cost areas at rates that are reasonably comparable to those charged in urban areas
- To increase access to telecommunications and advanced services in schools, libraries and rural health care facilities
- To provide equitable and non-discriminatory contributions from all providers of telecommunications services to the fund supporting universal service programmes

³¹⁵ CIA World Factbook 2012

The Telecommunications Act of 1996 states that all providers of telecommunications services should contribute to the federal universal service in a fair and non-discriminatory manner; there should be specific, predictable, and sufficient Federal and State mechanisms to preserve and advance universal service; all schools, classrooms, health care providers, and libraries should have access to advanced telecommunications services; and lastly, that the Federal-State Joint Board and the Commission should determine those other principles that, consistent with the 1996 Act, are necessary to protect the public interest.

The USAC receives contributions from all companies providing interstate and international telephone and Voice over Internet Protocol (VoIP) service. Contributors report their revenue data to USAC, which collects the data and reports them to the Commission. The Commission reviews the programme requirements (e.g., demand for distributions from recipients of USF support) and the revenue data and determines the appropriate contribution factor (e.g., the percentage of a contributor's revenues that must be assessed to meet distribution demand). The Commission's Office of Managing Director releases a public notice stating the proposed contribution factor for the upcoming quarter. If, after 14 days, the Commission takes no action regarding the proposed contribution factor, the factor becomes final. The contributors then send payments based on projected quarterly earnings. This revenue is deposited into a central Fund, from which the USAC distributes money to eligible USF recipients through the four central USF programmes:

- High Cost
- Low Income
- Schools and Libraries
- Rural Health Care

1.13.2.4 Current status of the fund

As mentioned in the preceding section, there are four major elements that are addressed by the Fund.

1. The Universal Service High-Cost programme

This programme is designed to ensure that consumers in rural, insular and high-cost areas have access to telecommunications services at rates that are affordable and reasonably comparable to those in urban areas. The programme fulfills this universal service goal by allowing eligible carriers who serve these areas to recover some of their capital and operating costs from the federal Universal Service Fund.

2. Lifeline

This programme provides a discount on phone service for qualifying low-income consumers. Lifeline is available to eligible low-income consumers in every state, territory, commonwealth and on tribal lands. Consumers with proper proof of eligibility may be qualified to enroll. To participate in the programme, consumers must have an income that is at or below 135% of the federal Poverty Guidelines or must participate in a qualifying state, federal or Tribal assistance programme such as those listed below.

- Medicaid
- Supplemental Nutrition Assistance Programme (Food Stamps or SNAP)
- Supplemental Security Income (SSI)
- Federal Public House Assistance (Section 8)

-
- Low-Income Home Energy Assistance Programme (LIHEAP)
 - Temporary Assistance to Needy Families (TANF)
 - National School Lunch Programme's Free Lunch Programme
 - Bureau of Indian Affairs General Assistance
 - Tribally-Administered Temporary Assistance for Needy Families (TTANF)
 - Food Distribution Programme on Indian Reservations (FDPIR)
 - Head Start (if income eligibility criteria are met)
 - State assistance programmes (if applicable)

Federal rules prohibit eligible low-income consumers from receiving more than one Lifeline discount per household. An eligible consumer may receive a discount on either a landline or wireless service, but not on both. Consumers violating this rule may also be subject to criminal and/or civil penalties.

3. The Schools and Libraries Universal Service

This programme provides affordable telecommunications services, including broadband, to all eligible schools and libraries, especially those in rural and economically disadvantaged areas. Funding is subject to a cap that is adjusted annually to account for inflation. The cap in 2011 was **USD 2.23B**.

4. Rural Health Care Programme

This provides funding to eligible health care providers for telecommunications services, including broadband, that are necessary for the provision of health care. The goal of the programme is to improve the quality of health care available to patients in rural communities by ensuring that eligible health care providers have access to affordable telecommunications services. It provides discounts on the purchase of telecommunications services by eligible rural health care providers. These discounts result in rates for service that are nearly the same as those in urban areas, where telecommunications rates typically are lower. Funding is capped at **USD 400M** annually.

To provide broadband networks in rural areas where service is lacking, the Commission launched the **Rural Health Care Pilot Programme**, which provides funding for up to 85 per cent of the costs associated with: (1) the construction of a state or regional broadband network and the advanced telecommunications and information services provided over that network; (2) connection to Internet 2 or National LambdaRail (NLR); and (3) connection to the public Internet.³¹⁶

On July 15, 2010, the FCC issued a Notice of Proposed Rulemaking regarding reforms to the Rural Health Care support mechanism.

³¹⁶ References for section above: Federal Communications Commission. "Universal Service Fund Contribution Factor & Quarterly Filings"; "Connect America Fund & Intercarrier Compensation Reform Order and FNPRM Executive Summary". Federal Communications Commission; Aufderheide, P., & United States. (1999). Communications policy and the public interest. New York: Guilford Press; Jayakar, K. (2009). Universal Service. In Schejter, A. (2009); And communications for all: A policy agenda for a new administration. Lanham, MD: Lexington Books; Universal Service Administrative Company. Federal Universal Service Support Mechanisms Quarterly Contribution Base for the First Quarter 2009.

1.13.2.5 What the USF has achieved to date

According to the USAC, the Fund received total contributions of **USD 8.4B**³¹⁷. In its Annual Report for the Year 2010³¹⁸, the USAC mentions that **USD 8.1B** was disbursed in the following manner:

1. **High Cost Programme:** over 1,900 eligible telecommunication carriers received support in the amount of USD 4.03 B.
2. **Low Income Programme:** over 13.7 million low-income households received assistance through total disbursements of USD 1.75 B.
3. **Rural Health Care Programme:** more than 3,000 health care providers received support totalling USD 81.5 M.
4. **School and Libraries Programme:** more than 21,000 eligible applicants benefited with total disbursements of USD 2.23 B.

1.13.2.6 Other elements of interest

Although the component of the Fund that supports telecommunications service in high-cost areas has grown from USD 2.6B in 2001 to USD 4.3B in 2010, until reforms effected to the programme in late 2011, the programme had primarily supported voice, including, in some instances, broadband-capable infrastructure that delivers voice. In effect, the USF programmes were previously directed at legacy type telephone service and did not take broadband into consideration.

The USF has long been a controversial subject and federal legislation to reform the USF has been proposed every year since 2002. However, to date, none of these bills have passed. The primary reasons cited for requiring USF reform include:

- increasing costs to consumers
- lack of consumer say in the rate of USF fee increases
- alleged wasteful spending in the High Cost programme
- changing technological landscape

The most visible reason to consumers regarding the need for reform is the significant increase in the USF fee. The USF Contribution Rate was 5.7% in Q2 2002 and it reached a high of 15.5% in Q1 2011, representing a 272% increase during that time period. Major reasons cited for reform of the **High Cost** programme are: outdated programme not directly supporting broadband; wasteful/duplicative spending not targeted to areas that need it most; unsustainable growth in the size of the Fund. This programme, which represented 54% of the total USF expenditures in 2010, is viewed as being inefficient. FCC Chairman Genachowski has provided examples in which the Fund pays almost \$2,000 a month, or more than \$20,000 a year, for some households to have phone service. There are also numerous allegations that the High Cost programme encourages the development of redundant infrastructure and encourages traditional telephony solutions when other solutions could be substantially more cost effective.

³¹⁷ Testimony of D. Scott Barash - Acting Chief Executive Officer, Universal Service Administrative Company Before the Energy and Commerce Committee Subcommittee on Communications and Technology United States House of Representatives on February 16, 2012

³¹⁸ USAC 2010 Annual Report June 11, 2011

On October 27, 2011, after lengthy public consultations and deliberations, the FCC approved a six-year process that would transition money from the legacy Universal Service Fund High-Cost Programme to a new USD 4.5B a year **Connect America Fund** for the expansion of fixed and mobile broadband-capable networks ("voice telephony" remains the supported service, but recipients of support must deploy networks that can deliver voice and broadband service meeting minimum requirements established by the FCC). Although the National Broadband Plan proposes alterations to all four USF programmes, the reforms to the High Cost Programme and Low Income Programme are the most significant. The High Cost Programme would evolve into several new support mechanisms that would increasingly use market-based mechanisms to subsidize the development of terrestrial and mobile broadband infrastructure. Unlike the legacy system, USF support will only be provided to one provider per geographic area and support will no longer be available in areas that are already served by an unsubsidized provider. In the case of reforms to the Low Income Programme, the Commission has announced a USD 25M Lifeline Broadband Adoption Pilot Programme to explore options for enabling poorer families who subscribe to a broadband to have a portion of their monthly broadband fees subsidized using money from the USF. The Lifeline Reform Order also allows the current subsidy for voice service to be applied to bundled packages (combining voice and Internet services) for low-income consumers.

BEST PRACTICES IN THE MANAGEMENT OF THE USF

1.14 Introduction

At the outset of the introduction of USFs, there was much fanfare regarding this new and innovative approach to addressing universal service requirements, especially in light of various concerns regarding the practicality of USO frameworks in an increasingly liberalized global telecommunications environment. Indeed, in the ICT Regulation Toolkit, the following description was applied to the USF concept: *“Where UAS Funds are used, they have proved effective when disbursement is coupled with competitive bidding or auctions for these financial incentives, requiring operators to compete for the minimum subsidies needed to fulfill the UAS target.”*³¹⁹

Unfortunately, the examples of best practices with respect to USF management are less than abundant and even those that can be cited as being best practice examples have their individual drawbacks and shortcomings. Based on the analysis conducted as part of this USF study, the authors have concluded that although there are examples of well-conceived and well implemented Funds, it is extremely difficult to point to many Funds that embody all of the positive elements that would contribute to a highly successful Fund, further calling into question the overall effectiveness of the current USF regimes.

1.15 Basic Elements and Characteristics of a Successful USF

An effective and successful USF should have the following characteristics:

- Based on a legal/regulatory framework that is:
 - highly flexible with respect to effecting policy, structural and operational changes
 - technology and service flexible (neutral)
 - allows use of funds for targeted ancillary/complementary ICT related activities understanding that a government digital agenda should be the priority
 - ability to easily adjust levies (in consultation with stakeholders) to match the funding mechanism to assessed need
- Autonomous/independent Fund structure³²⁰ along with a Fund administrator who:
 - is accountable to an impartial, credible party/authority
 - not subject to political interference
 - has clearly defined governance and governance structure
- Clearly articulated policy with respect to how US will be achieved and organized
- Clearly specified and **measurable** objectives including coverage and service delivery targets:
 - prepared in consultation with industry and stakeholders
 - presented in one or more easily accessible information sites/media
 - clearly articulated measurement parameters that will allow milestones and achievements (or lack thereof) to be clearly demonstrated
 - measurements and results reporting should be in a format so as to facilitate independent verification

³¹⁹ <http://www.ictregulationtoolkit.org/en/Section.3116.html>

³²⁰ Even perhaps in the form of a separate company

- subject to annual review and adjustment in consultation with the stakeholders
- Highly transparent
 - minimum of annual reporting on performance of Fund (quarterly would be preferable)
 - recap of any USF tenders held and results of same
 - overview of approved USF projects in progress (project description, coverage goals and timelines)
 - performance of Fund projects against targets with respect to coverage targets, project budget, timelines, etc.
 - statistics and status on funds collected
 - statistics on funds collected versus funds disbursed as well as tabulation of remaining balance held in Fund
 - explanation of any roadblocks/impediments/challenges encountered in disbursement of funds
 - annual **public** audit independent of government with results publicly reported and published
- Guidelines and procedures for working with other funding sources (e.g., IFC, World Bank, NGO's, etc.)
- Clear definition and delineation of responsibilities between the USF and other government agencies/departments
- Focus on ongoing sustainability of USF funded projects (e.g., power supplies, backbone networks, education for users, etc.)
- Fair process to allocate subsidy – technology-neutral tenders to give all interested parties an equal chance to win (as opposed to mandating US)
- Instead of direct and immediate reimbursement, provide incentives for efficient deployment and/or innovation and cost-minimization where feasible
- “Pay or play” where operators can choose if they want to participate

1.16 Examples of Best Practices

Building on the discussion in the previous section regarding the key criteria for defining a successful USF scheme, the following table reiterates the characteristics of a successful Fund and provides examples countries that currently seem to adhere to best practice – at least in the specific area identified. As already previously indicated in this report, it is difficult in the extreme to cite examples of USF which fully embody best practice.

Best Practice	Country	Comments
Autonomous/independent Fund structure	<ul style="list-style-type: none"> ▪ Pakistan ▪ Nigeria 	<ul style="list-style-type: none"> ▪ Separate company - USF Co; BOD comprised of representatives of both private and public sector ▪ Separate entity USPF; BOD comprised of representatives of both private and public sectors

Consultation with stakeholders	<ul style="list-style-type: none"> ▪ Morocco ▪ Canada ▪ Ghana 	<ul style="list-style-type: none"> ▪ Successful implementation of play or pay plus practice of consulting with operators ▪ Operators have representation on and input into the Fund oversight committee ▪ Conducted detailed public consultation ▪ Board of trustees for Fund includes a representative from each major telecom operator
Clearly specified and measurable objectives including coverage and service delivery targets:	<ul style="list-style-type: none"> ▪ Pakistan ▪ Colombia ▪ Peru 	<ul style="list-style-type: none"> ▪ Publication of projects and related coverage targets; ongoing status reports ▪ Produces 4 year plan with detailed project descriptions. Targets and associated cost; ▪ Annual report on fund performance with respect to project allocation and project performance versus target
Highly transparent from a financial reporting perspective	<ul style="list-style-type: none"> ▪ Colombia ▪ India 	<ul style="list-style-type: none"> ▪ Detailed annual reports (in a 4 yr. planning cycle) showing budget allocation, funds committed and funds used including per cent utilization ▪ Posts details on Fund's financial performance on Fund's web site listing levies collected, amount contributed to Fund and balance not yet disbursed
Guidelines and procedures for working with other funding sources (e.g., IFC, World Bank, NGO's, etc.)	<ul style="list-style-type: none"> ▪ Mongolia ▪ Afghanistan 	<ul style="list-style-type: none"> ▪ Demonstrated in recent projects in collaboration with World Bank to increase mobile coverage in the soums ▪ Operating manual
Clear definition and delineation of responsibilities between the USF and other government agencies/departments	<ul style="list-style-type: none"> ▪ Peru 	<ul style="list-style-type: none"> ▪ Other government departments may identify possible projects and request funding with understanding that FTEL is the administrator

Focus on ongoing sustainability with particular emphasis on training and/or power sources	<ul style="list-style-type: none"> Colombia Dominican Republic Pakistan Uganda 	<ul style="list-style-type: none"> Tele-centres and internet access projects include technical training and training in use of applications; build-out of fibre backbone, connectivity Heavy focus on education and e-strategies to accompany deployment of tele-centres and community access centres Base stations funded by USF must have renewable energy; free electricity via solar power provided to tele-centres Addition of supplementary services to stimulate use of tele-centres and village phones, content, etc.
Fair project allocation process – competitive bidding	<ul style="list-style-type: none"> Nigeria Colombia Pakistan 	<ul style="list-style-type: none"> Least cost subsidy; successful bidders posted on web site Least cost subsidy; successful bidders posted on web site Least cost subsidy; successful bidders posted on web site and in publications
Instead of direct and immediate reimbursement, provide incentives for efficient deployment and/or innovation and cost-minimization where feasible	<ul style="list-style-type: none"> Chile Dominican Republic 	<ul style="list-style-type: none"> Subsidies paid in instalments based on project milestones/completed phases Instalments for project deployment paid in instalments over 5 years after initial payments made
Flexible regulatory framework to permit Fund adjustments where required	<ul style="list-style-type: none"> Peru Chile Colombia 	<ul style="list-style-type: none"> Able to change FTEL to incorporate rural broadband Government can adjust Fund parameters to respond to input regarding new technologies and practices Broad definition basically underscoring access to all ICT services

COMMON CHALLENGES IN THE ADMINISTRATION OF THE USF

1.17 Overview

It should come as little surprise that there are numerous challenges and impediments associated with administering USFs. Some may be directly attributable to the flaws or shortcomings in the underlying legal and regulatory framework but others may simply be a reflection of the conditions prevalent in the country in which the Fund is operating or may also result from the fundamental economic unviability of the Fund design. The following is a list of some of the most commonly encountered challenges, pitfalls and deficiencies, with specific examples being provided in the subsequent section.

- USF underlying framework and rules do not support or permit use of the funds for the services required (e.g., wireless, broadband)
- Inadequate or misguided articulation of Fund strategy and objectives impeding effective administration
- Local conditions that impede or endanger full deployment of approved projects
- Absence of adequate primary infrastructure and facilities which will impede or preclude project deployment (e.g., accessible transmission backbone)
- Inefficient or excessively complex decision making, approval and governance processes
- Inadequate skill levels available for rural rollout and ongoing maintenance, sustainability
- Structural flaws in setting up Fund and its relationship with the various other institutional bodies involved in oversight or policy making
- Lack of sufficient power/authority to effectively carry out Fund management (e.g., lack of enforcement with operators)
- Lack of qualified and/or interested vendors to bid on USF projects and/or flawed design of economic incentives for vendors to bid
- General managerial, operational and capacity issues

1.18 Examples of Common Challenges and Pitfalls in USF Administration

The previous section explored some of the most commonly experienced pitfalls encountered in the management and administration of a USF. The following table provides examples of countries that are faced with these kinds of impediments and provides a brief description of the impediment. The list of examples should not be considered as exhaustive.

Common Pitfall	Country	Comments
USF underlying framework and rules do not support or permit use of the funds for the services required	<ul style="list-style-type: none">▪ Brazil▪ Philippines	<ul style="list-style-type: none">▪ Fund permits only specific elements of fixed line deployment▪ Government simply closed down the Fund through decree issuance and with no advance warning

Inadequate or misguided articulation of USF objectives and strategy	<ul style="list-style-type: none"> ▪ RSA ▪ Czech Republic ▪ India 	<ul style="list-style-type: none"> ▪ Insistence on USAL licence scheme³²¹ ▪ Unable to properly set targets and level of levies for previous years' Funds; subject of multiple legal disputes ▪ Guidelines encouraged urban rather than rural network rollout
Unfavourable local conditions that impede or endanger full project deployment	<ul style="list-style-type: none"> ▪ Afghanistan ▪ Pakistan 	<ul style="list-style-type: none"> ▪ Hostile terrain, climactic conditions and ongoing threats by Taliban ▪ Civil unrest and insurgents in western Pakistan
Absence of adequate primary infrastructure and facilities which will impede or preclude project deployment	<ul style="list-style-type: none"> ▪ Afghanistan ▪ Colombia 	<ul style="list-style-type: none"> ▪ Lack of roads or alternate access for some of remote service areas ▪ Lack of suitable access roads resulted in cancellation of a major satellite project
Inadequate skill levels available for rural rollout and sustainability	<ul style="list-style-type: none"> ▪ Uganda ▪ RSA 	<ul style="list-style-type: none"> ▪ Illiteracy and general ignorance amongst many segments of poor rural population ▪ Failure to take training and education into account when rolling out tele-centres and school cyber-labs
Inefficient or excessively complex decision making, approval and governance processes	<ul style="list-style-type: none"> ▪ Nigeria ▪ Peru 	<ul style="list-style-type: none"> ▪ Delays in budget approval by National Assembly affects Fund's capacity to operate; carry out projects ▪ Before funds can be deployed, require multiple approvals from different committees and government organizations
Structural flaws in setting up Fund and its relationship with the various other institutional bodies involved in oversight or policy making	<ul style="list-style-type: none"> ▪ Indonesia ▪ Nepal 	<ul style="list-style-type: none"> ▪ Ongoing conflict between telecom regulator and Treasury Ministry regarding how funds can be allocated and utilized ▪ Unresolved issues between the NTA and the Ministry of Telecom

³²¹ Underserved Area Licence

Lack of sufficient power/authority to effectively carry out Fund management (e.g., lack of enforcement with operators)	<ul style="list-style-type: none"> ▪ Argentina ▪ Togo ▪ Ecuador 	<ul style="list-style-type: none"> ▪ Limited recourse to force payment from operators refusing to contribute to Fund ▪ Unable to collect all contributions owed by operators ▪ Currently attempting to define how the Fund can collect monies owed by various operators
Lack of qualified and/or interested vendors to bid on projects or flawed design of economic incentives for vendors to bid	<ul style="list-style-type: none"> ▪ Mozambique ▪ Tanzania 	<ul style="list-style-type: none"> ▪ Market domination by limited number of operators mean they feel no pressure to bid/be more competitive ▪ Failed tender due to inadequately set maximum subsidy and lack of technical and infrastructure support rendering incentives economically unviable
General managerial, operational and capacity issues	<ul style="list-style-type: none"> ▪ Afghanistan ▪ France ▪ India ▪ Indonesia 	<ul style="list-style-type: none"> ▪ Senior Fund management in the process of being replaced ▪ Calculation methods and application of requirements successfully challenged in court ▪ Significantly delayed execution of many project; frozen or suspended projects ▪ Lack of human resources at local level to maintain, support and educate inhabitants because maintenance contract with the government covers only the first year of deployment
General lack of transparency	<ul style="list-style-type: none"> ▪ Multiple countries 	<ul style="list-style-type: none"> ▪ Of the countries included in this study, over 50% have no formal public reporting process in place regarding the use and management of funds or have failed to adhere to the prescribed process.

DOES THE USF APPROACH ACHIEVE COVERAGE TARGETS?

2.1 Overview

One of the principal difficulties in answering the question as to whether the USFs achieve their coverage targets is the absence in many cases of specific and well-articulated targets. Very few funds have set detailed goals regarding overall population coverage but a number have defined coverage using parameters such as, but not limited to:

- total number of villages/localities, municipalities, provincial capitals³²², etc.
- number of districts, provinces or states served
- number of tele-centres
- number of schools, libraries, health centres
- number of payphones installed
- number of base stations constructed
- km. of fibre installed

Even if a population coverage goal has been established as part of the USF targets, this presents other hurdles in that there are present day complexities associated with defining population coverage and market penetration, particularly with respect to the expansion of mobile coverage under the auspices of a USF scheme. In 'earlier' days, before the proliferation of multiple SIM cards, actual mobile penetration as measured against total population was easier to determine. However, over the last several years, market penetration estimates have become increasingly less meaningful given the tendency of the more affluent mobile users in many countries to purchase two or more SIM cards from different providers. Therefore, it is challenging to arrive at meaningful estimates in terms of increases in the level of mobile population coverage. Fixed line market penetration may be easier to define and track, but these coverage statistics are growing increasingly irrelevant as wireless continues to grow and flourish as the telecommunications connection of choice and as operators increasingly select wireless solutions wherever and whenever practical.

2.2 Are There USF Coverage Objectives and Have They Been Achieved?

Of the Funds reviewed in this report, achievement of coverage targets can be grouped into the following categories as displayed in the table below. Specific details regarding USF programme/coverage targets versus the results have already been presented in the country overview tables contained in **Section 3** and the deep dive analyses presented in **Section 4**. However, the following table is intended to provide a snapshot of overall Fund performance where targets and objectives were identified in **some form**. Although the table headers are basically self-explanatory, the last column entitled 'unknown/not applicable' refers to:

- Funds which are basically direct subsidies to operators for providing US (e.g., Canada, Australia)
- Funds where no information is available other than that designated incumbent or designate USO provider is reimbursed directly by state (e.g. China)
- Cases where the creation of a Fund has been announced but no details provided (e.g., Bangladesh)

³²² This **may** include population estimates for the villages, towns, municipalities, etc.

Country	No targets are defined so accurate assessment is not possible	Very few targets are being achieved	Some targets, but not all, are being achieved	Most targets are being achieved	Unknown/ Not applicable
AFRICA					
Burkina Faso					
Cote d'Ivoire					
DRC					
Gabon					
Ghana					
Lesotho					
Madagascar					
Mauritius					
Morocco					
Mozambique					
Nigeria					
Niger					
RSA					
Rwanda					
Sudan					
Swaziland					
Tanzania					
Togo					
Uganda					
Zambia					
Zimbabwe					
ASIA PACIFIC					
Afghanistan					
Australia					
Bangladesh					
China					
India					
Indonesia					
Japan					
Korea (South)					

Country	No targets are defined so accurate assessment is not possible	Very few targets are being achieved	Some targets, but not all, are being achieved	Most targets are being achieved	Unknown/ Not applicable
Malaysia					
Mongolia					
Nepal					
New Zealand					
Pakistan					
Philippines					
Thailand					
Vietnam					
EUROPE					
Bulgaria					
Czech Republic					
France					
Italy					
Hungary					
Poland					
Romania					
Russian Federation					
Ukraine					
LATIN AMERICA					
Argentina					
Bolivia					
Brazil					
Chile					
Colombia					
Dominican Republic					
Ecuador					
Guatemala					
Nicaragua					
Paraguay					

Country	No targets are defined so accurate assessment is not possible	Very few targets are being achieved	Some targets, but not all, are being achieved	Most targets are being achieved	Unknown/ Not applicable
Peru					
Venezuela					
MIDDLE EAST					
Egypt					
Oman					
Saudi Arabia				323	
NORTH AMERICA					
Canada					
Mexico					
USA					

In summary, of the 64 Funds addressed in this report, the following can be noted:

- 22 Funds do not currently have any established coverage or delivery targets
- In the case of an additional two funds, they are not yet fully defined and thus, targets cannot yet be set
- There are eight additional funds that do not lend themselves to the setting of targets since they are basically refund mechanisms
- Of the remaining 50% (32) that have some form of target setting, only 20 have precisely quantified targets and goals

³²³ Fund is still new with only pilot trials but these are being completed and targets achieved

ALTERNATIVE APPROACHES TO ADDRESSING THE UNIVERSAL COVERAGE CHALLENGE

2.3 Overview

Although there is data available to show that USFs are having some degree of success in extending access to telecommunications in some of the countries in which they operate, there is also solid anecdotal and statistical evidence to show that improved accessibility, coverage and service quality can often be accomplished by alternative solutions rather than just the use of the USF approach. For the purpose of this analysis, we have deliberately excluded countries such as Canada and the United States which are rather unique in that universal access and service coverage have basically been achieved in vast territories even without the introduction of the USFs that are currently in place in these two countries.

2.4 Bangladesh

2.4.1 Introduction

Grameenphone continues to shine as one of the more innovative examples of how universal coverage can be achieved via mechanisms other than Universal Service Funds. It also is an example of how the use of mobile cellular networks can play a fundamental role in accelerating universal service. In fact, although it was not designed as a USF, many of its approaches and principles have since been incorporated into rural coverage schemes financed by various USFs.

2.4.2 Alternative Approach Adopted

The Village Phone (VP) Programme, initiated in 1997, was the initiative of the Grameen Bank, an NGO with an extensive rural banking network and an expert in microfinance programmes that assist poor villagers in rural areas by providing loans to them under a micro-credit programme for rural income generating activities. To implement the VP Programme, the Grameen Bank created an independent, not-for-profit subsidiary called Grameen Telecom (GT), which then established a for-profit company, Grameenphone, to fund the VP Programme in Bangladesh with the profits it would earn as a nationwide mobile telecommunications provider. GT³²⁴ administered the VP Programme with the help of Grameen Bank, trained the operators, supplied them with handsets and handled all service-related issues.³²⁵

The VP Programme was able to provide modern digital wireless service to rural areas through Grameenphone's GSM network in Bangladesh. The programme provided loans to Grameen Bank members, who are most often female, to purchase a mobile phone under the lease-financing programme of Grameen Bank. These villagers then became VP operators and earned money by offering telephone service to other people in their village. Each VP operator was responsible for providing telephone services (sending and receiving calls), collecting call charges according to prescribed rates, remitting payments to Grameen Bank, and ensuring proper maintenance of the telephone. The VP operator's income resulted from the difference between charges paid by customers and the airtime charges billed to

³²⁴ Telenor holds 55.8 % of Grameenphone, with Grameen Telecom Corporation owning the remaining 34.2 %. The rest (10%) of the shares belong to general retail and institutional investors.

³²⁵ Grameenphone website/About Grameenphone/Shareholders/Grameen Telecom Overview, at <http://www.grameenphone.com>

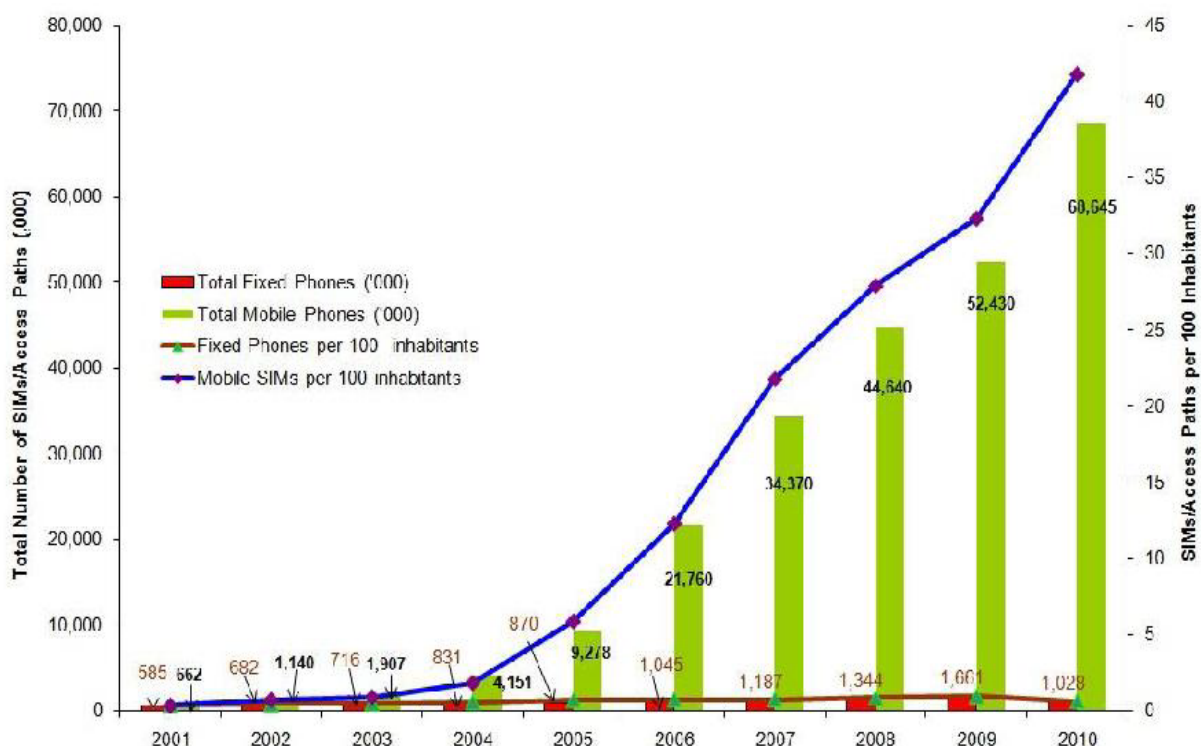
the operator by GT as well as a flat charge for incoming calls. Grameen Telecom bought airtime in bulk at a discounted rate from Grameenphone, which enabled GT to pass on savings to the village operators.³²⁶

The manner in which the VP Programme was implemented is as follows. GT would first gather information on villages that had cellular coverage from Grameenphone's existing network. GTC Unit Officers would then visit the Grameen Bank branches in that area and prepare a list of villages where network coverage was suitable for providing VP service. The GB branch manager would then select women from among Grameen Bank members in those villages to act as VP operators. The initial goal of the Village Phone Programme was to install 40,000 village phones by year end 2004. According to Grameenphone's 2006 Annual Report, there were over 280,000 village phone operators by year end 2006 and 300,000 operators as of May 2007.³²⁷ By 2007, GT's total mobile subscribers had reached 16 M. In fact, by 2007, the VP programme had become so successful that the need for the programme in its initial form had lessened considerably and although the programme continues to exist, the VP operators appear to be earning lower incomes than in the initial stages of the programme. Nonetheless, the impact of the VP programme in Bangladesh is nothing short of enormous.

³²⁶ Grameen Telecom's Village Phone Programme in Rural Bangladesh: A Multi-Media Case Study, Final Report (Mar. 17, 2000), available at <http://www.telecommons.com/villagephone/finalreport.pdf>. See also Grameen Telecom information at <http://www.grameen-info.org/grameen/gtelecom/index.html>.

³²⁷ Grameen Foundation, Village Phone Direct Manual: Enabling Microfinance Institutions to bring Affordable Communications to the Poor (2007).

According to data from the International Telecommunication Union (ITU) ICT Eye Survey of 2010, the total fixed line phones per 100 inhabitants in 2010 in Bangladesh was 1.04, having increased only marginally from a rate of 0.76 in 2005.³²⁸ This indicates that the majority of villages across Bangladesh still do not have access to a landline. However, if one examines the mobile phone landscape, the story is entirely different: the mobile phones per 100 inhabitants in 2005 was 6.4 and as of 2010, had increased to 46.2. The chart below illustrates the rapid development of mobile telephony in the Bangladeshi market as compared to fixed lines



Source BTRC 2011

³²⁸ ITU ICT Eye 2010

By way of additional background, Grameenphone obtained a national mobile operator licence in November 1996, and commenced operation on March 26, 1997, with the VP Programme starting shortly thereafter. It is currently the largest telecommunications services provider in Bangladesh, with a subscriber base of 36.5M, which represents a total market share of approximately 44 per cent. Since it began operations in 1997, Grameenphone has also built the largest cellular network in Bangladesh: as of December 2011, Grameenphone's network covered 99% of Bangladesh's population and 90% of the total land area. The network infrastructure included more than 13,000 base stations located in more than 7,200 sites in operation around the country.³²⁹ Current mobile coverage in Bangladesh as provided by Grameenphone is illustrated in the map below:



Source: GSMA

After introducing the internationally acclaimed VP Programme, Grameenphone expanded its service and coverage initiatives through the creation of the Community Information Centre (CIC). The CIC is a shared premises where rural people may access a wide-range of advanced services such as Internet, voice communications, video conferencing and other information services. This initiative responds to the company's objective to serve local community needs by:

- Bridging the "digital divide" by providing information access to rural people - alleviating poverty
- Educating the underserved and underprivileged on information-based services
 - building local entrepreneurship and improving capacity
 - creating employment opportunities for unemployed youth

³²⁹<http://investor-relations.grameenphone.com/IRPortal/Admin/PageDetails/?id=1>

The pilot project started in February 2006, with 16 CICs; today the project has become a large operation with over 500 CICs operational in nearly 450 Upazillas. The short-term plan of this initiative is to establish at least one CIC in each of the 462 Upazillas. In the long-run, Grameenphone plans to increase the number of CICs substantially so that every CIC can support the information needs of four adjacent villages. Recently, Grameenphone announced the creation of an additional 102 CIC's.

The GPCICs are designed to be run independently as small businesses by local entrepreneurs. The entrepreneurs are trained and are provided with continuous support by Grameenphone. To help the entrepreneurs to earn more, CIC's also provide local inhabitants with other Grameenphone services, such as mobile payphones and electronic recharges for prepaid and postpaid mobile accounts.

The services available in the GPCICs include but are not limited to:

- Internet surfing and e-mailing
- Content on health, agriculture etc.
- Chatting with voice, picture
- Video conferencing
- Computer composing
- Scanning, printing
- Commercial Mobile Call
- E-governance services
- Telemedicine services
- Multimedia education for children

2.5 Brazil

2.5.1 Introduction

Section 4.4.2 above addressed the numerous shortcomings of Brazil's USF. However, the Brazilian regulator, ANATEL, hampered by the major limitations of the Fund, was pro-active in seeking other means not only in which to achieve coverage for hard to serve areas but also to encourage and stimulate the provision of advanced services such as broadband.

2.5.2 Alternative Approach Adopted

Building on the coverage and service achieved by the already licensed operators without the use of the FUST (Universal Service Fund), the government took advantage of the new licences being issued for third generation (3G) mobile services in 2007³³⁰ and imposed more expansive coverage obligations on those new 3G licensees than the obligations previously imposed on the first mobile licensees. In so doing, ANATEL would appear to have recognized

³³⁰ *Edital de Licitação ("Bidding Terms")* No. 002/2007. The tender was concluded in Dec. 31, 2007, and the 3G licences were signed and published on the Brazilian Official Gazette in Apr. 29, 2008.

that imposing coverage obligations through licences could bring more immediate benefits to the population than via other funding mechanisms.

To this end, during the afore-mentioned tender for 3G mobile licences, areas of low demand were not licensed in their own right, but were included as coverage obligations along with licences covering the more populous areas. For example, winners of the São Paulo metropolitan profitable licences (in the southeast of the country) were required to provide service with specific coverage obligations in the unprofitable areas of the northern states of Amazonas, Amapá, Pará, Maranhão and Roraima. In addition, specific coverage obligations were also detailed in the licences, in accordance with the following table:

Target	Threshold population	Coverage Obligations
I.	No cellular service	Licensees will have the first two years to provide mobile services to 25% of the municipalities of each area acquired that still does not have cellular service.
II.	Municipalities with less than 30,000 inhabitants	Licensees must provide 3G coverage to 15% of all municipalities within five years and achieve 60% coverage in all municipalities within eight years.
III.	Municipalities with 30,000 – 100,000 inhabitants	Licensees must provide 3G coverage to 50% of all municipalities within five years.
IV.	Municipalities with more than 100,000 inhabitants	<ul style="list-style-type: none"> • Within one year, licensees must cover 50% of state capitals and municipalities with more than 500,000 inhabitants • Within two years, licensees must cover 100% of state capitals and municipalities with more than 500,000 inhabitants • Within three years, licensees must cover 50% of municipalities with more than 200,000 inhabitants • Within four years, licensees must cover 100% of municipalities with more than 200,000 inhabitants • Within five years, licensees must cover 100% of municipalities with more than 100,000 inhabitants.

Source: Anatel.

Based on data provided by Anatel, as of May 2012, mobile operators had achieved coverage of 5564 municipalities with only one municipality (only one municipality of 8000 inhabitants - Nazária-PI remained unserved by any mobile operator) and population coverage of 99.9%, all without benefit of access to the FUST³³¹. Current nationwide mobile cellular coverage of Brazil based on operators who have provided coverage data to the GSMA appears as follows:



In addition to the focus on imposing mobile service coverage requirements in the 2007 licence auctions, ANATEL has sought other ways to achieve the service and coverage levels that are not and cannot be addressed by FUST.

- **PMU I**, created by Decree 6039/2007 in order to provide wireline phone services to 91 hearing impaired organizations (2010). During 2011, Anatel and the Ministry of Health were trying to include other impaired persons organizations as well as hospitals and health centres.
- **PMU II**, a plan to provide payphone services to communities with less than 100 inhabitants. Although it was approved by Anatel's Board in 2009, it was sent back to Anatel in 2010 by the Ministry of Communication, asking that Anatel revise the plan because there were some overlaps with the PGMU plan 332 approved by Decree 4769/2003 and modified in 2008 by Decree 6424/2008. Anatel's position was that PMU II complements the PGMU plan: if towns with 50 pops or more are not served by the licensees via PGMU³³³, then PMU II would provide the fixed line phone service. As a result of Anatel's analysis, PMU II is supposed to provide fixed phone services to 8,760 communities using FUST but there

³³¹ <http://www.teleco.com.br/cobertura.asp>

³³² PGMU= Plano Geral de Metas para a Universalização do Serviço Telefônico Fixo Comutado Prestado no Regime Público The difference between PMU and PGMU acronyms is the G of Geral (General), with the main difference being that PMUs are FUST funds usage plans and PGMU are "non FUST" Universal Service obligations originally included in the licences.

³³³ In fact, PGMU was the third revision of the fixed line service providers' contracts since being established in 2005.

is no guarantee that this can move forward any time soon.

- **PGMU III** took note of the previous failures to comply with the obligation to install and operate tele-centres in urban areas. Instead, the licensees agreed with Anatel, amongst other Universal Service obligations, to include:
 - Aice (low rates for low income subscribers pre or postpaid)
 - contract revisions in 2011, 2015 and 2020
 - Rural Telecommunications National Programme
 - change to payphone goals from six for each thousand pops in the Concession areas to four for each thousand pops in each county
 - more than 110,000 payphones, if requested, in airports, highway patrol sites, rural community centres, rural public schools and rural health posts, etc.
 - PNBL, the country's national fixed broadband plan (Plano Nacional de Banda Larga), published in May 2010

Furthermore, related to the PNBL plan, the licensees are required to provide enough capacity to generate good quality broadband in the backbones and feeder links. The minimum requirements for the counties are as follows:

- 5,000 pops or less - 2 Mbps
- 20,000 pops - 8 Mbps
- 40,000 pops - 16 Mbps
- 60.000 pops - 32 Mbps

The number of Brazilian municipalities covered by the country's national fixed broadband plan (Plano Nacional de Banda Larga, or PNBL), now stands at 692. A total of 471 municipalities were covered in 2011, but the footprint has increased significantly through the addition of 221 new cities in January, 2012. The goal is to reach a total of 4,424 cities by 2017.

Not only mobile operators have to fulfill USOs. In exchange for amending the Universal Services Decree that provides targets for backhaul installation, the fixed line operators and the Ministry of Communications entered into an agreement, known as "Broadband in Schools," (see table below) in which the fixed operators installed broadband connections of 1 Mbps downstream in each of the 70,000 public schools in the urban areas at no cost to the government and provided free of charge until 2025. The installation was gradual: 30 per cent of the schools in 2008, 30 per cent in 2009 and the remaining 40 per cent in 2012. As of April 30, 2012, almost 61,000 schools had achieved broadband connection, all without subsidies from FUST.

PROJETO BANDA LARGA NAS ESCOLAS PÚBLICAS URBANAS

Quantidade de Escolas Conectadas - até 30/04/2012

UF	Quant. de Escolas Abrangidas pelo Projeto (INEP 2010)			Quant. de Escolas Conectadas 2008			Quant. de Escolas Conectadas 2009			Quant. de Escolas Conectadas 2010			Quant. de Escolas Conectadas 2011			Quant. de Escolas Conectadas 2012			Total de Escolas Conectadas			A conectar
	Fed	Est	Mun	Fed	Est	Mun	Fed	Est	Mun	Fed	Est	Mun	Fed	Est	Mun	Fed	Est	Mun	Fed	Est	Mun	
AC	1	199	131	331	-	54	20	74	117	39	117	117	-	35	50	85	-	18	7	23	-	32
AL	5	305	670	880	2	135	183	330	2	82	286	380	1	41	118	158	-	18	26	44	-	68
AM	12	607	603	1.222	3	95	71	169	1	96	113	210	-	19	80	99	-	20	63	83	-	661
AP	-	158	117	275	-	-	-	-	91	40	131	-	24	31	55	-	12	9	21	-	-	68
BA	25	1.496	4.130	5.651	6	612	1.155	1.773	7	673	1.690	2.270	7	203	737	947	3	55	185	233	1	395
CE	9	675	2.068	2.762	3	372	802	1.177	2	208	549	769	2	34	131	167	2	29	136	167	-	505
DF	2	585	-	587	1	203	-	204	-	211	-	211	-	79	-	79	-	38	-	38	-	56
ES	12	404	826	1.242	1	184	370	565	4	108	214	326	5	51	129	185	-	32	66	98	-	67
GO	8	1.117	1.334	2.459	1	347	486	814	1	544	448	893	5	135	197	337	-	48	102	150	-	163
MA	9	806	2.129	2.944	2	289	418	689	2	268	623	1.063	2	216	647	865	3	18	95	116	-	171
MG	33	3.488	3.708	7.229	10	1.680	1.204	2.794	6	676	1.167	2.149	8	529	941	1.478	-	143	156	299	-	509
MS	1	394	408	773	1	179	132	312	-	122	160	282	-	48	70	118	-	11	21	32	-	31
MT	3	568	549	1.120	1	269	154	414	-	184	212	396	-	67	98	165	1	22	34	57	-	87
PA	13	767	1.618	2.418	3	184	119	306	3	288	453	742	3	114	274	391	-	38	70	108	-	671
PB	14	730	1.052	1.796	1	214	277	482	5	260	401	666	2	200	274	476	1	43	66	100	-	72
PE	12	865	1.063	2.870	6	465	558	1.019	1	312	618	932	3	78	199	280	1	51	71	123	-	313
PI	14	808	1.020	1.842	2	296	213	481	2	285	381	678	1	182	257	440	1	31	59	91	-	145
PR	24	1.806	2.720	4.550	4	881	748	1.633	2	457	1.056	1.544	4	223	471	698	3	149	203	355	-	315
RJ	48	1.579	3.113	4.740	27	880	1.651	2.558	12	611	970	1.593	6	51	244	301	1	2	62	65	-	221
RN	21	634	826	1.481	2	224	172	388	2	213	275	490	5	165	284	454	4	16	46	66	-	72
RO	1	307	228	536	-	116	32	148	-	116	109	225	-	41	52	93	-	15	18	33	-	37
RR	2	112	79	193	-	-	-	-	-	49	19	68	1	10	10	21	1	35	27	63	-	41
RS	25	1.843	2.029	3.897	4	969	502	1.475	4	554	710	1.268	7	210	407	624	3	123	200	326	1	300
SC	13	1.160	1.507	2.660	1	257	554	812	2	527	356	885	5	244	350	599	2	67	103	172	-	212
SE	2	349	420	771	1	148	86	235	1	144	199	344	-	33	90	123	-	6	16	22	-	45
SP	13	5.436	7.881	13.330	1	370	2.088	2.457	1	62	2.406	2.489	6	982	1.228	2.316	4	390	1.216	1.590	-	2.965
TO	9	454	370	833	-	178	90	268	1	115	114	230	5	119	115	239	1	31	26	58	-	38
Total	331	27.842	41.256	69.432	83	9.441	12.073	21.597	62	7.541	13.838	21.441	78	4.131	7.482	11.891	31	1.427	3.053	4.541	3	8.460

Data da Elaboração: 22/5/2012

Nota: Os valores foram revisados de acordo com as informações prestada pela Autorizatórias.

Source: Anatel

In summary, whilst the FUST continues to collect money and languish in the midst of almost zero activity, the mobile and fixed line operators have been able to address universal service obligations and achieve extremely high coverage levels, all without use of the universal service funds.

2.6 Cooperatives – Argentina

2.6.1 Introduction

Long before the USF concept was introduced in the country, Argentina adopted the Cooperative approach in order to provide service in many rural areas. Argentine Telephone Cooperatives ('the **Cooperatives**') were born as non-profit community organizations and businesses that are owned and managed by the subscribers of the telephone services provided (a consumer cooperative). As in the US, **Cooperatives** are organized as non-capital stock corporations under Government specific cooperative laws. In other words, member's dividends are not proportional to their capital. All members' investment into the cooperative is for the same amount i.e., the cost of the telephone line. Profits, if any, must be divided amongst the members according to their use of the services provided. Given that 80 per cent of the traffic income is produced by a mere 20 per cent of the subscribers, the members typically vote to reinvest the profit into infrastructure.

2.6.2 Alternative Approach Adopted

The Cooperatives' first milestone was April 5, 1960, when Decree 3556 compelled ENTel to connect private networks to the national network. Although ENTel was a state owned monopoly with a legal stranglehold over the supply of local and long distance telephony, before that date, many utility cooperatives had tried to start providing telephone service in their towns. Thus, one year before the introduction of Decree 3556, one small Cooperative, San Genaro, was created with 120 members/subscribers without an interconnection link. They managed to capture the attention of the authorities, demonstrating that in many rural areas near the main cities, local residents preferred to travel tens of kilometres rather than waiting more than six hours to make a long distance call. Thanks to the above mentioned Decree 3556/1960, in May 14, 1961, San Genaro finally obtained interconnection with ENTel and started its telephone service operations. By 1965, there were 19 operating Cooperatives and by 1966, this had grown 110. In addition to the installation charge (i.e., the membership fee), the Cooperatives' monthly income was derived from the monthly subscription fee, local call traffic and up until 1968, 20 per cent of the total outgoing long distance traffic.

In its 1968-1972 expansion plan, ENTel, as a result of its chronic budget shortages, failed to include small cities. In response to the resulting complaints of both mayors and governors, ENTel proposed (via Resolution 68/1968), that the potential subscribers of each excluded town create a Cooperative to operate their own telephone company, investing in the necessary capex for the land, building, outside plant and telephone equipment (local switching and long distance links). ENTel's tasks under this approach were the project engineering, technical support and supervision of civil works construction and equipment installation, including the final approvals and the interconnection obligations.

Small private companies were compelled, without subsidies or financial assistance, to provide telephone service without profit in low density areas where ENTel was unable to fulfil the provision of Universal Service. However, in

the same Resolution 68/68, instead of the 20 per cent they were collecting on outgoing long distance, Cooperatives were authorized to increase this to 40 per cent.

By the time ENTel was privatized in 1990, there were some 295 Cooperatives operating with more than 350,000 lines (at that time, about ten per cent of the total wireline connections). Approximately ten Cooperatives (3%) had more than 5,000 lines; 45 (15%) had between 1000 and 5000 lines; 50 (17%) had between 500 and 1000 lines; 160 (55%) had between 100 and 500; and 30 (10%) had less than 100 lines. Five years after privatization, in 1995, the telecom regulatory authority, CNT, raised the Cooperatives' access to income from 40% to 78% of the outgoing long distance traffic.

The Privatization Decree (62/1990) states that Cooperatives and private enterprises are not allowed to build or operate private telephone networks that are less than 50 km. from an incumbent primary centre. Distances beyond 50 km. are also restricted if one of the two main operators, Telefónica or Telecom, are able to demonstrate that the proposed new service area has already been included in the expansion plan for following year. As a result of this condition, from 1990 to 2011, only three new Cooperatives were authorized. However, the existing ones expanded their networks, increased their subscriber counts and now provide new multimedia services, such as VoIP and ADSL or WiMax and broadband Internet services.

Today, altogether, they have more than 450,000 wireline subscribers (approximately five per cent of the country's total fixed lines). Despite the fact that they are not authorized to provide TV services, under the guise of "triple play field trials", some Cooperatives have already started to provide IPTV services. It is also important to note that although the **Cooperatives** are licensed operators, they are not required to contribute to the Universal Service Fund (FFSU) unless they operate in profitable areas.

2.7 Finland

2.7.1 Introduction

Unlike many other countries in Europe, the development of telecommunications in Finland was carried out primarily on a regional basis using municipal telephone companies and cooperative style approaches. Prior to liberalization in the 1990s, there were three large operators with similar market shares, and a number of small regional operators that dominated their local markets both for cable television and fixed line telephony. As a result of this initial structure, today - Finland is divided into numerous geographic areas each of which has a designated universal service provider.

Similar to the framework utilized in many European countries (plus countries such as South Korea), the Finnish Communications Regulatory Authority (FICORA) can impose the obligation on one or more operators in specific geographic areas to provide universal service. Where the provision of universal service constitutes an unreasonable financial encumbrance to the operator, it can request that FICORA calculate the net cost of universal service, thereby allowing the operator to claim compensation for those costs from the Ministry of Transport and Communications. This strategy appears to have been successful and as can be seen from the GSMA coverage map below, mobile coverage is virtually ubiquitous despite some remote and climatically hostile regions (e.g., Arctic Circle).



Source GSMA

However, at the beginning of the 21st century, Finland starting setting the stage for a major transformation of universal service. A pioneer in the promotion of broadband services, the country published its National Broadband Strategy (NBS) in 2003. At a time when less than ten per cent of the Finnish population subscribed to broadband service³³⁴, the overarching objective of the NBS was for Finland to become a leader in the availability and use of high-speed communications, and to provide broadband geographical coverage for all Finnish inhabitants. The NBS was intended to be both market oriented and technologically neutral but also had clear goals to encourage the provision of service and content, to increase demand for broadband services and to support the development of broadband infrastructure in areas where investment was not commercially viable. To implement these objectives, the NBS contained 50 specific actions which were to be implemented between 2004 and 2007. At the outset of this initiative, broadband was considered to be an umbrella of services covering a number of different transmission technologies that were capable of delivering speeds of 256 Kbps or more³³⁵.

2.7.2 Alternative Approach Adopted

Throughout the implementation of the NBS, the broadband remained outside the scope of universal service provisions but this changed after the Finnish government approved a Plan of Action that raised the bar of broadband infrastructure and service provision in December 2008. The plan aimed to provide a wired or wireless broadband connection delivering average download speeds of at least 1 Mbps to every permanent residence, firm or public administration body by 2010. In addition, by the end of 2015, the plan expected “practically all” (more than 99% of the population) permanent residences, firms and public administration bodies to be within two kilometres of an fibre optic or cable network permitting connections of 100 Mbps.

Under this plan, the Finnish government expects 95% of the population will be served through commercial

³³⁴ According to the ECTA broadband scorecard Q3 2004, broadband penetration in Finland stood at 11.0%

³³⁵ Eskelinen et al (2008). Telecommunications Policy 32 (2008) 412-421. Eskelinen et al (2008). Telecommunications Policy 32 (2008) 412-421.

investment. The remaining four per cent (4%) needed to achieve the stated goal of 99% (approximately 130,000 connections, required primarily in sparsely populated rural areas) will be served through a combination of private and public investment. These subsidized projects will be assigned via a competitive tender to a telecom operator that will become responsible for project execution and for funding at least 34% of the total project costs. The remaining investment will consist of a combination of state, municipality and EU funds. There are approximately 800 of these subsidized projects for an expected total value of USD 512M). Effective 2009, subscribers can also contribute to the installation of communications connections to their main residences. Each individual taxpayer can claim a credit tax deduction of USD 4,170 for labour costs through a vehicle called the domestic help credit.

This major transformation in the communications infrastructure commenced under the 2008 plan subsequently prompted significant changes to universal service arrangements. In July 2010, FICORA announced a further change to the Communications Market Act (already amended in July 2009) in which both residential and business users are entitled to a broadband subscription operating at a downstream rate of at least 1Mbps as part of the country's revised Universal Service Obligations (USO) by July, 2010 (moved forward from the initial target date of December, 2010). To comply with the USO, FICORA designated 26 operators to provide universal service to pre-determined geographical areas. Within these areas, carriers can choose to fulfil their obligations through a fixed or wireless communications network. Although the price of an Internet connection must be reasonable, prices may vary depending on service costs for the operator. FICORA also suggested that a monthly charge of between EUR30 and EUR40 (USD 36.7 and USD 48.9) per month would be reasonable in most cases³³⁶. The regulator, however, has noted that it does not have the power to determine a price cap for a universal service subscription in advance.

The announced changes also included a provision that by the end of 2015, practically all (more than 99 percent of the population) permanent residences, permanent offices of business or public administration bodies must be no more than within two kilometres' reach of an fibre optic or cable network permitting 100 Mbit/s connections. The government also expressed its strong support for joint construction of a network with a requirement that all future transport infrastructures will be pre-installed with tubes into which optical fibre may later be installed.

One of the main reasons that the Finnish government was able to impose such requirements for broadband deployment is that Finland's MNOs had all, of their own volition, invested in HSPA technology which currently covers most of the country: TeliaSonera's entire 3G network had been upgraded to HSPA by late 2007. By June 2009, all base stations in DNA's network were able to support HSPA+ (providing up to 21Mb/s download), while since July 2009, Elisa has rolled out HSPA+ in the 900MHz band³³⁷. As of April 2012, both TeliaSonera and Elisa had already launched LTE.

The addition of broadband to the country's USOs makes it the first country globally to mandate high speed internet access as a basic right. Although the government is obviously the entity that issued the USO edict, it was basically able to piggyback on what the operators had already initiated on their own volition even prior to the imposition of a USO requirement.

³³⁶ <http://www.telegeography.com/products/commsupdate/articles/2010/07/01/broadband-becomes-a-basic-right-for-finns/>

³³⁷ http://www.circleid.com/posts/20091015_finland_legislates_universal_broadband/

GENERAL FINDINGS AND CONCLUSIONS

2.8 Overview

The fourth chapter of the ITU publication **2012 Trends in Telecommunication Reform** is entitled '*The More Things Change, the More They Stay the Same*'. This very same title could be used to describe the current state of many, (if not most), USFs. Despite the plethora of reports, both global and regional, indicating most funds are not performing up to expectations. In general, there has been little noticeable progress in rectifying deficiencies or shortcomings that have been previously identified (often on multiple occasions) in many of the funds. Whereas few people would question the necessity of providing universal access and service as a means of furthering social and economic improvement, based on the general USF approach and performance to date, there are likely many who would question whether USFs are indeed the most appropriate mechanism for ensuring that these goals are actually achieved. In fact, one could say that where there have been changes in orientation in terms of access and services to be provided, these have **generally** been accomplished through work-around or alternate solutions (e.g., licence conditions imposed on operators, establishment of separate plans or funds, private/public partnerships, etc.). Furthermore, with the WSIS objective in mind wherein participating countries agreed on the extremely ambitious goal of connecting all villages of the world to ICTs by 2015, including the establishment of community access points, as well as connecting universities, schools, libraries, post offices, health centres and local governments, it seems unlikely that these goals will be achievable solely through the accelerated use of USFs³³⁸ in their current form. The following section outlines some of the major findings that serve to underscore these conclusions.

2.9 Problems Persist and Impediments Linger

1. There are significant deficiencies in Fund structure, management and operation as illustrated by the following examples in Africa:
 - there are funds that have been legally established with levies being collected, yet the Fund has never been officially activated (e.g., Burkina Faso, DRC, Gabon and Niger); of the 21 African countries surveyed in this report, there were seven inactive Funds plus another five which have very little activity); in other cases, legislation calls for the establishment of the fund but the fund has not been established
 - obtaining accurate reports (or any reports at all) regarding funds collected and funds disbursed is possible in only a very few countries (e.g., Ghana, Uganda); even in countries such as Nigeria where the telecommunications regulatory environment is advanced and the Fund guidelines are clear, the reports simply do not get issued; in South Africa although reports are published, the total undisbursed funds cannot be ascertained and at this stage, all numbers are questionable
 - in general, transparency levels are low to extremely low (e.g., Mauritius, Sudan, Zimbabwe) with only a few exceptions (e.g., Ghana, Uganda)
 - the creation of AUSAFA was supposed to address many of these challenges but it appears to have languished since inception with no tangible results to date and no promise of any significant activity materializing in the near future
2. The underlying legal frameworks for many Funds were not well thought out or conceived from the outset

³³⁸ In those countries where USFs exist

(e.g., not technology neutral or service flexible, excessively bureaucratic, insufficient oversight, etc.) and this has resulted in a number of ineffective or severely constrained and/or legally challenged funds (e.g., Brazil, Czech Republic, Ecuador, France, Italy)

3. These same issues with respect to underlying legal frameworks also pose a major obstacle to the introduction of rural and non-commercially viable broadband through the USF funding mechanism because the frameworks must be changed in many cases in order to include the provision of broadband and there seems to be little or no political will to effect the changes.
4. The levies and taxes established for most USF contributions appear to have been established without any substantive analysis regarding the actual service funding/subsidy levels needed and, as a result, many funds receive contributions that appear to be far in excess of the actual universal service funding needs or capabilities (e.g., Argentina, Pakistan, India).
5. In other cases, the Funds seem unable to develop enough projects to adequately utilize the levies collected (e.g., India, Peru). In many instances, this is due to a lack of access gap evaluations as well as meaningful demographic surveys.
6. Even in Funds where there is a degree of autonomy and independence, there are many cases where political intervention or interference from other government agencies affect the Fund's performance (e.g., India, Indonesia, Pakistan, Philippines)
7. In addition to the specific problems caused by ineffectively conceived funds (as pointed out in points 4 and 5 above), many Funds suffer from or have been accused of poor or inefficient administration/use of funds (e.g., Afghanistan, Bolivia, Brazil, RSA, United States);
8. Overall project and financial reporting (transparency) for most Funds is extremely inadequate:
 - frequently difficult to ascertain status of projects in progress
 - unclear, contradictory or non-existent relationships presented between funds collected, funds disbursed and remaining balance (e.g., Peru, RSA, Indonesia)
 - allegations (not necessarily proven) of financial mismanagement associated with a number of funds (e.g., Brazil, Bolivia, RSA)³³⁹
9. Although many of the active Funds appear to have transparent project allocation processes, the ball starts to drop in terms of project monitoring, tracking and reporting (e.g., Afghanistan, India)
10. In many instances, the programmes and targets established for the deployment of tele-centres and community information centres have failed to take into account issues related to training and education, maintenance, power sources and other sustainability concerns (e.g., Afghanistan, Indonesia, India, Uganda)
11. Training and education requirements are not confined to recipients of USF projects. The successful execution of many USF projects has been hampered not only by the lack of suitable training for the targeted users but also by the lack of adequately trained staff.
12. Not everything can be blamed on poor design or poor governance: by the very nature of the remote and often difficult areas to be covered by USFs, there are bound to be situations which arise that impede or

³³⁹ Although in the case of RSA, the Minister has publicly acknowledged that there were irregular activities

totally prevent USF projects from moving forward (e.g., avalanches, political unrest, civil unrest, terrorist or insurgent activity, etc.)

2.10 Some Good News

1. Currently, out of all the funds surveyed globally, Colombia appears to be the country that epitomizes best practice in the development and administration of USFs
2. The structure and design of some funds were sufficiently flexible so as to permit the subsequent addition of broadband as a universal service category (e.g., India, Indonesia, Peru, Malaysia)
3. Although many countries have espoused broadband as part of their overall telecommunications strategy or policy, this has not necessarily translated into modifications to the USFs; instead alternate solutions have been created (e.g., Australia, Brazil, Canada, New Zealand) in order to accelerate development
4. Mongolia has demonstrated that positive results can be achieved in joint projects (when properly structured) and close coordination and cooperation between a USF and external aid agencies (e.g., World Bank, NGOs)³⁴⁰
5. Although in theory, they may not be as independent as a stand-alone Fund financed via levies and operator contributions, some of the telecommunications Funds financed directly out of the government's budget seem to be performing well and achieving targets (e.g., Chile, Paraguay) with the added benefit that any unused funds are rolled directly back in to the Treasury. The added advantage is that these funds are subject to published budget processes and are subject to public audits.

2.11 Conclusions

Given the complexity of the tasks and projects that a USF is expected to support in countries that are often beset with social, political and economic challenges, it is unreasonable to expect that any USF will be a model of perfection with boundless flexibility to respond to changing technologies and varying requirements of a financially and geographically challenged population. Nonetheless, it is fair to say that overall, the performance (or lack thereof) of most USFs since their inception cannot be construed as a ringing endorsement for blanket adoption of the current USF approaches and administrative practices. Indeed, success stories are very much in the minority.

There is no doubt that in order for a USF to achieve some degree of success, it is necessary to arrive at a balanced (and no doubt complex) combination of innovation, flexibility, autonomy and solid governance in order for the USF concept to achieve a greater level of global success than it currently enjoys. As a growing body of reports as well as many government policy announcements make clear, one of the fundamental changes required for most USFs is to incorporate the provision of broadband in the UA and US requirements. It is also important to acknowledge that irrespective of the amount of thought given to every potential scenario that a USF scheme may need to address, the possibility of unanticipated developments or unforeseen challenges will always exist. In addition, however, while understanding that many of the underperforming (or non-performing) USFs cannot be improved or changed overnight

³⁴⁰ Although it should be noted that in the case of Mongolia, once external aid agencies ceased participation, fund performance declined

due to the amount of effort and time to modify and/or replace the underlying laws or regulatory frameworks, one must still seriously question why so many administrators and governments do not seem to have made any effort whatsoever to address these issues with any degree of urgency when these issues and deficiencies have been highlighted on numerous occasions. It also seems incomprehensible and calls into question why these same governments seem willing to let USF financial contributions pile up and remain untapped when so many inhabitants in their respective countries could benefit enormously from deployment of these funds to provide much needed ICT and related services. Furthermore, most of the countries examined in this study are signatories to the WTO's Fourth Protocol on Basic Telecommunications and they appear to be disregarding the requirement not to impose an undue burden on operators with levies that are not proportional.

Indeed, if the various jurisdictions continue to demonstrate the inability and lack of will to effect significant and timely changes and improvements to the overall USF framework, serious consideration should be given to a completely new blueprint and approach to address and concretely respond to universal service requirements in order to achieve some **measurable** degree of universal service success.

APPENDICES

2.12 Introduction

The following tables are derived from the ITU ICT Eye Database – 2010, which is compiled based on responses from the ITU members (i.e., self-reporting). We have included these tables in order to illustrate the complexity of obtaining accurate information as it pertains to USFs and related UAS policies. In reviewing the information compiled, we noted the following:

- The ITU survey failed to specifically query as to whether broadband was one of the services included in Universal Service (US)
- The survey also did not address the manner in which US is funded (e.g., USF, government contributions, etc.)
- Not all respondents provided answers to the UAS/US related questions
- Some respondents indicated that they had a universal service policy when they did not
- Some respondents indicated that they did not have a universal policy when they did
- Many respondents provided incorrect information regarding the year in which the US policy went into effect

Based on the foregoing, the information presented in these tables below has not been utilized in the preparation of this report.

The tables as presented below are organized in a manner which is slightly different than the regional groupings utilized in the rest of this report as the ITU database uses the following categories:

- Africa
- Arab States
- Asia Pacific
- CIS
- Europe
- The Americas

2.13 Africa

Country	Category	Value	Year
Angola	UAS definition: other services	• Telecentres as part of universal service definition	2008
		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	

	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2008
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2008
Benin	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2011
	Universal access/service policy	Yes	2011
Botswana	UAS definition: other services	• Telecentres as part of universal service definition	2003
		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	

	Universal access/service policy	No	2010
Burkina Faso	UAS definition: other services	• Telecentres as part of universal service definition	2010
		• Schools (primary, secondary post-secondary)	
		• Health centres	
		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Burundi	UAS definition: other services	• Telecentres as part of universal service definition Explain: Service télégraphique,	1998
	Universal access/service policy	No	2011
Cameroon	UAS definition: other services	• Emergency services as part of universal service definition	2004

		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2004
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Cape Verde	UAS definition: other services	• Emergency services as part of universal service definition	2006
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	No	2010
Central African Rep.	UAS definition: other services		2011
	Universal access/service policy		2011
Chad	UAS definition: other services	• Telecentres as part of universal service definition	2004
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2004

		<ul style="list-style-type: none"> • Individual mobile cellular service as part of universal service definition 	
	Universal access/service policy		2011
Congo	UAS definition: other services		2010
	UAS definition: voice services	<ul style="list-style-type: none"> • Fixed line public payphone service as part of universal service definition 	2010
		<ul style="list-style-type: none"> • Public mobile payphone service as part of universal service definition 	
	Universal access/service policy	Yes	2010
Congo (Dem. Rep.)	UAS definition: other services	<ul style="list-style-type: none"> • Telecentres as part of universal service definition 	2010
	UAS definition: voice services	<ul style="list-style-type: none"> • Fixed line private residential service as part of universal service definition 	2010
		<ul style="list-style-type: none"> • Public mobile payphone service as part of universal service definition 	
	Universal access/service policy	No	2010
Côte d'Ivoire	UAS definition: other services	<ul style="list-style-type: none"> • Emergency services as part of universal service definition 	2011
		<ul style="list-style-type: none"> • Directory services as part of universal service definition 	
	UAS definition: voice services	<ul style="list-style-type: none"> • Fixed line private residential service as part of universal service definition 	2011
		<ul style="list-style-type: none"> • Fixed line public payphone service as part of universal service definition 	
	Universal access/service policy	Yes	2011

Equatorial Guinea	UAS definition: other services		2011
	UAS definition: voice services		2011
	Universal access/service policy	No	2010
Eritrea	UAS definition: other services		2011
	Universal access/service policy		2011
Ethiopia	UAS definition: other services	• Schools (primary, secondary post secondary) ;,	2011
		• Health centres ;,	
		• Emergency services as part of universal service definition	
		• Telecentres as part of universal service definition Explain: Fixed Line Rural Telecom services,	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2011
	Universal access/service policy	No	2010
Gabon	UAS definition: other services	• Emergency services as part of universal service definition	2005
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2005
		• Individual mobile cellular service as part of universal service definition	

		<ul style="list-style-type: none"> • Public mobile payphone service as part of universal service definition 	
	Universal access/service policy		2011
Gambia	UAS definition: other services	<ul style="list-style-type: none"> • Telecentres as part of universal service definition 	2004
		<ul style="list-style-type: none"> • Emergency services as part of universal service definition 	
		<ul style="list-style-type: none"> • Services for impaired/ elderly 	
		<ul style="list-style-type: none"> • Directory services as part of universal service definition 	
		<ul style="list-style-type: none"> • Telecentres as part of universal service definition Explain: Radio & TV, 	
	UAS definition: voice services	<ul style="list-style-type: none"> • Fixed line private residential service as part of universal service definition 	2004
		<ul style="list-style-type: none"> • Fixed line public payphone service as part of universal service definition 	
		<ul style="list-style-type: none"> • Individual mobile cellular service as part of universal service definition 	
		<ul style="list-style-type: none"> • Public mobile payphone service as part of universal service definition 	
	Universal access/service policy	No	2010
Ghana	UAS definition: other services	<ul style="list-style-type: none"> • Telecentres as part of universal service definition 	2011
		<ul style="list-style-type: none"> • Schools (primary, secondary post-secondary) 	
		<ul style="list-style-type: none"> • Health centres 	

		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Individual mobile cellular service as part of universal service definition	2011
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Guinea	UAS definition: other services	• Telecentres as part of universal service definition	2010
		• Schools (primary, secondary post - secondary)	
		• Emergency services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Guinea-Bissau	UAS definition: other services	• Telecentres as part of universal service definition Explain: Autres qui peuvent être déclarés par le gouvernement,	2004

	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2004
	Universal access/service policy		2011
Kenya	UAS definition: other services	• Telecentres as part of universal service definition	2010
		• Schools (primary, secondary post secondary) ;,	
		• Emergency services as part of universal service definition	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2010
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Lesotho	UAS definition: other services	• Telecentres as part of universal service definition	2010
		• Telecentres as part of universal service definition Explain: Telebureau,	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2010
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010

Liberia	UAS definition: other services	• Emergency services as part of universal service definition	2007
	UAS definition: voice services	• Individual mobile cellular service as part of universal service definition	2007
	Universal access/service policy	No	2007
Madagascar	UAS definition: other services	• Directory services as part of universal service definition	2009
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2009
	Universal access/service policy	Yes	2009
Malawi	UAS definition: other services	• Telecentres as part of universal service definition	2007
		• Emergency services as part of universal service definition	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	No	2010
Mali	UAS definition: other services	• Telecentres as part of universal service definition	2010

		• Schools (primary, secondary post-secondary)	
		• Health centres	
		• Emergency services as part of universal service definition	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Mauritius	UAS definition: other services	• Telecentres as part of universal service definition Explain: Although the ICT Act 2001 defines 'universal service', it has not yet been determined which ICT service would be classified under US at this time,	2011
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Mozambique	UAS definition: other services		2011
	Universal access/service policy		2011

Namibia	UAS definition: other services	• Telecentres as part of universal service definition	2008
		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2008
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	No	2011
Niger	UAS definition: other services	• Telecentres as part of universal service definition	2003
		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2003
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy		2011
Nigeria	UAS definition: other services	• Telecentres as part of universal service definition	2010

		• Schools (primary, secondary post-secondary)	
		• Health centres	
		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
		• Telecentres as part of universal service definition Explain: Community Centres, Government offices	
	UAS definition: voice services	• Individual mobile cellular service as part of universal service definition	2010
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Rwanda	UAS definition: other services	• Telecentres as part of universal service definition	2010
		• Schools (primary, secondary post-secondary)	
		• Health centres	
		• Emergency services as part of universal service definition	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2010
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010

S. Tomé & Príncipe	UAS definition: other services	• Telecentres as part of universal service definition	2008
		• Emergency services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2008
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2008
Senegal	UAS definition: other services	• Telecentres as part of universal service definition	2010
		• Emergency services as part of universal service definition	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy	Yes	2010
Seychelles	UAS definition: other services	• Emergency services as part of universal service definition	2011

		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Sierra Leone	UAS definition: other services	• Telecentres as part of universal service definition	2009
		• Emergency services as part of universal service definition	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2009
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	No	2009
South Africa	UAS definition: other services		2011
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	1999
	Universal access/service policy		2011

Swaziland	UAS definition: other services		2011
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	1998
	Universal access/service policy	No	2011
Tanzania	UAS definition: other services	• Emergency services as part of universal service definition	2001
		• Services for impaired/ elderly	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2004
	Universal access/service policy		2011
Togo	UAS definition: other services	• Telecentres as part of universal service definition	2010
		• Emergency services as part of universal service definition	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010

Uganda	UAS definition: other services	• Telecentres as part of universal service definition	2009
		• Emergency services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2009
		• Fixed line public payphone service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2009
Zambia	UAS definition: other services	• Emergency services as part of universal service definition	2002
	Universal access/service policy	No	2011
Zimbabwe	UAS definition: other services	• Telecentres as part of universal service definition	2011
		• Emergency services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy	Yes	2011

2.14 Arab States

Country	Category	Value	Year
Algeria	UAS definition: other services	• Emergency services as part of universal service definition	2005
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2005
	Universal access/service policy		2011
Bahrain	UAS definition: other services	• Telecentres as part of universal service definition Explain: The Telecommunications Law defines Universal Service as “the basic public telephone services described in Article 64(c) of this Law of specified quality and at suitable prices (as determined by the Authority) which are available to all Users independent of their geographical location.”,	2010
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	No	2010
Comoros	UAS definition: other services	• Emergency services as part of universal service definition	2002
		• Telecentres as part of universal service definition Explain: Implantation des cabines téléphoniques publiques dans les zones rurales.,	

	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
	Universal access/service policy	No	2010
Djibouti	UAS definition: other services		2011
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	1999
	Universal access/service policy		2011
Egypt	UAS definition: other services	• Telecentres as part of universal service definition	2010
		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2010
	Universal access/service policy	Yes	2010
Iraq	UAS definition: other services		2011
	UAS definition: voice services		2011
	Universal access/service policy	No	2010
Jordan	UAS definition: other services	• Telecentres as part of universal service definition	2009

		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2009
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2009
Kuwait	UAS definition: other services	• Telecentres as part of universal service definition	2007
		• Emergency services as part of universal service definition	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2007
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy		2011
Lebanon	UAS definition: other services		2011

	UAS definition: voice services		2011
	Universal access/service policy	No	2010
Mauritania	UAS definition: other services	• Telecentres as part of universal service definition	2006
		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Morocco	UAS definition: other services	• Telecentres as part of universal service definition	2011
		• Emergency services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	

	Universal access/service policy	Yes	2011
Oman	UAS definition: other services	• Telecentres as part of universal service definition	2011
		• Schools (primary, secondary post secondary) : government schools,	
		• Health centres ;,	
		• Emergency services as part of universal service definition	
		• Directory services as part of universal service definition	
		• Telecentres as part of universal service definition Explain: all government transactions,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Qatar	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
	Universal access/service policy	No	2011
Saudi Arabia	UAS definition: other services	• Telecentres as part of universal service definition	2010

		• Schools (primary, secondary post secondary) ;,	
		• Health centres ;,	
		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
		• Telecentres as part of universal service definition Explain: The USF applies the technology and service neutrality concept,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Sudan	UAS definition: other services	• Telecentres as part of universal service definition	2011
		• Schools (primary, secondary post-secondary)	
		• Health centres	
		• Emergency services as part of universal service definition	

	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy	Yes	2011
Syria	UAS definition: other services	• Telecentres as part of universal service definition	2005
		• Emergency services as part of universal service definition	
	Universal access/service policy		2011
Tunisia	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
	Universal access/service policy	Yes	2011
United Arab Emirates	UAS definition: other services		2011
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	1999
	Universal access/service policy	No	2007
Yemen	UAS definition: other services	• Telecentres as part of universal service definition Explain: It is the responsibility of Ministry of Communications to provide Basic Telephony to the remote and rural areas,	2002
	UAS definition: voice services		2011

	Universal access/service policy		2011
--	--	--	------

2.15 Asia Pacific

Country	Category	Value	Year
Afghanistan	UAS definition: other services	• Telecentres as part of universal service definition	2004
		• Emergency services as part of universal service definition	
		• Directory services as part of universal service definition	
		• Telecentres as part of universal service definition Explain: Beside the above mentioned services we have defined the GMPCS services to provide voice and data services in the remote areas of Afghanistan.,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2004
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy		2011
Australia	UAS definition: other services	• Emergency services as part of universal service definition	2010
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
		• Telecentres as part of universal service definition Explain: Itemised billing, operator-assisted services, unique telephone number with directory listing (unless requested otherwise), fixed line small business service (5 or fewer lines), Digital Data Service Obligation (DDSO),	

	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Bangladesh	UAS definition: other services	• Telecentres as part of universal service definition	2004
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2005
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy		2011
Bhutan	UAS definition: other services	• Telecentres as part of universal service definition	2007
		• Emergency services as part of universal service definition	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2007
	Universal access/service policy	Yes	2007
Brunei Darussalam	UAS definition: other services	• Telecentres as part of universal service definition	2004
		• Emergency services as part of universal service definition	
		• Directory services as part of universal service definition	

	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2004
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy		2011
Cambodia	UAS definition: other services		2011
	Universal access/service policy	No	2011
China	UAS definition: other services	• Telecentres as part of universal service definition	2011
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Fiji	UAS definition: other services		2011
	Universal access/service policy	No	2011

India	UAS definition: other services	• Telecentres as part of universal service definition	2011
		• Emergency services as part of universal service definition	
		• Telecentres as part of universal service definition Explain: i. Creation of Infrastructure for provision of Mobile Services in rural and remote areas ii. Provision of Broadband connectivity to villages in a phased manner iii. Creation of general infrastructure in rural and remote areas for development of telecommunication facilities iv. Introduction of new technological developments in the telecom sector in rural and remote areas.,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Indonesia	UAS definition: other services	• Telecentres as part of universal service definition	2001
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2004
	Universal access/service policy		2011
Iran (I.R.)	UAS definition: other services	• Telecentres as part of universal service definition	2010
		• Emergency services as part of universal service definition	

	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Japan	UAS definition: other services	• Emergency services as part of universal service definition	2011
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Kiribati	UAS definition: other services		2011
	UAS definition: voice services		2011
	Universal access/service policy	Yes	2007
Korea (Rep.)	UAS definition: other services	• Emergency services as part of universal service definition	2010
		• Telecentres as part of universal service definition Explain: maritime communications,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010

Lao P.D.R.	UAS definition: other services	• Telecentres as part of universal service definition	2005
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2005
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy		2011
Malaysia	UAS definition: other services	• Telecentres as part of universal service definition	2011
		• Services for impaired/ elderly	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy	Yes	2011
Maldives	UAS definition: other services	• Telecentres as part of universal service definition Explain: Technology Neutral. Basic telecom package including 90 mins of national call, 250MB of Internet access at minimum 56Kbps to all by end 2008,	2007
	UAS definition: voice services	• Individual mobile cellular service as part of universal service definition	2010
	Universal access/service policy	No	2010
Micronesia	UAS definition: other services		2011
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	1998

	Universal access/service policy	No	2010
Mongolia	UAS definition: other services	• Telecentres as part of universal service definition Explain: Rural and remote areas,	2011
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy	Yes	2011
Myanmar	UAS definition: other services	• Telecentres as part of universal service definition	2011
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
	Universal access/service policy	No	2011
Nepal	UAS definition: other services	• Telecentres as part of universal service definition	2009
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2009
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2009
New Zealand	UAS definition: other services	• Emergency services as part of universal service definition	2009
		• Services for impaired/ elderly	

		<ul style="list-style-type: none"> • Directory services as part of universal service definition 	
	UAS definition: voice services	<ul style="list-style-type: none"> • Fixed line private residential service as part of universal service definition 	2009
	Universal access/service policy	Yes	2009
Pakistan	UAS definition: other services	<ul style="list-style-type: none"> • Telecentres as part of universal service definition 	2011
		<ul style="list-style-type: none"> • Schools (primary, secondary post-secondary) 	
		<ul style="list-style-type: none"> • Health centres 	
		<ul style="list-style-type: none"> • Emergency services as part of universal service definition 	
		<ul style="list-style-type: none"> • Services for impaired/ elderly 	
		<ul style="list-style-type: none"> • Directory services as part of universal service definition 	
	UAS definition: voice services	<ul style="list-style-type: none"> • Fixed line private residential service as part of universal service definition 	2011
		<ul style="list-style-type: none"> • Fixed line public payphone service as part of universal service definition 	
		<ul style="list-style-type: none"> • Individual mobile cellular service as part of universal service definition 	
		<ul style="list-style-type: none"> • Public mobile payphone service as part of universal service definition 	
	Universal access/service policy	Yes	2011
Papua New Guinea	UAS definition: other services	<ul style="list-style-type: none"> • Emergency services as part of universal service definition 	2001

	Universal access/service policy		2011
Philippines	UAS definition: other services	• Emergency services as part of universal service definition	2001
	Universal access/service policy		2011
Samoa	UAS definition: other services	• Telecentres as part of universal service definition	2011
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy	Yes	2011
Singapore	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Directory services as part of universal service definition	
		• Telecentres as part of universal service definition Explain: As part of IDA's Next Generation Nationwide Broadband Network (Next Gen NBN) initiative, IDA has required the appointed Next Gen NBN operators to roll-out an ultra high-speed, all-fibre network to all homes and offices in Singapore by 1 Jan 2013.,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Sri Lanka	UAS definition: other services	• Telecentres as part of universal service definition	2009

		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2009
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy	Yes	2009
Thailand	UAS definition: other services	• Telecentres as part of universal service definition	2011
		• Schools (primary, secondary post secondary) :,	
		• Services for impaired/ elderly	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2011
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Tonga	UAS definition: other services	• Telecentres as part of universal service definition	2000
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2000

	Universal access/service policy	No	2008
Vanuatu	UAS definition: other services	• Telecentres as part of universal service definition	2011
		• Schools (primary, secondary post-secondary) :,	
		• Health centres	
		• Emergency services as part of universal service definition	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Individual mobile cellular service as part of universal service definition	2011
	Universal access/service policy	Yes	2011
Viet Nam	UAS definition: other services	• Telecentres as part of universal service definition	2011
		• Emergency services as part of universal service definition	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011

2.16 CIS and Europe

CIS

Country	Category	Value	Year
Azerbaijan	UAS definition: other services	• Telecentres as part of universal service definition	2010
		• Schools (primary, secondary post-secondary) ,	
		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy		2011
Belarus	UAS definition: other services	• Telecentres as part of universal service definition	2007
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2007
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2007
Georgia	UAS definition: other services	• Emergency services as part of universal service definition	2005
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2005

		<ul style="list-style-type: none"> • Fixed line public payphone service as part of universal service definition 	
		<ul style="list-style-type: none"> • Public mobile payphone service as part of universal service definition 	
	Universal access/service policy	No	2011
Kazakhstan	UAS definition: other services	<ul style="list-style-type: none"> • Telecentres as part of universal service definition 	2010
		<ul style="list-style-type: none"> • Schools (primary, secondary post-secondary) 	
		<ul style="list-style-type: none"> • Health centres 	
		<ul style="list-style-type: none"> • Emergency services as part of universal service definition 	
		<ul style="list-style-type: none"> • Services for impaired/ elderly 	
		<ul style="list-style-type: none"> • Directory services as part of universal service definition 	
	UAS definition: voice services	<ul style="list-style-type: none"> • Fixed line private residential service as part of universal service definition 	2010
		<ul style="list-style-type: none"> • Fixed line public payphone service as part of universal service definition 	
		<ul style="list-style-type: none"> • Individual mobile cellular service as part of universal service definition 	
		<ul style="list-style-type: none"> • Public mobile payphone service as part of universal service definition 	
	Universal access/service policy	No	2010
Kyrgyzstan	UAS definition: other services	<ul style="list-style-type: none"> • Emergency services as part of universal service definition 	2002

		• Services for impaired/ elderly	
	Universal access/service policy	No	2007
Moldova	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	No	2011
Ukraine	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011

Europe

Country	Category	Value	Year
Albania	UAS definition: other services	• Emergency services as part of universal service definition	2006

		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2006
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy		2011
Andorra	UAS definition: other services	• Schools (primary, secondary post-secondary)	2011
		• Health centres	
		• Emergency services as part of universal service definition	
		• Directory services as part of universal service definition	
		• Telecentres as part of universal service definition Explain: Todos los servicios de telecomunicaciones,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	

	Universal access/service policy	Yes	2011
Austria	UAS definition: other services	• Directory services as part of universal service definition	2010
		• Telecentres as part of universal service definition Explain: fixed line service is not restricted to residential customers - US definition also includes business customers,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Belgium	UAS definition: other services	• Emergency services as part of universal service definition	2010
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Bosnia and Herzegovina	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	

	Universal access/service policy	Yes	2011
Bulgaria	UAS definition: other services	• Emergency services as part of universal service definition	2010
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Croatia	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Cyprus	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Services for impaired/ elderly	

		• Directory services as part of universal service definition	
		• Telecentres as part of universal service definition Explain: Special retail packages for disabled and low income groups,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Czech Republic	UAS definition: other services	• Services for impaired/ elderly	2011
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy	Yes	2011
Denmark	UAS definition: other services	• Emergency services as part of universal service definition	2010
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
		• Telecentres as part of universal service definition Explain: Radio based maritime distress and safety communications services,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010

	Universal access/service policy	Yes	2010
Estonia	UAS definition: other services	• Emergency services as part of universal service definition	2008
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2008
	Universal access/service policy	Yes	2008
Finland	UAS definition: other services	• Directory services as part of universal service definition	2010
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy	Yes	2010
France	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Services for impaired/ elderly	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Germany	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Directory services as part of universal service definition	

		<ul style="list-style-type: none"> • Telecentres as part of universal service definition Explain: Printed public directory of subscribers (availability of at least one printed public directory of subscribers approved by the Federal Network Agency, which satisfies general requirements and is updated on a regular basis, once a year at least). 	
	UAS definition: voice services	<ul style="list-style-type: none"> • Fixed line private residential service as part of universal service definition 	2011
		<ul style="list-style-type: none"> • Fixed line public payphone service as part of universal service definition 	
	Universal access/service policy	Yes	2011
Greece	UAS definition: other services	<ul style="list-style-type: none"> • Emergency services as part of universal service definition 	2011
		<ul style="list-style-type: none"> • Services for impaired/ elderly 	
		<ul style="list-style-type: none"> • Directory services as part of universal service definition 	
	UAS definition: voice services	<ul style="list-style-type: none"> • Fixed line private residential service as part of universal service definition 	2011
		<ul style="list-style-type: none"> • Fixed line public payphone service as part of universal service definition 	
	Universal access/service policy	Yes	2011
Hungary	UAS definition: other services	<ul style="list-style-type: none"> • Telecentres as part of universal service definition 	2010
		<ul style="list-style-type: none"> • Emergency services as part of universal service definition 	
		<ul style="list-style-type: none"> • Directory services as part of universal service definition 	
		<ul style="list-style-type: none"> • Telecentres as part of universal service definition Explain: Directory enquiry service, 	

	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Iceland	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Ireland	UAS definition: other services	• Services for impaired/ elderly	2010
		• Directory services as part of universal service definition	
		• Telecentres as part of universal service definition Explain: Affordability,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010

Israel	UAS definition: other services	• Emergency services as part of universal service definition	2003
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2003
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy		2011
Italy	UAS definition: other services	• Emergency services as part of universal service definition	2010
		• Telecentres as part of universal service definition Explain: special measures for disable and low income users: fifty per cent reduction of monthly access fee for low-income or disable customers, totally free access for deaf-mute users who need special communications devices.,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Latvia	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	

	Universal access/service policy	Yes	2011
Liechtenstein	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Lithuania	UAS definition: other services	• Emergency services as part of universal service definition	2010
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Luxembourg	UAS definition: other services	• Emergency services as part of universal service definition	2010
		• Directory services as part of universal service definition	

		• Telecentres as part of universal service definition Explain: Fourniture de renseignements téléphoniques,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
	Universal access/service policy		2011
Malta	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Monaco	UAS definition: other services	• Emergency services as part of universal service definition	2002
		• Telecentres as part of universal service definition Explain: radiotéléphonie, VSAT, annuaire,	
	Universal access/service policy	No	2010
Montenegro	UAS definition: other services	• Emergency services as part of universal service definition	2007
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2007

		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	No	2007
Netherlands	UAS definition: other services	• Emergency services as part of universal service definition	2007
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2007
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	No	2007
Norway	UAS definition: other services	• Services for impaired/ elderly	2009
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2009
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2009
Poland	UAS definition: other services	• Emergency services as part of universal service definition	2010
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	

	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Portugal	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Romania	UAS definition: other services	• Telecentres as part of universal service definition	2009
		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2009
		• Fixed line public payphone service as part of universal service definition	

	Universal access/service policy	Yes	2009
Serbia	UAS definition: other services	• Emergency services as part of universal service definition	2010
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Slovak Republic	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
		• Telecentres as part of universal service definition Explain: public pay phones,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Slovenia	UAS definition: other services	• Emergency services as part of universal service definition	2010

		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Spain	UAS definition: other services	• Emergency services as part of universal service definition	2010
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
		• Telecentres as part of universal service definition Explain: El alcance del servicio universal está actualmente en proceso de revisión en España. Especialmente se está valorando la posibilidad de incluir acceso a Internet de banda ancha dentro de las obligaciones de servicio universal.,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Sweden	UAS definition: other services	• Emergency services as part of universal service definition	2003
		• Telecentres as part of universal service definition Explain: Public payphones, directory services and directory enquiry services.,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2005

	Universal access/service policy		2011
Switzerland	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Services for impaired/ elderly	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
TFYR Macedonia	UAS definition: other services	• Emergency services as part of universal service definition	2005
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2005
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy		2011
Turkey	UAS definition: other services	• Telecentres as part of universal service definition	2007
		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	

		<ul style="list-style-type: none"> • Directory services as part of universal service definition 	
	UAS definition: voice services	<ul style="list-style-type: none"> • Fixed line private residential service as part of universal service definition 	2007
		<ul style="list-style-type: none"> • Fixed line public payphone service as part of universal service definition 	
	Universal access/service policy		2011
United Kingdom	UAS definition: other services	<ul style="list-style-type: none"> • Emergency services as part of universal service definition 	2010
		<ul style="list-style-type: none"> • Services for impaired/ elderly 	
		<ul style="list-style-type: none"> • Directory services as part of universal service definition 	
		<ul style="list-style-type: none"> • Telecentres as part of universal service definition Explain: Public payphone and a requirement to provide functional internet access, 	
	UAS definition: voice services	<ul style="list-style-type: none"> • Fixed line private residential service as part of universal service definition 	2010
		<ul style="list-style-type: none"> • Fixed line public payphone service as part of universal service definition 	
	Universal access/service policy	Yes	2010

2.17 The Americas

Country	Category	Value	Year
Antigua & Barbuda	UAS definition: other services		2011
	Universal access/service policy	No	2011

Argentina	UAS definition: other services	• Emergency services as part of universal service definition	2010
		• Services for impaired/ elderly	
		• Telecentres as part of universal service definition Explain: Telefonía Pública de Larga Distancia en áreas sin servicio, Telefonía Local, Telefonía Pública Social, Clientes de bajos ingresos.,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Bahamas	UAS definition: other services	• Schools (primary, secondary post-secondary)	2011
		• Health centres	
		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011

Barbados	UAS definition: other services	• Emergency services as part of universal service definition	2010
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Belize	UAS definition: other services	• Telecentres as part of universal service definition	2008
		• Emergency services as part of universal service definition	
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2008
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy	No	2010
Bolivia	UAS definition: other services	• Emergency services as part of universal service definition	2001
	Universal access/service policy		2011
Brazil	UAS definition: other services	• Telecentres as part of universal service definition	2010

		• Emergency services as part of universal service definition	
		• Telecentres as part of universal service definition Explain: Explain: Decree number 6.424/2008 recently changed the Universal Service plan, to include among the universal service targets the construction of the internet backhaul (i.e. the infrastructure that allows broadband connection, connecting incumbent operators' backbones). According to the new target, until 31 December 2010 the backhaul must reach all Brazilian municipalities. Furthermore, the public service concessionaires have recently entered an agreement committing themselves to connect with internet access 55 thousand urban public schools,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2010
Canada	UAS definition: other services	• Emergency services as part of universal service definition	2011
		• Services for impaired/ elderly	
		• Directory services as part of universal service definition	
		• Telecentres as part of universal service definition Explain: http://www.crtc.gc.ca/eng/archive/2011/2011-291.htm ,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
	Universal access/service policy	Yes	2011
Chile	UAS definition: other services	• Telecentres as part of universal service definition Explain: La definición de servicio universal en Chile no se trata como una obligación para todas las empresas, sino que la adquieren las empresas que participan en los concursos públicos que se realizan a través del Fondo de	2005

		Desarrollo de las Telecomunicaciones. Este fondo puede financiar la provisión de cualquier tipo de servicio de telecomunicaciones en zonas aisladas y pobres.,	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	1998
	Universal access/service policy	Yes	2010
Colombia	UAS definition: other services	• Telecentres as part of universal service definition	2010
		• Schools (primary, secondary post-secondary)	
		• Health centres	
		• Emergency services as part of universal service definition	
	UAS definition: voice services	• Individual mobile cellular service as part of universal service definition	2010
	Universal access/service policy	Yes	2010
Costa Rica	UAS definition: other services	• Telecentres as part of universal service definition	2011
		• Schools (primary, secondary post - secondary) : PRIMARIA Y SECUNDARIA,	
		• Health centres	
		• Services for impaired/ elderly	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	

		<ul style="list-style-type: none"> • Individual mobile cellular service as part of universal service definition 	
		<ul style="list-style-type: none"> • Public mobile payphone service as part of universal service definition 	
	Universal access/service policy	Yes	2011
Cuba	UAS definition: other services	<ul style="list-style-type: none"> • Telecentres as part of universal service definition 	2011
		<ul style="list-style-type: none"> • Emergency services as part of universal service definition 	
		<ul style="list-style-type: none"> • Services for impaired/ elderly 	
		<ul style="list-style-type: none"> • Directory services as part of universal service definition 	
	UAS definition: voice services	<ul style="list-style-type: none"> • Fixed line private residential service as part of universal service definition 	2011
		<ul style="list-style-type: none"> • Fixed line public payphone service as part of universal service definition 	
		<ul style="list-style-type: none"> • Individual mobile cellular service as part of universal service definition 	
		<ul style="list-style-type: none"> • Public mobile payphone service as part of universal service definition 	
	Universal access/service policy	Yes	2011
Dominica	UAS definition: other services	<ul style="list-style-type: none"> • Telecentres as part of universal service definition 	2011
		<ul style="list-style-type: none"> • Schools (primary, secondary post-secondary), 	
		<ul style="list-style-type: none"> • Health centres 	

		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy	Yes	2011
Dominican Rep.	UAS definition: other services	• Telecentres as part of universal service definition	2011
		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
Ecuador	UAS definition: other services	• Telecentres as part of universal service definition	2009
		• Emergency services as part of universal service definition	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2009

		<ul style="list-style-type: none"> • Public mobile payphone service as part of universal service definition 	
	Universal access/service policy	Yes	2009
El Salvador	UAS definition: other services	<ul style="list-style-type: none"> • Emergency services as part of universal service definition 	2002
	Universal access/service policy	No	2007
Grenada	UAS definition: other services	<ul style="list-style-type: none"> • Telecentres as part of universal service definition 	2011
		<ul style="list-style-type: none"> • Schools (primary, secondary post-secondary) 	
		<ul style="list-style-type: none"> • Health centres 	
		<ul style="list-style-type: none"> • Emergency services as part of universal service definition 	
		<ul style="list-style-type: none"> • Services for impaired/ elderly 	
	UAS definition: voice services	<ul style="list-style-type: none"> • Fixed line private residential service as part of universal service definition 	2011
		<ul style="list-style-type: none"> • Fixed line public payphone service as part of universal service definition 	
		<ul style="list-style-type: none"> • Individual mobile cellular service as part of universal service definition 	
		<ul style="list-style-type: none"> • Public mobile payphone service as part of universal service definition 	
	Universal access/service policy	Yes	2011
Guatemala	UAS definition: other services		2011

	Universal access/service policy		2011
Guyana	UAS definition: other services	• Services for impaired/ elderly	2007
		• Directory services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2007
	Universal access/service policy	Yes	2007
Haiti	UAS definition: other services	• Telecentres as part of universal service definition	2011
		• Schools (primary, secondary post secondary) ;,	
		• Emergency services as part of universal service definition	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy	Yes	2011
Honduras	UAS definition: other services	• Telecentres as part of universal service definition	2010
		• Schools (primary, secondary post-secondary)	
		• Health centres	
		• Emergency services as part of universal service definition	

		• Telecentres as part of universal service definition Explain:.,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2010
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	No	2010
Jamaica	UAS definition: other services	• Schools (primary, secondary post secondary) : e-Learning Project,	2010
		• Telecentres as part of universal service definition Explain: Public access to be provided through public libraries, post offices and other agencies and institutions.,	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2008
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
	Universal access/service policy	Yes	2010
Mexico	UAS definition: other services	• Telecentres as part of universal service definition	2005
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2005
		• Fixed line public payphone service as part of universal service definition	

		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2008
Nicaragua	UAS definition: other services	• Telecentres as part of universal service definition	2009
		• Emergency services as part of universal service definition	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2009
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2009
Panama	UAS definition: other services	• Telecentres as part of universal service definition Explain: La Ley de Servicio Universal está Pendiente en la Asamblea legislativa,	2004
	Universal access/service policy	Yes	2008
Paraguay	UAS definition: other services	• Emergency services as part of universal service definition	2011
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2011
		• Fixed line public payphone service as part of universal service definition	
		• Individual mobile cellular service as part of universal service definition	
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011

Peru	UAS definition: other services	• Telecentres as part of universal service definition	2005
		• Telecentres as part of universal service definition Explain: Capacitación en uso de TICS,	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2011
		• Public mobile payphone service as part of universal service definition	
	Universal access/service policy	Yes	2011
St. Lucia	UAS definition: other services	• Schools (primary, secondary post-secondary)	2011
		• Health centres	
		• Emergency services as part of universal service definition	
		• Services for impaired/ elderly	
	Universal access/service policy	Yes	2011
St. Vincent and the Grenadines	UAS definition: other services	• Emergency services as part of universal service definition	2010
		• Services for impaired/ elderly	
	UAS definition: voice services	• Fixed line public payphone service as part of universal service definition	2010
	Universal access/service policy	Yes	2010
Suriname	UAS definition: other services	• Telecentres as part of universal service definition	2011

		<ul style="list-style-type: none"> • Emergency services as part of universal service definition 	
		<ul style="list-style-type: none"> • Directory services as part of universal service definition 	
	UAS definition: voice services	<ul style="list-style-type: none"> • Fixed line public payphone service as part of universal service definition 	2011
	Universal access/service policy	No	2011
Trinidad & Tobago	UAS definition: other services	<ul style="list-style-type: none"> • Schools (primary, secondary post secondary) ;, 	2011
		<ul style="list-style-type: none"> • Emergency services as part of universal service definition 	
		<ul style="list-style-type: none"> • Services for impaired/ elderly 	
		<ul style="list-style-type: none"> • Directory services as part of universal service definition 	
	UAS definition: voice services	<ul style="list-style-type: none"> • Fixed line private residential service as part of universal service definition 	2011
		<ul style="list-style-type: none"> • Fixed line public payphone service as part of universal service definition 	
		<ul style="list-style-type: none"> • Individual mobile cellular service as part of universal service definition 	
		<ul style="list-style-type: none"> • Public mobile payphone service as part of universal service definition 	
	Universal access/service policy	Yes	2011
United States	UAS definition: other services	<ul style="list-style-type: none"> • Telecentres as part of universal service definition Explain: Section 254 of the Communications Act of 1934, as amended by the Telecommunications Act of 1996 (the Act), states that universal service is an evolving level of telecommunications services that the Commission shall establish periodically, taking into account advances in telecommunications and information technologies and services. Programme 	2011

		principles, obligations and rules can be found in Sections 214 and 254 of the Act, and Parts 36 and 54 of the Commission's rules. See 47 U.S.C. §§ 214, 254, 47 C.F.R. §§ 36.601, et seq. and 54.1, et seq.	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2004
	Universal access/service policy	Yes	2011
Uruguay	UAS definition: other services		2011
	UAS definition: voice services		2011
	Universal access/service policy	No	2010
Venezuela	UAS definition: other services	• Telecentres as part of universal service definition	2008
		• Services for impaired/ elderly	
	UAS definition: voice services	• Fixed line private residential service as part of universal service definition	2008
	Universal access/service policy	Yes	2008



For more information, please contact:

Mani Manimohan

Public Policy Director, GSMA

mmanimohan@gsma.com

GSMA Head Office

Seventh Floor, 5 New Street Square, New Fetter Lane,

London, EC4A 3BF, United Kingdom

Tel: +44 (0)207 356 0600

www.gsma.com/publicpolicy/tax