

# **NRA** Benchmarking National Telecom Regulatory Authority Websites **WEBSITES**

Algeria Autorité de Régulation  
Angola Angolan Institute  
Antigua and Barbuda  
Argentina Argentina Com  
Australia Australian Commu  
Azerbaijan Ministry of Commun  
Bahamas Bahamas Public Ut  
Bangladesh Bangladesh Teleco  
Bahrain Bahrain Telecommuni  
Barbados Barbados Telecomm  
Bhutan Bhutan Infocomm and Me  
Botswana Botswana Telecommu  
Brunei Darussalam Brunei Daru  
Burkina Faso Burkina Faso Min  
Cambodia Cambodia Ministry  
Canada Canadian Radio-televisi  
Cayman Islands Cayman Islan  
Chile Chile Subsecretaría de  
Colombia Colombia Comisión  
Costa Rica Costa Rica Autorid  
Cuba Cuba Dirección de Regul  
Dominica National Telecommu  
Dominican Republic Dominican  
El Salvador Superintendencia  
Ecuador Ecuador National  
Egypt Egypt National General  
Ethiopia Ethiopia Agency of  
Gabon Gabon Agence de régula  
Georgia Georgian National  
Grenada Grenada National  
Guatemala Guatemala Super  
Guatemala Guatemala Super  
Ghana Ghana National Comm  
Hong Kong Hong Kong Office  
India India Ministry of Tele  
Indonesia Indonesia Kominfo  
Iran Iran Ministry of Commun  
Iraq Iraq Ministry of Commun  
Israel Israel Ministry of Commun  
Italy Italy Ministry of Commun  
Japan Japan Ministry of Commun  
Jordan Jordan Telecommunica  
Kenya Kenya Communications  
Madagascar Madagascar  
Maldives Maldives Telecommu  
Malta Malta Telecommunications  
Mauritius Mauritius Telecommu  
Mexico Mexico Federal Teleco  
Moldova Moldova National  
Mongolia Mongolia General  
Morocco Morocco National  
Mozambique Mozambique Teleco  
Myanmar Myanmar Ministry  
Nepal Nepal Telecommunications  
Nicaragua Nicaragua Telecomm  
Nigeria Nigeria National  
Oman Oman Telecommunications  
Pakistan Pakistan Telecommuni  
Panama Panama National  
Paraguay Paraguay National  
Peru Peru National Telecommu  
Philippines Philippines Teleco  
Poland Poland National  
Portugal Portugal National  
Romania Romania National  
Russia Russia Federal  
Rwanda Rwanda Telecommuni  
Saudi Arabia Saudi Arabia  
Senegal Senegal National  
Sierra Leone Sierra Leone  
Singapore Singapore Telecomm  
Slovakia Slovakia National  
Slovenia Slovenia National  
South Africa South Africa  
South Korea South Korea  
Spain Spain National  
Sri Lanka Sri Lanka Telecomm  
Sudan Sudan National  
Sweden Sweden National  
Switzerland Switzerland  
Tanzania Tanzania Telecommu  
Thailand Thailand National  
Togo Togo National  
Tonga Tonga Telecommunications  
Trinidad and Tobago Trinidad  
Tunisia Tunisia National  
Turkey Turkey National  
Uganda Uganda Telecommuni  
Ukraine Ukraine National  
United Kingdom United King  
United States United States  
Uruguay Uruguay National  
Uzbekistan Uzbekistan  
Vanuatu Vanuatu Telecommu  
Venezuela Venezuela National  
Vietnam Vietnam National  
Yemen Yemen National  
Zambia Zambia National  
Zimbabwe Zimbabwe National



# NRA WEBSITES

Benchmarking National Telecom Regulatory  
Authority Websites

Edited by A.K. Mahan



The World Dialogue on Regulation for Network Economies (WDR) facilitates an international dialogue to generate and disseminate new knowledge on frontier issues in regulation and governance to support the development of network economies. WDR is a project of LIRNE.NET.



Learning Initiatives on Reforms for Network Economies (LIRNE.NET) is an international network for research, training, policy and regulatory advice on telecom and information infrastructure reform and development.

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Fundación Comunica managed global coordination of LIRNE.NET from 2003-2009.



IDRC supports research activities at the LIRNE.NET regional centres and globally at Fundación Comunica.

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Design and layout by Forma Estudio, Montevideo.  
[www.formaestudio.com](http://www.formaestudio.com)

Cover design: Enrique Zabala.



*In memoriam*

*Amy Mahan  
(1961-2009)*

*With sadness we note the untimely death of Amy Mahan on 5 March 2009. Amy was the inspiration behind the idea of benchmarking national regulatory authority (NRA) websites and led the initiatives in implementing it. She planned, organized, contributed to and edited this publication, working with a quiet determination until the end. All that remained was to write the introduction and send it to the publisher. Amy is missed and remembered warmly.*



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## Introduction

William H. Melody

### Communication: Neglected Priority of Communication Regulators

The telecom reform process is primarily about the implementation of some fundamental policy and institutional changes by national governments with respect to the future direction of the telecom sector. The essential change is from a government dictated monopoly provider of telecom infrastructure and services to a liberalized environment that allows, if not actually encourages, widespread participation in sector development and in convergence with related sectors such as computing, electronics and digital content. To facilitate this transition and guide its development, many National Regulatory Authorities (NRAs) have been established to address the many complex issues that arise in this highly dynamic and often unpredictable environment.

To date the research and policy debates have focused almost entirely on the substantive issues of policy and regulation, such as license conditions for new operators and standards for determining reasonable prices. There has been relatively little attention paid to the information and communication processes necessary to ensure that the new NRAs can perform their responsibilities efficiently and effectively. In most countries, few people other than those business and government officials directly involved in regulatory matters have any real knowledge about what the NRA does or why. Even fewer understand the implications of regulatory decisions. This limits access to information that is important to the business community, consumers, the public, and other government agencies, and restricts participation in regulatory inquiries, debates and decisions that affect the communication environment for everyone. As a new institution in most countries, and a reformed one in others, NRAs must establish responsive information and com-

munication networks with their constituents and the general public if they wish to be effective. But the communication effectiveness of communication regulators has rarely been attended to. It has never been a priority and is often not even acknowledged or recognized.

The pace of telecom reform has varied widely among countries depending heavily on local circumstances and political priorities, including the prior state of general economic development and telecom sector development specifically, and the extent of near-term potential benefits from specific reforms. The telecom reform process began in the US more than a quarter century ago and some countries have yet to start. Although developed countries generally have been the early reformers and developing countries the later ones, this is by no means a precise distinction as there are overlaps, as well as large differences among countries within these general classifications in the timing, speed and priorities of reform.

These significant differences have led to the adoption of a variety of benchmark indicators to measure and compare progress with reforms, to identify best (and worst) practices, and to stimulate greater progress with reforms. These indicators have focused on the extent of achievement of particular steps in the reform process, e.g., interconnection and consumer prices, extent of access to particular services, extent of competition in providing particular services, etc.. The International Telecommunications Union (ITU) publishes statistics on a number of common indicators for most UN member countries, but the quality of the reported data can vary widely. The Organisation for Economic Co-operation and Development (OECD) publishes a more comprehensive and reliable set of indicators with higher quality data, but coverage is normally limited to OECD member countries. The European Commission has used a series of telecom reform indicators to

identify leading countries and best practices on specific reforms, and used this evidence to actively encourage laggard countries to improve their performance. Special interest groups, regional associations and individual countries often develop their own sets of benchmark indicators. In addition, within the broader context of ICT convergence and information society development, a variety of indicators of “e-readiness” and information society development have been adopted. But none of these programs for measuring benchmark indicators includes an indicator to measure the communication effectiveness of national NRAs in implementing the reforms necessary to achieve e-readiness and information society goals.

## Evolution of NRA Website Benchmarking

LIRNE.NET has been providing training courses for executives and senior staff of NRAs, and other participants in the regulatory process, for more than a decade. These courses include the use of benchmarks in key areas of substantive regulation, and the encouragement of NRAs to develop their own set of benchmark indicators and comparison countries as a guide to improving their performance over time. Although we encouraged NRAs to pay attention to the importance of information sharing and effective communication with their constituent groups and the public, we focused predominately on the substantive issues that must be addressed by regulation.

As the Internet grew rapidly during this period and websites became common, Amy Mahan suggested that benchmarking NRA websites might provide some good indicators of the effectiveness of NRAs in providing essential information and in communication with their constituents and the public, and thereby the quality of their services. As the regulator of telecom networks and services, NRAs should be making active use of them in providing their own services. Early efforts at benchmarking NRA websites in Europe were restricted by the diversity of languages and constrained by limited data and experience. But they provided useful teaching tools for the training courses, and were used by the Danish and Dutch regulators in assessing their respective performance. As the Internet continued to grow, Amy turned her attention to developing countries where it seemed NRA websites could not only facilitate telecom reforms, but also provide a leading source of best practices and demonstrate the wider potential of e-government.

Amy’s initial regional benchmarking study of selected African NRA websites was first used in a LIRNE.NET training course on telecom reform held at the University of Witwatersrand in Johannesburg. After the session examining the study and discussing its implications, some course participants from the NRAs of countries that didn’t rank too well claimed the study was full of errors and could not be relied upon. At the lunch break we invited them to access their websites, and call their website managers to identify where the study was wrong.

They reported back that they had not realized how unresponsive their websites were, and improvements would be made immediately.

Building on this early experience and the continued growth of the Internet and the potential capabilities of NRA websites, Amy has been able to improve the methodology, the data and the quality of the benchmark comparisons in next stage studies that she and colleagues have done covering different regions of the world. The present publication is the most comprehensive set of studies done to date.

## Moving Closer to Global Benchmarking Indicators

This is the first NRA Website Benchmarking report that provides results from a near-global coverage for the same time period. Studies cover Latin America, the Caribbean and North America, Africa and the Asia Pacific region. Doing the studies was not a straightforward exercise. They identify the enormous differences among countries. For example, at the time of data collection, in Africa 45% of the countries surveyed didn’t have NRA websites, and in Asia 29%. Some countries did not have regulators. In others, some regulatory activities were being performed, but dispersed through different government agencies rather than established in an NRA. These study results demonstrate very clearly the interdependent “chicken and egg” nature of network development. An Internet presence doesn’t mean much unless others have an Internet presence. The value of an NRA website depends on access to the Internet, not only by the NRA but also by the network of constituent interests that it needs to serve. Yet the pace of growth of Internet access is influenced by policy and regulation facilitating telecom infrastructure and services development and ICT convergence. Far too many countries are still struggling to establish the foundation conditions for Internet access where the benefits of network growth exceed the costs.

In Chapter 2, *Benchmarking Assessment Methodology*, Hugo Carrion and Amy Mahan review the methodology of the studies which has been refined and strengthened based on Amy’s experience with her earlier research. Three of the four regional studies were able to follow the same methodology for measuring the indicators, with the fourth (Asia-Pacific) adopting a parallel approach adapted to the particular circumstances of the countries being studied. This increases the possibilities for drawing meaningful comparisons across countries and regions.

The studies are not designed simply to fulfill the limited objective of identifying leading and following countries, but rather to identify specific best practices, which are likely to vary among countries. Country ranking is done, as that is what gets their attention, but then the studies identify where specific strengths and weaknesses are and specific improvements warranted. The studies adopt a classification scheme for assessing website performance that identifies four stages of

website development - emerging, enhanced, interactive and transactional. Benchmark indicators are developed for five major categories and 20 subcategories of website activity which individually and collectively measure performance.

In Chapter 3, *Benchmarking National Regulatory Authority Websites in Latin America*, Hugo Carrion shows the significant diversity among the 21 countries examined by identifying the different stages of telecom reform in the different countries, and the significant differences in the ages and roles of the NRAs. Specific areas of strength and weakness are identified. Although Latin American NRA website development is still in the “emerging” category, the study also was able to document some improvements over time.

Opal Lawton provides an interesting contrast between early and late telecom reform countries, as well as rich and poor countries, in Chapter 4, *Benchmarking of Caribbean and North American NRA Websites*. Although the US and Canadian NRA websites are more advanced, as expected given their circumstances, they did not have the best practice in all categories. The study shows that even the North American NRA websites haven't reached the advanced transactional stage of website development yet. Among the 12 countries, some had multiple agencies performing different functions, making indicator measurement more difficult.

In *Benchmark Indicators for African NRA Websites*, Chapter 5, Monica Kerretts-Makau identifies a very wide diversity among countries. Only 30 of 54 countries had NRAs with websites. Although most countries were still at an early stage in the telecom reform process and in NRA development generally, some countries scored well on specific indicators. In most countries, the limited development of the Internet, and NRA websites, suggests that the web is not the main means of communication access to or by NRAs. Local languages are extremely important in some countries and the populations more difficult and costly to serve as they require more advanced Internet development. NRA website development in most countries is often linked to developments in e-government generally and e-governance in particular. Thus at this early stage of development, NRA website development for most African countries is a much more limited indicator of progress in implementing telecom reforms.

In Chapter 6, *Benchmarking Asia Pacific NTRA Websites*, Lara Alawattagama and Chanuka Wattagama examined the widest diversity among countries ranging from the very poor and underdeveloped to the very rich and highly developed. Many of the same difficulties that were identified in the African study were found here as only 31 of 62 countries had NRAs with websites that had a version in English, which was necessary to be included in the study. Thus a few important countries, including China and South Korea, had to be dropped from the study. Given the greater extent of diversity among

countries, this study clustered the countries in groups as measured by access paths/100 population to facilitate proximate benchmark comparisons. In addition, the primary focus was shifted to regulatory functions rather than NRAs, as a number of countries performed a number of regulatory functions but not through an NRA.

The studies have done a good job at showing the interrelations between NRA website development and telecom network development by placing the research within the context of overall telecom reform and ICT development. Their recommendations for improvement in responding to best practices are especially significant as weakness on some individual indicators can significantly weaken the overall effectiveness of the website for NRA communication with its constituents.

Although the regional studies were all done by applying a consistent methodology and covering the same time period, they were done by different researchers, each with specialized knowledge of their regions. But they wisely did not try to compare the basis of their professional judgments across the regions. Thus, the numerical scores are not comparable across regions. However the detailed assessments of specific strengths and weaknesses as shown by particular indicators are generally comparable. For example, the common conclusion that the studies document that no country has an NRA website that has reached the transactional stage of development yet is fully demonstrated by the data and the assessments from each region.

After reviewing these studies in the context of Internet development generally, it seems fair to observe that the results show NRAs have not been leaders in the use of websites for fulfilling their mandates. They have not provided best practice examples in promoting their mission of stimulating Internet development. There is considerable room for improvement as telecom reform and Internet development continue. Although the speed of Internet growth rapidly dates the specific data measurements used in these studies, it does not render obsolete the best practice assessments, conclusions and recommendations.

An interactive and transactional Internet presence is rapidly becoming essential for all organizations as the major instrument for effective information gathering and communication. For the future, the Internet makes possible major improvements in the international networking of NRAs among themselves as part of a learning process of identifying and employing best practices in all areas of regulation, not just website development. This report provides an important step in preparing for this possibility. It provides a foundation for continuing research on these issues as telecom reform proceeds, NRA websites improve, and NRAs begin to make effective use of the next-generation Internet in fulfilling their mission.





## Benchmarking Assessment Methodology

Hugo Carrión and Amy Mahan

### Introduction

Two methodologies are used to evaluate national regulatory authority (NRA) websites in this volume. The first is a benchmarking approach which focuses on best practices. This methodology is used for assessing Latin America, the Caribbean and Africa (chapters 3-5) and is described below. The methodology used for the assessment of Asian websites has a primary focus on ranking websites out of a score of 100. This methodology is described in the chapter for Asia (chapter 6).

### Benchmarking methodology

LIRNE researchers first began assessing regulatory websites as discussion tools for courses for regulators. At the time, at the turn of the century, most regulators had only bare bones websites and there was little in the way of 'best practice' to guide their efforts. These early assessments identified categories of information and reported on initiatives that regulators were taking to make resources available in these categories via their websites.

As this work evolved, it also became apparent that different categories of stakeholders who regulators could be reaching via their websites (as well as other channels) needed to be identified. Our question was whether equal efforts were being made, for example, to reach consumers as compared to business users.

While rich in information, the tables used to describe the different websites were difficult to summarize. What was needed was an objective value that could be assigned, which would rank the different categories and provide a snapshot of how individual websites performed, and which areas of informa-

tion required more attention or conversely, were evidence of best practice.

The ranking system for the 2005 NRA benchmark study of regulatory websites in Africa (Mahan 2005) was inspired by the 2001 United Nations report, Benchmarking E-government (Ronaghan 2001) which identified five stages of electronic government: emerging, expanded, interactive, transactional and seamless. These categories were used to evaluate the various aspects of regulatory agencies' websites to arrive at a consistent classification system for the various categories of information and characteristics of the websites analyzed.

The qualitative requirements for the five stages were modified slightly for the NRA benchmarking studies to reflect the particular nature of regulatory websites. The last category of the UN study, seamless, which refers to full integration of all electronic functions and services across administrative and departmental boundaries, was excluded on the grounds that it was not realistic for the subjects of this study — and, in fact, it was not attained by any country in the worldwide study. The stages were therefore defined as follows:

- **Emerging:** only basic, mostly static information is available.
- **Enhanced:** content and information are updated regularly, and the information is available not only in its original format (for example, decrees and laws), but also in a simplified and explanatory manner.
- **Interactive:** users can download forms, contact officials and file requests. The available information has the added value of being linked to relevant legislation or other points of reference .

- **Transactional:** users can request and submit online requests for information or to complete other regulatory processes such as licence requests or to participate in regulatory forum discussions.

The subcategories were classified with each thematic element assigned a value from 1 to 4, based on the stages described above, and with each category contributing to a final score. The classification was based on qualitative evidence, but subjectivity was minimized by the use of the categories defined above, rather than relying merely on perceptions.

It should be noted that a value of 0 was used to indicate the lack of information or a service. Intermediate scores were also used to provide a more precise assessment. For example, if information was available but it was not completely up-to-date and lacked sufficient explanation, it received a score of 1.5.

## Categories and sub-categories

The evaluation takes into account the different types of information that the regulatory authority must provide to the various stakeholders involved in the telecom market.

Table 1. Evaluation categories			
	Category	No.	Sub-Category
1	<b>Factual information &amp; news</b>	1	Laws, regulations
		2	Statistical information and indicators for the sector
		3	Sector news
2	<b>Consumer and citizen information</b>	4	Information for users (rights, rate information, new numbering plans, etc.)
		5	Information about users' and consumers' rights
		6	Process for filing complaints
		7	Information about public hearings
3	<b>Business information</b>	8	Statistical information about assistance to users and resolution of complaints
		9	Certification of equipment
		10	Details about entering market (licensing)
		11	Information about interconnection
		12	Articles and documents by consultants
4	<b>General information</b>	13	Scarce resources (spectrum allocation)
		14	Mission statement
		15	Local languages
		16	Links to national and international sites
		17	Contact information for key officials (telephone, email, contact form)
		18	Ease of use (navigation tools, site map, search engine, organization)
		19	Organizational chart or equivalent
5	<b>Universal service / universal access</b>	20	Information about policies, reports and plans

**Factual information and news** considers information such as a description of the sector, online availability of laws and the legal framework, indicators and news.

**Information for users and citizens** includes information useful to the user, consumers' rights, procedures for filing complaints and participation in public consultations.

The third category, **business information**, involves information useful for operators and investors. Aspects related to homologation and certification of equipment, licensing, interconnection and management of the electromagnetic spectrum are evaluated in this category.

The **general information** category looks for items such as the mission statement, an organizational chart, contact information for functionaries, and external and internal links. While the general methodology takes into account the availability of information in different languages, this sub-category was not considered for many countries in the survey as it was not always relevant. In this case the assessment value was reallocated across the other subcategory components.

The final category evaluates information about **universal service / access policies** and plans that are made available via the NRA websites.

The evaluation thus considers five categories and a total of 20 subcategories. The following table shows the categories and their respective sub-categories.

## Weighting of categories

Each category and subcategory was assigned a certain weight. Equal weights were assigned to the first three categories, and the fourth and fifth categories were weighted to total 100 per cent, as shown in Figure 1 and Table 2.

## Observations

Benchmarking implies that comparisons are undertaken between similar websites to identify good practices and to engender a sharing of knowledge around approaches which to increase the functional profile of the website and facilitate informed regulatory processes. Because this is a rapidly evolving area, the primary focus of this methodology is current state of the art, rather than progress over time. However, although the subcategories may be altered from one evaluation year to the next, the overall framework does allow individual regulatory agencies to assess the evolution of their websites.

As the subcomponents each receive a value from 0 to 4, it becomes irresistible to make charts which rank the countries in terms of their achievement in reaching a 4 in all areas of information provision. However, ranking is only a by-product of this methodology, unlike the approach used in chapter 6, which was designed specifically to rank the Asian websites.

It is not necessarily the case, however, that a value of 4 is the desirable value for a particular area of information provision.

In some instances, clear, well-explained and up-to-date information may be the best approach (which would yield a value of 2) rather than interactivity which might be more bells and

whistles than further illuminating. For this reason, spider web charts are used in the appendices which show regional averages against which the country can benchmark its own progress.

In this same vein, use of Web 2.0 tools have not been specifically included in the assessments. The NRA surveys rank information provision in terms of increased interactivity and functionality, hence, websites with higher scores are more likely to embrace Web 2.0 philosophies of interconnectedness and sharing of information, if not the actual tools themselves. Findings indicate that there is room for development of best practices around using Web 2.0 tools on regulatory websites. Interactivity on NRA websites is usually centred around forms (to request information or to submit requests, comments, etc.) and hyperlinking within the site.

Some applications that could be useful to include on NRA websites include:

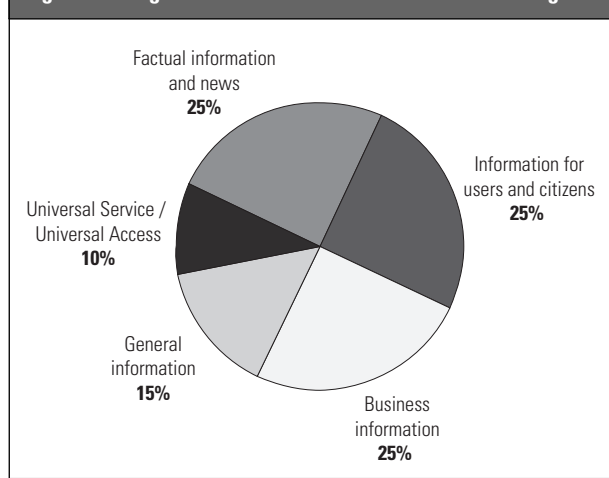
- RSS feeds and XML;
- thematic Tags (collective tagging, social tagging);
- Wikis or forums - for particular subjects, manuals or to support participatory user-generated content
- Flickr or onsite photo collections can make the regulatory authority more familiar

Finally, some websites are aesthetically more attractive than others. This is a subjective kind of observation, and likely has to do with regional and national cultural norms and graphic tradition. This methodology does not evaluate the attractiveness of design except where bad design impedes the functionality of the website.

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**Figure 1. Weight distribution for the five evaluation categories**



**Table 2. Weighting of categories**

Category	Weight	Sub Category	Weight
Factual information & news	25.0%	Laws, regulations	10.00%
		Statistical information and indicators for the sector	10.00%
		Sector news	5.00%
Consumer and citizen information	25.0%	Information for users (rights, rate information, new numbering plans, etc.)	5.00%
		Information about users' and consumers' rights	5.00%
		Process for filing complaints	5.00%
		Information about public hearings	5.00%
		Statistical information about assistance to users and resolution of complaints	5.00%
Business information	25.0%	Certification of equipment	5.00%
		Details about entering market (licensing)	5.00%
		Information about interconnection	5.00%
		Articles and documents by consultants	5.00%
		Scarce resources (spectrum allocation)	5.00%
General information	15.0%	Mission statement	2.40%
		Local languages	0.00%
		Links to national and international sites	3.90%
		Contact information for key officials (telephone, email, contact form)	3.90%
		Ease of use (navigation tools, site map, search engine, organization)	2.40%
		Organizational chart or equivalent	2.40%
Universal service / universal access	10.0%	Information about policies, reports and plans	10.00%



# Benchmarking National Telecom Regulatory Authority Websites in Latin America

Hugo Carrión\*

## Introduction

With the increased privatization of telecommunications and the liberalization of the telecom sector, the role of national regulatory authorities (NRAs) has become ever more important because of their responsibility for ensuring the harmonious co-existence of converging technologies and services, as well as ensuring equitable access to the benefits of the information society. Among the main protagonists of the technological revolution of the past few decades are the internet and World Wide Web. Nowadays, businesses and organizations that want to be competitive and develop close relationships with their customers, and which seek to add value to the information they distribute, must have a network presence. Websites now are not only a medium for disseminating information, but also involve key strategies for handling relations with customers and providers. For government institutions, internet presence has become a powerful device for ensuring accountability and the transparency of information, fostering citizen participation and also for providing online services and transactions.

The information and knowledge society brings innumerable changes, including citizens' demands on their authorities. Citizens want to know what their governments are doing. They demand transparency as a way of monitoring government activities, because it is understood that access to and transparency of public information are rights, and it is the government's responsibility to respond to citizens' expectations.

Technology allows the NRA websites to become instruments for effective communication, producing and reproducing information for the benefit of citizens, operating companies, private enterprise, non-governmental organizations, government agencies, etc. The sites must therefore be designed to be functional and accessible to the general public,

and must take into consideration such factors as users' needs, educational levels,<sup>1</sup> and physical disabilities that are barriers that limit access. Failure to take these into consideration when a website is designed could constitute discrimination.

The content must be clear, current and complete, and the information must meet the user's needs, facilitating good governance and public administration. Well-implemented technology can foster and promote electronic government and electronic commerce, new forms of communication and relationship that are the result of the information-driven society in which we find ourselves.

Regulatory entities are responsible for issuing clear public information about the sector, overseeing compliance of regulations, and facilitating more democratic access. Regulations should serve as incentives for the development and implementation of new communications and information technologies. It is important to take into account the role that states must play in a changing society, where the speed of technological development makes the implementation of laws or rules for timely regulation of new technological options very difficult, if not impossible. Nevertheless, the state must monitor, regulate and guarantee the quality and accessibility of services.

Users must understand that regulatory bodies are in charge of looking out for their interests, but are also responsible for ensuring that the rules for operators and private companies are clear, which creates confidence in their operations and stimulates investment in the sector.

\* Special thanks to Rossana Flores of Imaginar for her assistance in compiling information and revising the final report.

Translation from Spanish to English was by Barbara Fraser.

For these reasons, NRAs cannot be sidelined from the opportunities offered by the internet and its applications. The responsibility to provide current, complete and reliable information to users, telecom operators, potential investors, the media, researchers and the government can be facilitated by the use of websites that combine appropriate information architecture and functionality. The use of websites should be viewed not only from an instrumental standpoint, as a way of increasing competitiveness, but also from a global standpoint of enhancing governance in the telecom sector.

Because of the close relationship among telecoms, information and communications technologies, and the internet, the regulatory entities' websites should be a model of transparency, access, inclusion, quality of content, and useful and up-to-date information for the benefit of all who seek services and information.

This study consists of four sections:

- **General overview of Latin America:** The first section provides a summary of the telecommunications market in the region, describing the role of the various national regulatory agencies and the evolution of privatization and liberalization processes
- **Evaluation of websites:** This section presents the challenges in applying evaluation methodology. It also examines the importance of the role played by websites in the work of regulatory entities.
- **Benchmarking Latin America's national regulatory authorities:** The third section presents the results of the evaluation of 20 regulatory entities in the region, including three Caribbean countries. All of the countries evaluated have websites in Spanish, except for Brazil, where Portuguese is spoken.
- **Conclusions:** Various conclusions are presented and recommendations are offered to help NRA take steps toward the enhancement and evolution of their websites.

## General Overview of Latin America

### Regional bodies

During the 1980s and 1990s, Latin America adopted a series of neoliberal economic measures that tended toward liberalization and deregulation of markets. These measures were touted by world leaders,<sup>2</sup> international finance and multilateral organizations, and were promoted at international forums and events where the economic policies that countries would adopt were discussed.

The most significant initiative implemented by Latin American countries grew out of the Washington Consensus,<sup>3</sup> which was backed by international finance bodies such as the World Bank and International Monetary Fund and recommended to other countries around the world.

Fiscal austerity, privatization, and market liberalization were the three pillars of Washington Consensus advice throughout the 1980s and 1990s. The Washington Consensus policies were designed to respond to the very real problems in Latin America, and made considerable sense. In the 1980s, the governments of those countries had often run huge deficits. Losses in inefficient government enterprises contributed to those deficits. Insulated from competition by protectionist measures, inefficient private firms forced customers to pay high prices. Loose monetary policy led to inflation running out of control. Countries cannot persistently run large deficits; and sustained growth is not possible with hyperinflation. Some level of fiscal discipline is required. Most countries would be better off with governments focusing on providing essential public services rather than running enterprises that would arguably perform better in the private sector, and so privatization often makes sense (Stiglitz 2003:53).

To a certain extent, these policies adopted by Latin American countries had some logic. "In many developed — and developed — countries, governments all too often spend too much energy doing things they shouldn't do. This distracts them from what they should be doing. The problem is not so much that the government is too big, but that it is not doing the right thing." (ibid.: 54). It was argued that the state should leave the management and control of companies that were once natural state-run monopolies in the hands of the private sector. Often the management of these companies was the result of political appointments with few technical qualifications. "In general, competing private enterprises can perform such functions more efficiently. This is the argument for privatization ..." (ibid.: 54). Private companies would be responsible for efficient management of the services acquired, and users would benefit, especially in the cost and quality of these services. Unfortunately, the privatization process was not necessarily accompanied by strong, effective regulation to control the new private companies.

Another place for dialogue and agreement, where the liberalization and deregulation of markets became important, was the Uruguay Round,<sup>4</sup> in which there was international discussion of mechanisms for developing worldwide free trade. One of the topics was telecommunications and transportation services. These initiatives show that during the 1980s and 1990s, a new international order was taking shape, in which the neoliberal policies that countries imposed on their economies took priority. In the international context of interdependence, these initiatives responded to the interests of international private enterprise, which needed market deregulation and elimination of state-run enterprises in various countries in order to expand. Unfortunately, this was not accompanied by an equitable process in developing countries; in many cases, after implementing the policies recommended by multilateral bodies, these countries experienced serious economic crises that destabilized their governments.

The much heralded benefits of privatization were not evident in practice, and the process did much harm to societies.

Jobs were not created, instead, employees who were laid off from the privatized companies swelled the ranks of the unemployed. Privatization was supposed to eliminate corruption, or “what economists call the ‘rent-seeking’ activity of government officials who either skim off the profits of government enterprises or award contracts and jobs to their friends. But in contrast to what it was supposed to do, privatization has made matters so much worse that in many countries today privatization is jokingly referred to as ‘briberization’” (Stiglitz 2003:53). In some Latin American countries, presidents have had to resign because of corruption charges. If a government is corrupt or its officials engage in practices that run counter to the public good, privatization does not guarantee that those practices will change. If a government is corrupt, that same government will handle the privatization process.

It is important to clarify that the measures taken responded to the fact that in the 1980s, which is known as the ‘lost decade’ because of its countless economic crises, state-run companies often operated at a loss because of poor management. The technological model adopted by these companies did not take advantage of technological advances being implemented in other countries and accentuated the digital divide.

These changes required clear legal structures and strong, efficient regulatory mechanisms to stimulate expansion of the market and efficiency in the companies, rather than what actually happened — distrust of markets and democratic institutions. Unfortunately, in many cases poorly managed state-run companies operating at a loss gave way to private companies that imposed their interests, and which the state could not control, to the detriment of society.

In the privatization and market deregulation that occurred in Latin America, telecom companies and markets were coveted by foreign and national private investors.

During the 1990s, the telecom sector in Latin America showed significant growth, mainly because of a modernization process that would turn over the administration, management and control of what had been state-run monopolies to private foreign companies (in other words, privatization) that implemented new technologies, especially in fixed and mobile telephony and internet access.

The striking development of telecommunications in the region's countries is partly due to the maturation of the business in developed countries and partly to the difficulties in implementing reforms conducive to modernization and development of the sector in the poorest, most backward countries in the world; above all, though, it is due to structural transformations of the telecommunications industry and reforms implemented in Latin America and the Caribbean during the 1990s, which had significant consequences in the region's telecommunications sector. [...] In the 1990s, significant institutional changes occurred in Latin America that had a strong impact on the performance of the telecommunications industry. The major basic telephony companies in the region were transferred to international economic agents, and legal frameworks were radically modified to

allow segmentation of the industry, as well as the incorporation of new technologies, the development of lines of business that had not existed before, and the entry of new players into the respective markets. Nevertheless, in the various scenarios that emerged after the reforms, the State has continued to play an important role in developing this area, strengthening its role as guarantor of the efficient provision of telecommunications services in accordance with the needs of each country, within the framework of the new international economic orders (Rozas 2003).

The privatization process in Latin America during the 1990s was intense and accelerated. More than two-thirds of the countries in the Latin American region had already partially or completely privatized their telecommunications companies (ibid.). The privatization process also was extremely varied, because it depended on each country and its market, the degree of openness to new economic stakeholders, and the implementation and planning of public telecommunications policies that provided incentives or disincentives to the telecommunications services industry. It is important to remember that telecom companies were the most highly valued in the privatization process. “According to data from the World Bank, the sale of state-run telecommunications companies worldwide during the 1990s generated revenues of US\$76 billion, equivalent to 24 percent of all revenues from this process. The bank determined that telecommunications companies were the sector that generated the greatest revenue from privatizations, surpassing companies in the electricity sector” (ibid.).

The initial benefits of privatization made many people believe that the principal problems<sup>5</sup> in the telecom sector would be overcome. Unfortunately, although significant progress has been made, there are still regions that lack access to basic telecommunications services, which increases the digital divide in the region.

It is also important to note that while some Latin American countries did not begin privatization processes, they also opted for structural forms in which the regulatory framework was modified, allowing the entry of private operators who diversified the range of services and access to new technologies.

### **Regulatory authorities in Latin America**

With the privatization process, many Latin American countries established telecom regulatory authorities for oversight, management and implementation of new regulations for this market.

During the late 1990s, regional initiatives arose that allowed the sharing of experiences, fostering cooperation in information about regulation of the telecom market. One such initiative was Regulatel, the *Foro Latinoamericano de Entes Reguladores de Telecomunicaciones* (Latin American Forum of Telecommunications Regulatory Authorities). Regulatel is comprised of 20 regulatory agencies from Latin America, as well as European regulatory entities, which act as observers. The first initiative arose in 1997, in Cancún, Mexico. The effort was subsequently reinforced and the forum became more

structured so as to project an image of Latin American unity on issues related to the regulation of telecommunications and technological advances in the field.

Another organization, the Inter-American Telecommunication Commission (CITEL) "...endeavors to make telecommunications a catalyst for the dynamic development of the Americas by working with governments and the private sector. Under the auspices of the Organization of American States, it resides in Washington, DC, USA. It has 35 Member States and over 200 Associate Members. It has been entrusted by the Heads of State at the Summits of the Americas with specific mandates to intensify its activities in key areas ..."<sup>6</sup> This body is autonomous under the OAS Charter, statutes and mandates of the General Assembly. Its goals include facilitating and promoting the development of telecommunications in the region.

Finally, to facilitate regional efforts and promote the development of telecommunications in the region, efforts have arisen such as the Connectivity Agenda for the Americas, which is a "... conceptual framework that can be envisioned as a national, regional or sub-regional strategy for transforming the hemisphere's countries into a knowledge-based society. The Action Plan offers a basic three-step process for countries interested in formulating and implementing a connectivity strategy. These are: evaluation and planning, implementation and valuation ..."<sup>7</sup>

### Regulatory challenges in the region

As noted above, the privatization process in Latin America responded to a decade, the 1980s, in which economic growth stagnated, countries' indebtedness and default on credit obligations reached alarming levels, and governments sought mechanisms for resolving the crisis. The response was found in the Washington Consensus policies, which were backed by international finance bodies and recommended market liberalization, fiscal austerity and privatization. In this process, the telecom companies were the most coveted, and it was thought that the arrival of outside economic agents bringing new technology would narrow the technology gap.

To a certain extent, the new technology that was implemented and new services, such as mobile telephony, helped modernize the sector. Unfortunately, however, the access-related technology gap has not yet been closed, as there are still countries in the region that lack generalized access to fixed telephony. When countries set up their state-run enterprises, they subsidized service in areas with low population densities and remote areas far from cities. To a certain extent, this fulfilled a social function. Private enterprise, however, responds to different requirements, and from the standpoint of this new model, funds established to develop universal service have met expectations.

The entry of private companies, most with foreign capital, helped create a market of free competition, especially in services such as mobile telephony, internet service provision and current converged services such as IPTV. Operators fight for market share, and in many cases costs have come down, qual-

ity has improved and new services have been offered, enabling users to choose the ones that best meet their needs.

In this process, the creation of national regulatory authorities has played an important role in oversight of companies and consumer defense. The regulatory process did not accompany the privatization process from the start, but it is important to note the regional initiatives that have allowed the exchange of information and cooperation between successful experiences to achieve consistency in telecommunications regulatory policies.

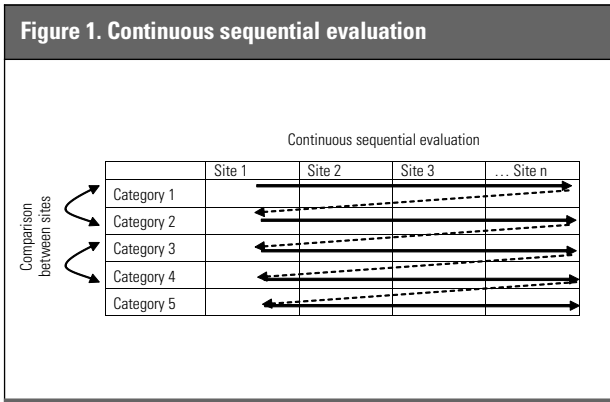
## Evaluation of Websites

### Challenges in application of the methodology

The methodology used in this study to evaluate the national telecom regulatory authority websites in Latin America clearly defines the aspects to be evaluated and the levels to which they should be assigned based on real observation. The methodology is intended to minimise the evaluator's subjectivity in the evaluation. As with any evaluation, however, this poses challenges. The following describes these challenges and the strategies used to address them.

Using numerical categories for the evaluation, in this case 1 to 4, gives the observer the erroneous idea that the highest score represents the ideal situation. It is therefore important to clarify that the assigned value does not rate the efficiency of the site, but describes it and places it on a scale in terms of certain levels of development from an emerging level to a transactional level, passing through more enhanced and interactive stages. It is important to clarify this aspect, because several categories, by their nature, cannot reach the transactional level. For example, the mission statement and news cannot provide online services (level 4). They could however, contain updated information and a detailed explanation (level 2), and even include elements that facilitate interactivity and user feedback (level 3).

Another challenge posed by numerical scale is the limited number of levels for describing intermediate stages. In this





case, therefore, intermediate scores were used. For example, if a site included sufficiently detailed explanations or completely updated information (level 2), but only took these factors partly into account, it received a score of 1.5. This helped make the evaluation more precise, though it might lower the site's overall score, which otherwise would have received a rating of 2.

One challenge posed by the evaluation of various sites is that of equality — maintaining the same weighting criteria regardless of the object being evaluated. One strategy used to ensure equitable evaluation was the application of the analysis to the entire set of sites only once, within a short period of time, to ensure that the evaluation criteria would not be affected over time. For this study, the websites were reviewed between 28 April and 2 May.

Another useful strategy for adjusting the evaluation is peer comparison, in which two sites are randomly compared and the evaluation is applied again to a certain aspect. When the evaluation is finished, this can be useful for comparing the sites with the highest scores and adjusting for possible imbalances. This enables the researcher to ensure that the weighting has been done correctly.

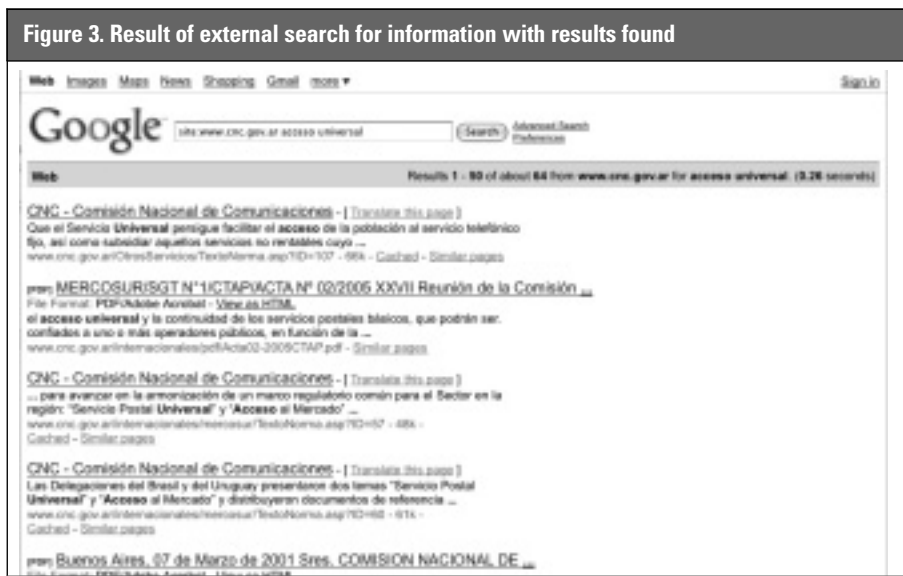
The evaluation was relatively agile for the most advanced sites, whose design facilitated the search for information. For sites that had more limited functionality and usability, both the site's own search engine and external search engines such as Google had to be used. This was necessary to determine whether information was available even when its location was not evident.

Figures 2 and 3 show how this strategy was used.

Figure 2. Result of external search for information without results



Figure 3. Result of external search for information with results found



Finally, one obvious limitation of an evaluation such as this is that it is done at one point in time; the scores show the situation of the website on the date of the evaluation. Subsequent review of the websites (two weeks later) revealed that several of the sites had been updated, display of indicators was enhanced, etc. To maintain the objectivity of the evaluation, however, the results described are those of the evaluation done on the common review date.

## Benchmarking NRA Websites in Latin America

This section presents the results of the evaluation of the websites of 20 national regulatory authorities in Latin America. The graphs show the countries in descending order, from the highest score to the lowest. The average score for the region is

shown in a different color. As noted above, during the period of evaluation, the Guatemalan website was not available.

### Factual information and news

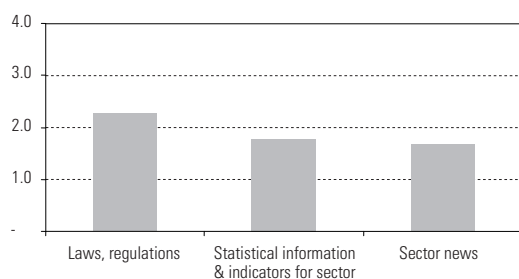
The regional average for this category was high; 11 of the 20 countries evaluated present complete, detailed, explanatory information. In addition, the five countries ranking highest include facilities for interactivity, such as search systems, forms, etc. The country with the highest score is Brazil, whose website overall has a very advanced functional design.

All countries with an available website had information in this category. Even the website with the lowest score at least had static information.

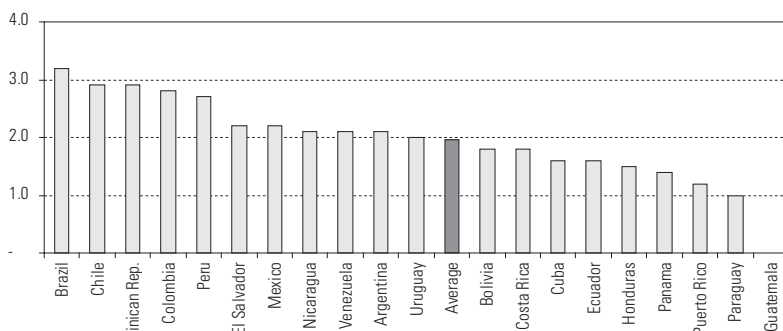
Among the sub-categories that make up this category, it is noteworthy that news scores lowest. While the scores are higher than static level, they do not rank as complete and up to date. The Dominican Republic is notable for the advanced tools that it incorporates into its news section. Each item is accompanied by one or more descriptive images or photographs, and there are icons for converting the news item directly to PDF format, printing it or e-mailing it. There is also the possibility of syndicating content using RSS 2.0, and direct links are provided to a glossary of terms, legal statement and privacy policies.

Availability of laws and regulations is at an optimal level, although few sites include interactive search systems. In Argentina, via the Technical Information Centre (Library), there is an organized presentation of all regulations, with appropriate explanations, and the norms can be downloaded in PDF format. A further noteworthy positive element is the indication of the size of the archived information files, which is useful for users with limited bandwidth. The Dominican Republic stands out again for the organization of the information, options for finding more detailed information and the possibility of downloading in different formats. It is also note-

**Figure 4. Average regional score for sub-categories of Factual Information and News**



**Figure 5. Scores of NRA websites in the category of Factual Information and News**



worthy that visitors to the site can download the programs needed for viewing the documents, specifically Acrobat Reader for PDF files and Word Viewer for DOC files.

Finally, the statistical and sector information on the sites tends to be complete, with only a few cases of very outdated information. Several sites had information from 2007. Some sites had detailed information broken down sufficiently for more in-depth analysis. The Peruvian site stood out because it gave the user access to statistical information in spreadsheet format. Colombia is also noteworthy, as it uses the Unified Information System for the Telecommunications Sector (*Sistema de Información Unificado del Sector de Telecomunicaciones*, SIUST), a specialized application for statistical queries of indicators. Brazil also uses several advanced query systems.

In conclusion, there is a small group of countries that have little to improve in this area and some sites have reached a fairly optimal level of interactivity. Most countries, however, have

many opportunities to enhance, complete and update information and incorporate advanced tools to facilitate user participation.

### User information

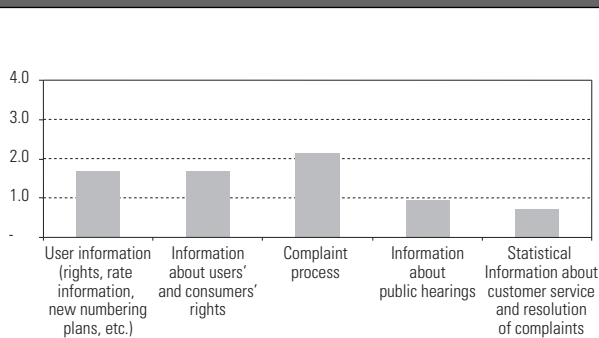
In this category, the regional average barely exceeds the minimal level, lacking even complete and detailed information in many instances. Of the eight countries that scored above average, just two, Chile and Brazil, come close to interactivity. Of the 12 countries below the regional average, the last five have scores lower than one, reflecting the absence of information in one or more sub-categories.

In general, helpful user information about rates, numbering plans, etc., is not available on most sites or cannot be found easily. Brazil and Chile stand out as positive examples. The latter has a direct link from its home page to the 'Consumers' section, where complete information can be found about all aspects of interest to the user of telecom services.

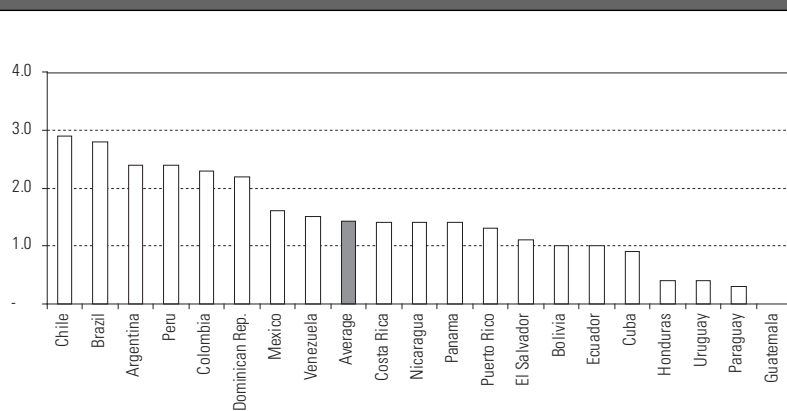
The process for filing complaints is better documented, and in some cases it is possible to file the complaint with an online form. It was not possible to test the efficiency of these tools; the evaluation could only note that it was possible to do so. The types of forms are varied, from forms that are embedded in the website to those that can be downloaded in DOC or PDF format. Several countries stand out in this sub-category: Argentina, Chile and the Dominican Republic. Colombia is a special case, because the Comisión de Regulación de Telecomunicaciones (CRT) has developed a special portal for the Rights of Telecommunications Users website.<sup>8</sup> In addition to an online form submission option, there is a free hotline and the site includes explanatory information about filing a complaint.

Ten of the 20 countries include no information about public hearings. Among the countries that do, Brazil, Chile and Colombia stand out because their sites include detailed and

**Figure 6. Average regional score in sub-categories of User Information**



**Figure 7. Ranking of NRA websites in the User Information category**



even historical information about consultation processes and public debate.

Statistical information about customer service and resolution of complaints is generally inadequate. Twelve countries lack such information. Of the others, Peru and Brazil have paid more attention to the topic. Peru may be the only case in which information is provided about the office that resolves complaints. Statistical information is available in spreadsheet format. Perhaps the only limitation of Peru's site is that there are problems displaying the page with browsers other than Internet Explorer (such as Mozilla Firefox, SeaMonkey or Opera).

### Business information

Business information appears to be another weakness of the majority of the websites in the region. The regional average shows that it has barely exceeded the level of static information. Nine countries surpass the regional average of 1.6. Brazil,

at the top, appears to be the only country that has incorporated interactive services. Argentina is another noteworthy case, but most of the countries are still some distance from enhanced level.

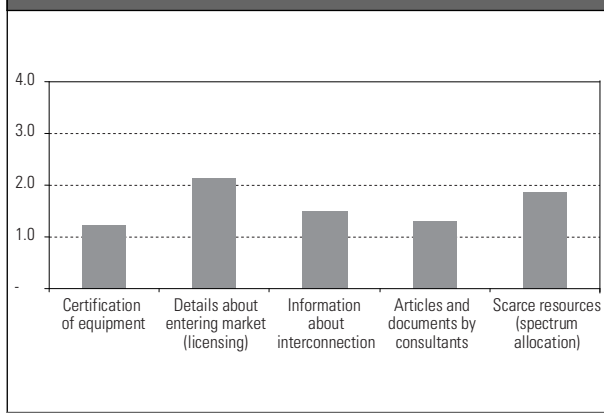
In the area of information about equipment certification, seven sites do not even mention the subject. Brazil, Argentina and Cuba clearly and explicitly include an option for homologation of equipment. Cuba's section on "Oversight and Supervision" explains the homologation process and allows users to begin by downloading a special form.

Information about licensing details is the section to which the greatest attention has been paid in this category. Brazil, Chile, Panama and Peru are the countries with optimal levels of interactivity. The Panamanian regulatory agency's site includes detailed information about time frames and requirements for filing applications, forms in PDF format, and the complete list of concessions granted.

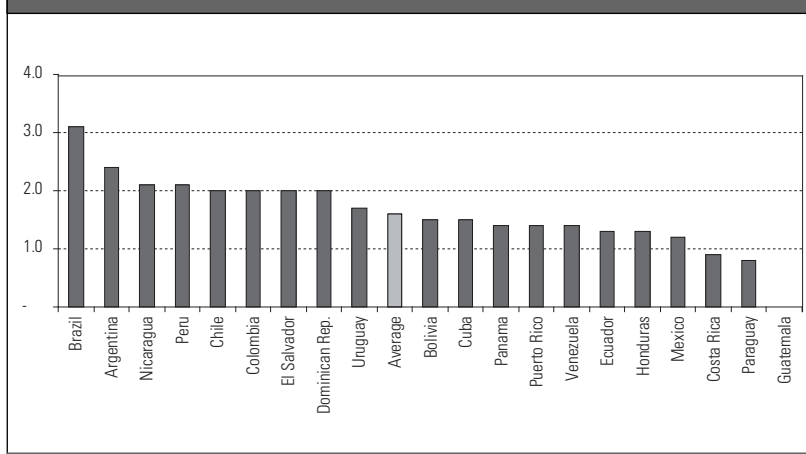
Information about interconnection, like that about homologation, is limited. Most sites only include regulations for interconnection, without further explanation. Brazil and Peru stand out in this sub-category. Peru's section on 'Business Services' includes the option, 'Interconnection Topics', where the visitor can find current interconnection contracts, current interconnection contracts by company, setting and review of maximum interconnection charges, the text of interconnection contracts, basic interconnection offers, and economic conditions.

Information is also scant in the sub-category of articles and studies by consultants. Countries such as Brazil, Nicaragua and Peru have made efforts to give users access to full text documents that can be downloaded from the websites. They also have systems for searching for these documents, a classification system and an explanation of the archives, providing good service in this area. Nicaragua's 'Digital Library' option pro-

**Figure 8. Regional average for Business Information sub-categories**



**Figure 9. Ranking of NRA websites in the Business Information category**



vides access to specialized studies and articles about the sector that can be downloaded in PDF format.

Finally, all of the sites include information about spectrum management and allocation of scarce resources, although the information is mainly static. Argentina, Brazil and El Salvador not only have complete information, but also facilitate access to it using interactive tools. In the 'Telecommunications Sector' section of El Salvador's website, the 'Spectrum' option contains complete information about the frequency allocation chart, bulletins, instructions, concession procedures, regulations, etc.

### General information

The regional average of 1.4 indicates that this information is still at the static level. Once again, Brazil stands out with a portal designed with interactivity in mind. The next four countries

are barely at the enhanced level. The other countries are in the range between static and enhanced.

It would seem fairly obvious that a website would include the agency's mission statement. All countries except Panama include the text of such a statement. Only Argentina and Brazil enhance the text by including hyperlinks to related legislation and regulations (level 2).

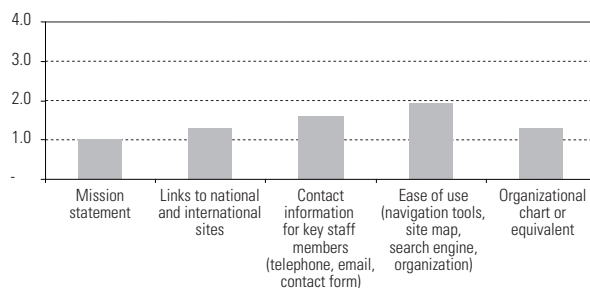
In the sub-category of internal and external links, most of the sites include only a list of hyperlinks to related sites. Peru, Brazil, Nicaragua and Panama stand out, providing value-added by including an appropriate categorization of the links and brief descriptions of the sites. The links to this section were also explicit. The 'Links of Interest' section on the Peru website provides a complete list of national and international links related to telecom. It is possible to send an electronic mail message or fill out a form suggesting new links. Each site also has a brief description, shows the number of visits and allows the user to rate the quality of the link.

Contact details for officials and staff were provided on all websites. Brazil and Nicaragua demonstrated best practices in this area. Besides including a form in the 'Contact Us' section, Nicaragua's 'Customer Service' section includes a list of the staff members who handle customer issues in 15 cities, indicating the street address, several telephone numbers and email address.

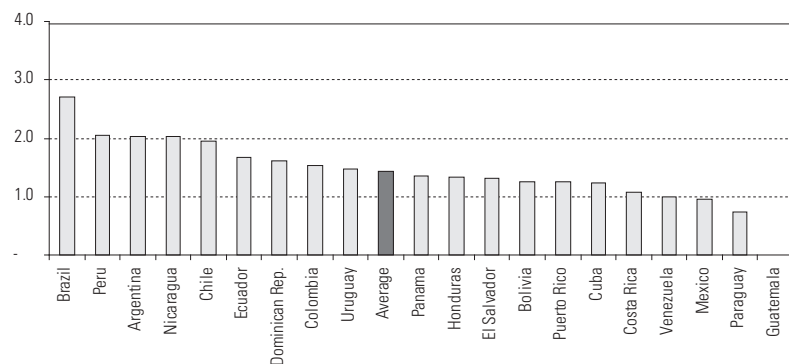
Like the mission statement, the organizational chart is a must for a regulatory authority. Various sites had interactive organizational charts. Noteworthy examples include Brazil, Chile, Colombia and Peru. Chile, for example, has a special animated application for interactively displaying the structure of the Telecommunications Sub-Secretariat. On the Peruvian site, some hyperlinks in the organizational chart link to the resúmenes of key agency officials.

To finalize this category, analysis was also undertaken on an aspect, which although could seem unimportant, is crucial for most users. The structure of the site and the existence of a

**Figure 10. Regional average for General Information sub-categories**



**Figure 11. Ranking of NRA websites in the General Information category**



search engine or site map are key to facilitating information searches and navigating the site. In this area, most of the sites in Latin America have moved out of the merely static phase and are gradually including enhanced information, but have not yet reached the level of generalized interactivity. Only the regulatory agency sites in Brazil, Argentina, Chile and the Dominican Republic stand out for their interactivity. Most of the sites include search engines, but many cannot do advanced searches or the results obtained are inadequate. Ten sites have optimized design for a resolution of 800 x 600, but only two, Brazil and Cuba, adjust the screen size beginning with a resolution of 800 x 600. The other seven allow adjustments as of a resolution of 1024 x 768. In terms of the technology used, 16 sites are dynamic and three are static. Of the dynamic sites, 12 were developed with ASP technology, two with JSP, one with PHP and one with FWX.

From the standpoint of usability and other technical issues, some inadvisable practices were found. These include the use of frames on the websites of Brazil, Colombia and Venezuela, and the inclusion of an initial Flash animation like the one on the Uruguayan site. There are also examples of recommended practices, such as the Chilean site, which meets HTML 4.01 and CSS standards according to the World Wide Web Consortium (W3C). Colombia's site includes the direct possibility of increasing font size, which is a requirement for accessibility and ease of use for visually impaired users.

The inclusion of Web 2.0 tools is still limited. A few sites, such as those of the Dominican Republic and El Salvador, allow the use of RSS. Forums, online chat, Twitter and podcasts are not included in any of the evaluated websites.

### Information about universal access/service

The final category evaluates the availability of policies, reports and plans related to universal service/access. There were many asymmetries in this category. Some countries, such as Brazil and the Dominican Republic, have extensive information and

even interactive consultation systems, while other countries do not even mention the subject. Between these extremes, most sites include static and often limited information.

One noteworthy case is that of the Dominican Republic, which has a system that allows citizens to search ICT projects. With the help of a map, users can do a detailed search for projects by location. On Brazil's site, the 'Universalization' section includes complete information about policies and projects for universal service, as well as an online system for operators to file their universal service fund statements.

### Overall ranking

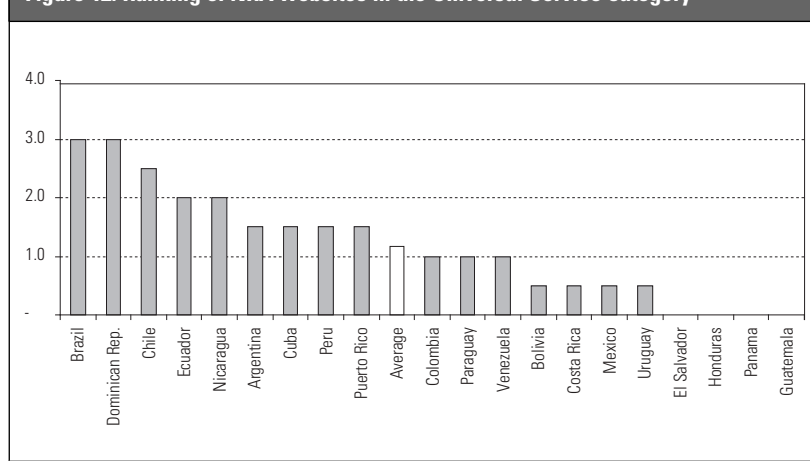
At the end of the evaluation, the final classification shows seven countries in the region above the regional average of 1.58. This indicates that most of the agencies still have static information that is incomplete and lacks the necessary detail. The other 13 countries are classified at about an emerging level. Among the best-positioned countries, Brazil and Chile stand out for their solid structure, user-centered design, interactivity and inclusion of online services.

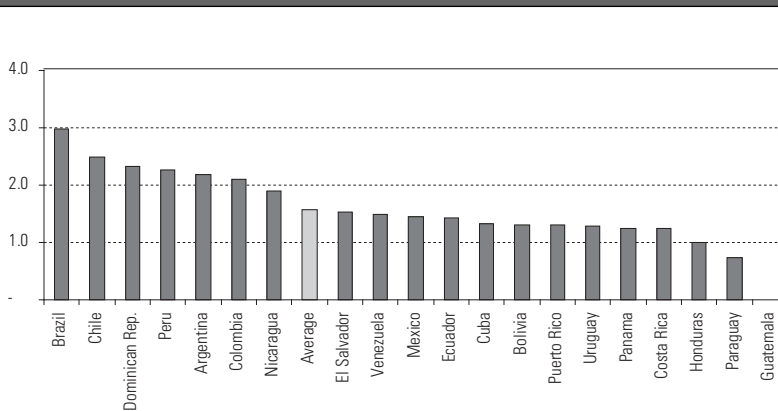
The situation in the region can be summarized as follows:

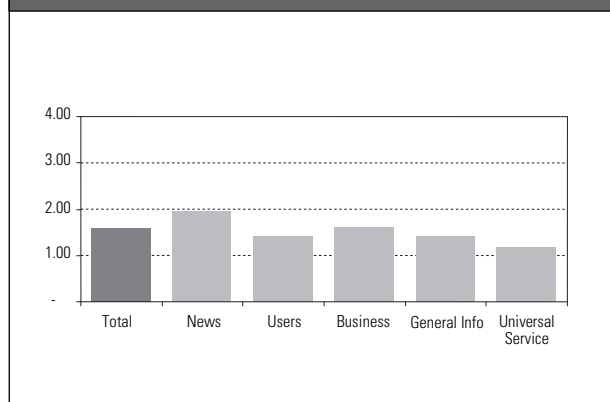
- Level 1 - static: 11 countries
- Level 2 - enhanced: 8 countries
- Level 3 - interactive: 1 countries
- Level 4 - transactional: no countries

In the evaluation by category, factual information and news are at the enhanced level; business information, although a bit farther away, is approaching level 2. This is not the case with user information, general information and information about universal service, however, which are closer to static than enhanced levels.

Figure 12. Ranking of NRA websites in the Universal Service category



**Figure 13. General evaluation of national regulatory authority websites****Figure 14. General ranking of NRA websites in Latin America**

**Figure 15. Regional average, by category**

### Evolution 2005-2008

In comparison with the evaluation undertaken in 2005, there are some interesting variations. In general, all countries' scores improved, which could be a sign of better use of websites by national regulatory authorities. Countries such as Brazil, El Salvador and Ecuador show significant improvement. Chile, the Dominican Republic and Peru show more moderate improvement. There are four cases of moderate backsliding (Argentina, Bolivia, Uruguay and Paraguay), and two cases of notable backsliding (Mexico and Honduras). The situation in the latter two countries occurred because the migration of their technology platforms happened to coincide with the evaluation period.

Although the regional average improved, increasing from 1.5 to 1.6, this progress seems almost imperceptible. This could be a weak sign of the beginning of a process of evolution from emerging to enhanced information sites.

### Conclusions

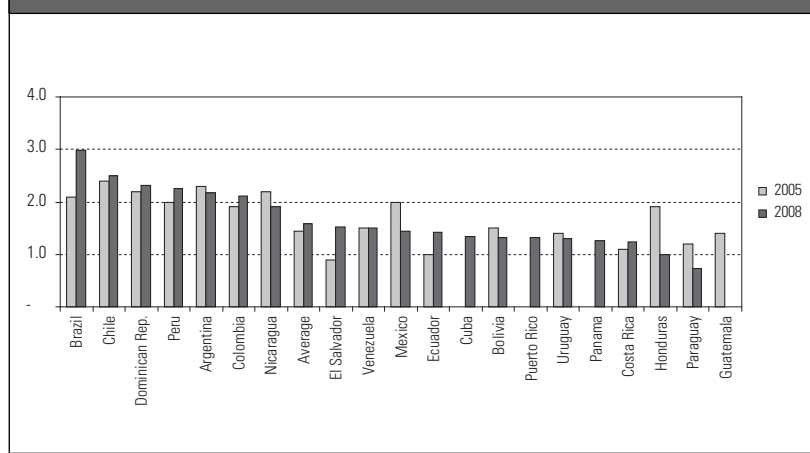
Currently the role of national regulatory authorities in the telecom sector is of unquestionable importance. Nevertheless, the level of responsibilities is directly proportional to the obligation to ensure information, accountability and transparent action. A liberalized market depends largely on the quality of information available about operations, efficiency in relations among those involved and the speed with which decisions are made.

In the information society, individuals and organizations need rapid, reliable, complete information. Citizens, businesses, investors and the government need NRAs to provide online information to support key processes such as: defense of users' rights, entry of new actors into the market, universalization of telecommunications, etc.

The increase in the supply of services and the entry of new operators into a competitive market allows users of telecom services to choose among more and better options. This greater supply, however, must be subject to more exhaustive quality control. To stay abreast of the conditions under which operators provide services, as well as underlying rights, the regulator must ensure a flow of updated, precise information.

The emergence of converged services, models for licensing them, the use of scarce resources and indispensable inter-network connections are aspects that operators must understand to make decisions about future investments, expansion of services, and creation of new products and packages. The regulatory authority website that provides reliable, complete information about these issues will contribute to maintaining a climate conducive to investment, thus decreasing regulatory risk.

Websites must not be viewed merely as tools for disseminating information, but as facilitators in managing relations with users, operators and the media. The design and structure

**Figure 16. Comparison of 2005 and 2008 evaluations**



of a website, therefore, must not be accidental, but must respond to the needs of the various stakeholders in the sector.

In Latin America, the national regulatory authorities have much room for improvement. They are still considered as 'emerging'. Excellent individual practices explain certain specific initiatives, but do not add up to a regional process of evolution toward the subsequent stages of efficient use of technology. The goals of interactivity, and even more of transactionality, still seem a long way off in most countries. Moreover, the lag in several countries is alarming, and telecom regulators should become pioneers in the efficient use of ICTs in their own administration.

## Recommendations

- National regulatory authorities must clearly identify the benefits that result from strategic use of their organizational websites, so as to allocate sufficient effort and resources to ensure the availability of the site, updating of information, quality of content and interactivity of the services.
- In function and outcomes obtained, national regulatory authorities should place greater emphasis on including information about the rights of users and consumers. They should also improve the quality and level of detail of the basic information needed by businesses and investors.
- Plans and policies for universal telecom service should have a prominent place on regulatory agencies' websites, particularly because these public policies and their implementation will contribute to an increase in the number of people who have access to information and online services.
- It is important to keep in mind that the correct definition of the information architecture for a website, as well as its functional design, require a user-centered strategy that makes it easy to find information, leverages participatory processes and includes interactive services supported by modern technologies that are currently available, but are under-used.
- Compliance with standards, use of open formats and compliance with norms for accessibility should also be taken into consideration in the design or redesign of a website. All of these conditions help ensure that the website facilitates the process of mediation between information and user.
- The results of this evaluation should be shared with the national regulatory authorities so that they can serve as input for beginning the enhancement of the structure and the redesign of agency websites.

## Notes

<sup>1</sup> Interview with Manuel Castells by Milagros Pérez Oliva, published by the daily *El País* of Madrid and entitled, "El Poder tiene miedo de Internet" ("Power Fears the Internet"). The interview highlights the importance of education: "(...) without education, technology is useless. In Spain, the so-called digital divide is a matter of age. The data are very clear: among those over age 55, only 9 percent are Internet users, but among those under 25, the figure is 90 percent (...). When my generation is gone, there will be no digital divide in access. In the Internet society, however, the complicated thing is not learning to navigate, but knowing where to go, where to look for what you want to find, and what to do with what you find. That requires education. In fact, the Internet amplifies the oldest social divide in history, which is in levels of education. The fact that 55 percent of adults in Spain have not completed secondary school — that is the real digital divide." <http://portal.educ.ar>

<sup>2</sup> World leaders who promoted neoliberal policies, such as U.S. President Ronald Reagan and British Prime Minister Margaret Thatcher, who governed in the 1980s.

<sup>3</sup> *What Washington Means by Policy Reform*, which became known as "The Washington Consensus," was drafted by John Williamson in 1989 for a conference organized by the Institute for International Economics.

<sup>4</sup> Multilateral Trade Negotiations – Uruguay Round – Trade Negotiations Committee. The Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Marrakesh, 15 April 1994. The issues of Financial Services and Information Technology are introduced.

<sup>5</sup> "...low telephone penetration, inadequate levels of investment, serious technological backwardness and poor quality of services..." Information taken from the study by Rozas (2005).

<sup>6</sup> [http://www.citel.oas.org/what\\_is\\_citel.asp](http://www.citel.oas.org/what_is_citel.asp)

<sup>7</sup> [http://www.citel.oas.org/sp/Connectividad/Final%20Spanish%20ACA-PAO-march-5-2003-v3\\_e.pdf](http://www.citel.oas.org/sp/Connectividad/Final%20Spanish%20ACA-PAO-march-5-2003-v3_e.pdf)

<sup>8</sup> See: <http://www.comusuarios.gov.co>

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- Walter, Jorge, and Senén, Cecilia. (2008) *La privatización de las telecomunicaciones en América Latina. Estudio comparado*. Paper prepared for ECLAC.

## Online resources

- Inter-American Telecommunications Commission  
<http://www.citel.oas.org>
- Economic Commission for Latin America and the Caribbean  
<http://www.eclac.org/analisis/>
- Foro Latinoamericano de Entes Reguladores de Telecomunicaciones  
<http://www.regulatel.org>
- World Dialogue on Regulations (WDR)  
<http://www.regulateonline.org>
- Universidad de San Andrés – Argentina  
<http://www.udes.edu.ar>

# Benchmarking Caribbean and North American National Telecom Regulatory Authority Websites

Opal Lawton

## Introduction

In the post privatisation and competition era the telecommunications industry has entered a new phase of evolution, the converging of the once separate industries of telecommunications, information technology (internet) and broadcasting (cable television). This convergence has ushered in the information age where information communication and technology (ICT) is the new development mantra.

ICT is recognised globally as a key vehicle to foster economic development. As a result of this international development agencies such as the United Nations (UN) are focussing on ICT as a critical component of the overall development agenda.

The UN General Assembly in the World Summit on the Information Society (WSIS) clearly articulated the role ICT is expected to play in the new information society. As a consequence of this, action line C7 of WSIS Implementation Plan relates specifically to the role of ICT applications in a range of e-initiatives, including e-government. Governments around the globe have been developing e-government strategies with the hope of putting their countries on the path to reap the benefits of the information society.

As the implementing agency for government telecommunications policies national regulatory agencies (NRAs) are presented with new challenges and opportunities as they seek to ensure the orderly and sustainable development of the ICT sector.

In discharging their responsibilities the NRA can potentially use their online presence via website to:

- 1) Provide access to information and services.
- 2) Address the needs of their various stakeholders; including citizens, service providers, investors and the government.
- 3) Allow greater participation in the regulatory processes.
- 4) Demonstrate transparency in processes and transactions.

The effectiveness of NRA websites will depend on factors such as:

- 1) The level of access the general population has to ICT resources such as internet access and computers.
- 2) The literacy level and computer literacy of the population.
- 3) The availability of skilled resources to the NRA.
- 4) Overall transparency in the sector and access to operator information.
- 5) The extent to which the media and other intermediaries, such as NGOs, further diffuse the regulatory news and other information available on websites.

Given the link between economic development and access to and the use of ICT, governments and government agencies need to find the resources to invest in the infrastructure and other capacities to ensure that citizens have access to and the capability to use the technology.

Equally important, websites need to be effectively designed so that they can in fact enhance service delivery. Most NRAs do have a website. Very few, particularly in Africa, do not. But, some NRAs although they have websites, don't use them in an effective way and don't allocate resources to their development.

This chapter is part of a wider study, covering countries in Asia, Africa, North America, the Caribbean and Latin America. This section focuses on NRAs in Canada, the US and ten English speaking Caribbean countries (Antigua & Barbuda, Barbados, Bahamas, Cayman Islands, Dominica, Grenada, Jamaica, St. Lucia, St. Vincent & the Grenadines and Trinidad & Tobago). The Spanish speaking Caribbean islands of Cuba and Dominican Republic are included with the Latin American countries because of the language commonality and because they are members of Latin American Forum of Telecommunications Regulators (Regatel).

The study seeks to assess the effectiveness of the web presence of these NRAs. The study focuses on the nature and quality of information they provide to their publics, the extent to which they use the technology in the various regulatory processes such as the administration of a complaints function, the provision of online forms, and in their day to day interaction with stakeholders.

## Regional Overview

The countries included in this study are quite diverse in terms of the level of development in their telecommunications market and the maturity of their regulatory agencies. In the same vein, the telecommunications regulatory environment varies from country to country. Factors such as the level of privatisation and the level of competition within the market inform the regulatory environment and nature of the regulatory processes.

In the Caribbean telecommunications landscape, privatisation and the establishment of competitive markets is a fairly recent occurrence. The movement toward privatisation and competition resulted largely from the impetus of the World Trade Organisation (WTO) Commitments relating to trade in services, under which telecommunications fall.

From the late 1990s leading into the beginning of this decade most Caribbean countries started to privatise and

develop pro competition policies leading to reform of their telecommunications sector. Table 1 gives information on the market access and regulatory structure of the islands included in this study.

In Antigua and Barbuda, Antigua Public Utilities Authority (APUA), a government controlled company, maintains a monopoly on local fixed telephone services. Cable and Wireless, the United Kingdom based telecommunications company, which has a long history in the region, continues to have an exclusive franchise on international voice calls, up until 2012. The monopoly on other international services has effectively ended with the landing of alternative international cable facilities by Southern Caribbean Fibre (SCF). However progress towards full liberalization of that market has been stalled, presumably to give the government controlled entity time to be competition ready.

Antigua and Barbuda also stands out as the only territory in the sample that does not have an independent regulator.

Four of the Caribbean islands included in the survey (Dominica, Grenada, St. Lucia, and St. Vincent and the Grenadines) are members of The Organisation of Eastern Caribbean States (OECS). The OECS is a grouping of nine<sup>1</sup> Eastern Caribbean states that are dedicated to economic harmonisation and integration for the economic, security and social development of their citizens. As part of this framework the OECS governments have set up the Eastern Caribbean Telecommunications Authority (ECTEL). ECTEL was established to coordinate and harmonize the development of telecommunications policies and regulations among the group of countries. ECTEL advises the national regulators in each of the member states. ECTEL has a website.

In addition to the ownership structure, the level and maturity of competition in the markets and the institutional frameworks, other factors such as availability of resources (financial and technical), the level of internet usage, internet penetration, and computer penetration, may impact the capacity and effectiveness of a NRAs website.

**Table 1.**

Countries	Structure of sector	Current status of market	Year competition achieved <sup>2</sup>	Type of regulator <sup>3</sup>
Antigua & Barbuda	Public & private	Competition in mobile & internet	NA	Public Utilities Authority
Bahamas	Public & private	Duopoly in fixed, monopoly in mobile, internet liberalized	NA	Independent
Barbados	100% Private	Fully liberalized	2005	Independent
Cayman Islands	100% Private	Fully liberalized	2004	Independent
Dominica	100% Private	Fully liberalized	2003	Independent
Grenada	100% Private	Fully liberalized	2003	Independent
Jamaica	100% Private	Fully liberalized	2003	Independent
St. Lucia	100% Private	Fully liberalized	2003	Independent
St. Vincent & The Grenadines	100% Private	Fully liberalized	2003	Independent
Trinidad & Tobago	100% Private	Fully liberalized	2004	Independent

Table 2 gives some key ICT indicators for the islands included in the survey.

As is the case with sector reform where the successes to date are varied, access to ICT infrastructure is varied. It is also low in comparison to the levels in developed markets. As small island economies with limited financial, technical and skilled human resources, regulators face challenges in terms of resources available to allocate to the development and maintenance of websites. Regulators with more resources are likely to develop better websites.

In terms of the current regulatory agenda, Caribbean regulators are focussing on developing regulatory policies such as interconnection, price regulation, cost separation, number portability, quality of service, indirect access and universal service.

Governments and NRAs are also concerned about putting in place regulatory policies that encourage investments in ICT and ensuring that citizens have access to affordable internet (in particular broadband) access.

In comparison to the Caribbean region, North America markets have less resource constraints and have had a long history of privatisation and competition. In the case of USA, this dates back to the divestiture of The Bell System in 1984. The divestiture allowed for:

- The deregulation of the telephone equipment market;
- The establishment of a competitive long distance calling market;
- The requirement of equal access, where local telephone companies were able to provide their customers with equal access to national long distance and international services provided by the former Bell companies.

The 1996 Telecommunications Act ushered in a greater level of market competition as long distance carriers were no

longer required to file tariffs with the Federal Communication (FCC), in order to effect rate changes. The FCC is an independent government agency that regulates interstate and international telecommunications and other media in the US market.

In as much as the regulatory environment is the product of the legislative and policy positions of respective governments, these legal and regulatory prescriptions are established within the context of social, economic and business imperatives.

The telecommunications industry is characterised by change. Technology has been a key change driver. The internet has revolutionized the industry at several levels: the way information is transported, the way we interface with the technology and the applications and services that can be provided.

Today, as a consequence of several industry drivers (privatisation, competition, technology changes) the US market is characterized by robust competition in all market segments.<sup>4</sup> Over 93% of US households are served by three or more wire line providers and 98% of the population is served by three or more wireless carriers. The US boasts 142 million internet connections which is one of the highest in the world. The regulatory agenda of the FCC includes:

- Ensuring access to reliable and affordable broadband services;
- Fostering innovation and offering customers reliable and meaningful service choices;
- Promoting efficient and effective use of scarce resources such as spectrum.

The Canadian Radio-television and Telecommunications Commission (CRTC), like the FCC, is an independent regulatory agency, whose role is to interpret and apply telecommunications legislation within that market. The CRTC is a multi sector regulator and regulates the broadcasting industry as well.

**Table 2. Key ICT indicators**

Countries	Fixed lines per 100 inhabitants	Mobile per 100 inhabitants	Internet per 100 inhabitants	Broadband per 100 inhabitants
Antigua & Barbuda	45.45	133.55	13.75	8.23
Bahamas	40.10	112.90	7.62	3.93
Barbados	50.14	87.76		20.45
Cayman Islands		76.64	Not available	Not available
Dominica	29.40	58.68	8.44	4.56
Grenada	26.74	44.59	7.03	5.35
Jamaica	12.85	93.74	3.19	2.97
St. Lucia		65.72	Not available	Not available
St. Vincent & The Grenadines	18.93	86.34	6.16	5.70
Trinidad & Tobago	24.29	70.58	4.75	1.17
Source: ITU (data for 2007)				

The passage of the 1993 Telecommunications Act, laid the framework for a more competitive market in Canada. At that time, all markets which were not subject to competition were opened to competition. Today the market is very competitive and has a variety of network service providers (wire line, wireless and IP based carriers), as well as a wide array of telecommunications service providers.

Recent statistics show Canada placed at tenth in the world for the number of broadband connections per 100 inhabitants.

The areas of focus included in the Canadian regulatory agenda are:

- Ensuring that market forces prevail and the population has access to high quality and affordable services;
- Ensuring that as far as is possible market forces are relied on to achieve telecommunications policy objectives;
- Establishing a consumer protection agency;
- Reviewing the regulatory framework for wholesale services and the definition of essential services.

The market and the regulatory landscape of the countries included in this study are at varying levels of maturity. This exercise seeks to determine how effectively they are using their websites to take forward their respective regulatory agendas.

## Benchmarking

### Methodological Comments

As described in Chapter 2, this study is designed to obtain an objective measure of NRA websites in terms of the depth and range of information provided across particular regulatory thematic areas, and in terms of the overall functionality of the website in supporting regulatory processes. Applying the methodology also used to assess Latin American and African websites in this volume, this chapter aims to measure the extent to which telecom regulators in North America and the Caribbean use their online presence to serve their various stakeholders.

The survey of the websites was done during the period of 14 April 2008 to 10 May 2008. In applying the methodology to the countries included in this assessment, there were several factors that could impact the results of the study. These are explained below with the hope of enhancing the quantitative assessment with a qualitative gauge.

The initial list of countries also included Guyana and St. Kitts & Nevis. Guyana has a Public Utilities Commission (PUC) but no web presence was identified and was therefore excluded from the study. The website for the NRA in St. Kitts & Nevis was not operational during the period of the assessment.

During the period of the survey, the Jamaican NRA, the Office of Utility Regulation (OUR), was in the process of re-launching their site. The site address remains the same; however, an advisory on the site indicated that the site was under

construction and that there are some errors and omissions. Over the period of the survey it was obvious that more information was being added to the site. While there was no information on the site itself indicating why it was being re-launched, when contacted, an official at the agency indicated that over time it had become difficult to locate information on the site. He further indicated that the overhauling exercise is intended to improve the accessibility of information on the site and to generally allow for a better navigation experience.

The ECTEL members included in the survey have their individual websites. ECTEL also has a site. For the purpose of this study, the primary survey was carried out on the site of the individual NRAs. Where the relevant information resided on the ECTEL site and a link was established from the member country site, that information or process was treated as if it were on the site of the member country.

Where there are multiple agencies with responsibility for regulating different areas of the market, as in the case of Jamaica and Barbados the assessment includes the various sites.

## Factual Information and News

Figure 1 shows the scores for the individual NRAs, both in terms of the overall score and the contribution of each of the items included in that category.

With the exception of Antigua and Barbuda, the other NRAs had information about their legislation and regulatory rules. This information was found to be up-to-date. For the Caribbean regulators this was in the form of copies of documents such as the telecommunications laws and other rulings. The information is presented in the form of PDF or Word document copies of the original. In comparison, the North American regulators present the information in web format rather than as copies of original documents. In the case of Canada, the CRTC site is linked to that of the Department of Justice, where the information is presented in a web page format with a table of contents. This allows the user to quickly identify and access the specific information required. There are also links to related information. The FCC uses a similar approach to present the rules and regulations on their website.

For the news sub-category, with the exception of Antigua and Barbuda, all the sites surveyed have a section for news on the main page. The information included are largely press releases from the agencies. The OUR in Jamaica has quite an extensive and varied news component. From the main page you can access the press releases page. From here you can access details of the various press releases. There is also an audio-visual section, where the user can access copies of presentations, audio files of the OUR's weekly radio programme, and video files of several press conferences. In the case of some of the smaller jurisdictions such as St. Vincent & The Grenadines, Grenada and Dominica the news component is actually a link to the news section of the ITU website.

In addition to the news presented on the site, CRTC provides the capability for users to subscribe to news releases via email. The FCC scored the maximum four points for this item given facilities for users to get information via online recordings and the capabilities for video streaming of meetings and conferences. Additionally, using its electronic filing and public access systems the public can review and submit filings related to various proceedings.

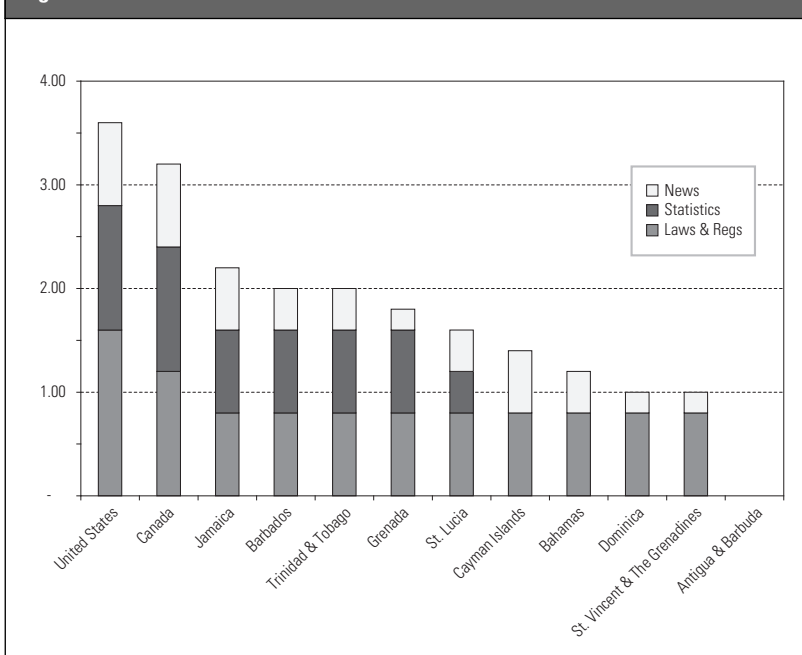
Seven of the 12 websites assessed had statistical information and sector indicators. The US and Canadian sites are information rich in this area. In terms of the Caribbean regulators, the website for the Grenada NRA stands out by having a very visible section of their site for telecommunications statistics. Drilling down the user can obtain a market overview and relevant statistical information on that market. Jamaica and Trinidad & Tobago provide some amount of statistical information as part of their annual sector reports which are posted on the site.

In terms of overall score in the category, among the Caribbean regulators, Jamaica scores the highest, followed by Barbados. Interestingly these two countries have multiple regulatory agencies. It may be that because of this, comparatively more resources are available to the overall regulatory efforts in these markets.

This writer observed that the regulators in North America provide useful guidance to help the user to better assess the quality of the factual information provided. For example, the Canadian site makes specific statements as to currency of update and the source of the information, where they are not the custodians of the information. It gives a disclaimer regard-

ing the accuracy of the information, notes that the information is for convenience purposes only and importantly refers the user to the official source of the information for purposes of interpretation. This is good value added feature, particularly where the information is being used for say research and other academic purposes. Additionally there are hyper links to related documents and related sites.

**Figure 1. Individual NRA Performance - Factual Information and News**



## Consumer and Citizen Information

One of the key responsibilities of a national regulator is to ensure that consumers have adequate information about the products and services they purchase from the various operators, and that they know their rights and privileges. The regulator also has the responsibility to ensure that citizens are informed and encouraged to participate in the development and implementation of industry policies and rules. To effectively carry out these functions the regulators have to put mechanisms and processes in place to ensure end users have access to reliable and up-to-date information and that transparent processes are in place to deal with issues such as consumer complaints. Used appropriately websites can be an invaluable tool in discharging these responsibilities.

Figure 2 gives the total and breakdown of scores for the consumer and citizen information section of the survey.

The FCC and CRTC sites scored 3.6 in this category. Both sites have an area dedicated to consumer affairs. From the main FCC page there is a link to the Consumer & Governmental Affairs Bureau (CGB) which has responsibility for developing and implementing consumer policies. Guided by the headings the user can drill down further to get to the specific information required. There is a wide range of consumer publications online with links to the related advisories. Through the customer information registry various interest groups including customers can request a range of information through a secured web portal.

A notable feature of the CRTC site is that in addition to allowing online access to information on ongoing public hear-

ings, it facilitates participation via online forms, where comments can be written and uploaded. One can also register online to have a telephone number removed from telemarketer's lists.

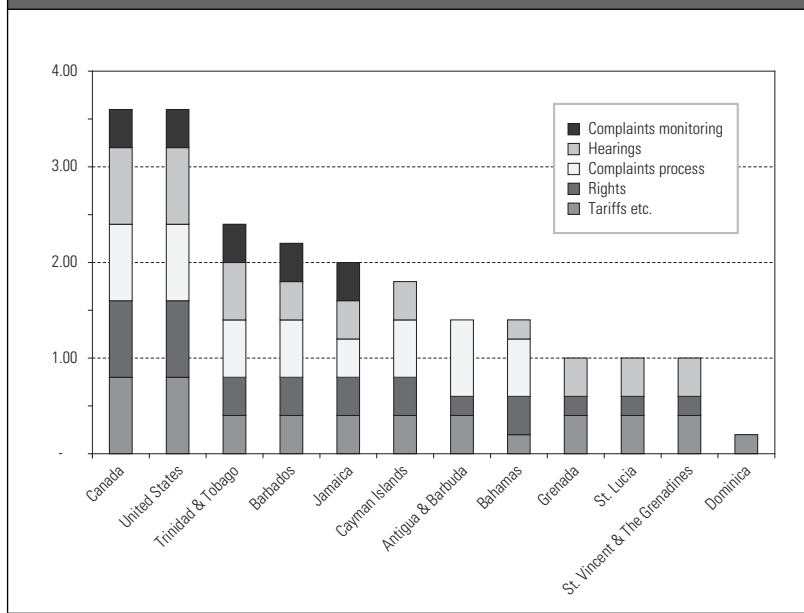
In using these sites, one gets the impression that you could actually interact with the regulator without actually having to make a visit to the physical location.

In doing the survey I had the occasion to request some information from the CRTC via the online customer enquiry facility. Almost immediately I received an automatic confirmation that my message was received. I was also informed that my query would be addressed within ten working days. I received a response within three working days.

One drawback with both the FCC and CRTC sites is that because of the wealth of information on the site, the online experience could be intimidating to the average user. For example I found that information on product tariffs and numbering plan information was not as easy to locate as compared to the websites in less developed markets. While the maturity of competition in these markets could mean that these issues are more stable (for example pricing decisions are more a function of competitive market forces than the result of regulatory intervention) consumers desire this type of information. Information on regulatory issues which are more alive in these markets (e.g. wireless number portability) is more visible.

On average, the Caribbean regulators tended to provide enhanced content with regularly updated and clearly explained information in this area. However the range is quite wide, Dominica with a score of less than one and Trinidad & Tobago with a score of 2.4. With the exception of Dominica the other

**Figure 2. Individual NRA Performance - Consumer and Citizen Information**





Caribbean NRAs included in the study had reasonably good information on prices. Other customer related information is available at a minimum through the Frequently Asked Question (FAQ) feature.

Forty percent of the Caribbean NRAs have an online component in their consumer complaints process where one can submit the complaint online or submit questions. While doing the survey I had occasion to send a question to the St. Vincent regulator via the online facility. I received an email response in two working days. In one or two instances (e.g. The Bahamas) I was not able to effectively verify if the facilities to submit questions and or comments worked, as I did not get a response (auto response or otherwise) having clicked the button to submit the question.

Where the consumer affairs function is part of the regulatory agency's function, information such as complaints tracking tends to be provided, as is the case in Jamaica, Barbados and Trinidad & Tobago. Where this is not the case such as for the Cayman Islands, this type of information is not included.

In terms of the mechanisms used to elicit public participation in the development of regulatory policies, the two approaches normally used are public hearings and public consultations. A public consultation involves an oral proceeding where members of the public are invited to give their views on an issue under consideration. Normally the regulator would present its policy position and the public (including entities participating in the industry) would be asked to present and defend their position.

On the other hand a public consultation is a written proceeding. Stakeholders participate in the process of policy development through written responses to policy papers put out by the regulator. Normally there are several rounds of responses. Initial responses are invited on the draft policy document put out by the regulator. The regulator uses the first set of comments to inform and update their policy paper. The redrafted document is re-circulated for further comments. These additional comments are used to further refine the final policy positions which are used as the basis for rule making.

Some regulatory agencies use both processes while others use one. Whereas public hearings are a feature of the policy formation process in North America, this is not always the case in the Caribbean. Of the Caribbean regulators included in the study, Barbados uses public hearings as an integral part of the regulatory process. The other jurisdictions tend to favour public consultations to solicit feedback to inform policy development.

For the purpose of this survey the focus is on the intent of the process. Therefore where the intent is for the public consultation process to be inclusive, that is, the general public and not only industry participants are invited to participate in public consultations, a public consultation process is treated the same as a public hearing process.

Regardless of the processes used (consultations or hearings), the NRAs have on their website guidelines for conducting these processes. Information about specific processes is

also available online including dates for responses. In the case of public consultations, the documents can be downloaded from the NRAs website. In this area the NRAs are effectively using their websites to facilitate participation in the regulatory process.

While outside the scope of this current study, the effectiveness of either process (consultations vs. hearings) in the Caribbean context merits further study.

To allow for an inclusive process, questions that arise include:

- 1) The accessibility of the information to the general public;
- 2) Whether literacy levels impede participation in the written process;
- 3) Is the oral process any more effective, given cultural tendencies of public inertia in such matters?

## Business Information

For the business information category, what stands out is the fact that this is one of the areas where the gap between the more mature markets of North America and the less mature Caribbean markets is narrowest in terms of the overall scores for each NRA. Of note is the fact that a small Caribbean markets such as St. Vincent & the Grenadines scores 2.8 points. A possible explanation is that Caribbean regulators are putting some focus into the effort to reform their markets and this is reflected in their online presence. Whatever the reason the Caribbean regulators are clearly making an effort to give investors, and the business community in general, access to information about their markets.

With the exception of Antigua Barbuda (where the government controls the major segments of the market) all the regulators have available online information related to their licensing regime. This includes the facility to download forms required to apply for licenses. Barbados, Jamaica, St. Vincent & the Grenadines, in addition to the Telecommunications Act, include information on licensing fees, details on the procedure for applying for licences, and online licensing application forms.

In the area of equipment certification 70% of the Caribbean regulators scored 3 and above. The Telecommunications Authority of Trinidad & Tobago (TATT) demonstrates best practise in this area. A customer requiring equipment to be certified can complete this activity by emailing the completed form to the authority. This is an indication that with little effort regulators in small states can move their online presence to the transactional end of the spectrum.

Information on public consultations / public hearings is generally available online. Eighty percent of NRAs in the region provide consultation documents and other related information on their sites. Users can download the documents if they so desire. A similar situation obtains with regards to spectrum

management; fifty percent of NRAs have an interactive online presence as users can download the required information and forms to access this service.

In the area of business information, North American regulators CRTC and FCC use their web presence to complete transactions. For example CRTC uses an electronic credentialing system “epass” to allow online communication.

To conduct business with the FCC users have the register with an online system (CORES). Upon registration users are allocated a unique identification number which is required in order to conduct business with the commission. Online functions include:

- Registering online to use the online facilities
- Applying for licenses and other related transactions
- Search for information
- Filings
- Pay fees

Additionally the FCC Electronic Filing & Public Access Systems allow the public to submit and review a range of FCC proceedings.

## General Information

This section looks at the layout of the website: how user friendly it is to navigate, the organisational structure and availability

of contact information for key officials. The overall scores plus the contribution of each element are shown in Figure 4.

The Cayman Islands, the smallest country (in terms of population) in the sample scores the highest in this category. However, of the Caribbean countries included in the sample it has one of the highest gross domestic product (GDP) per capita.

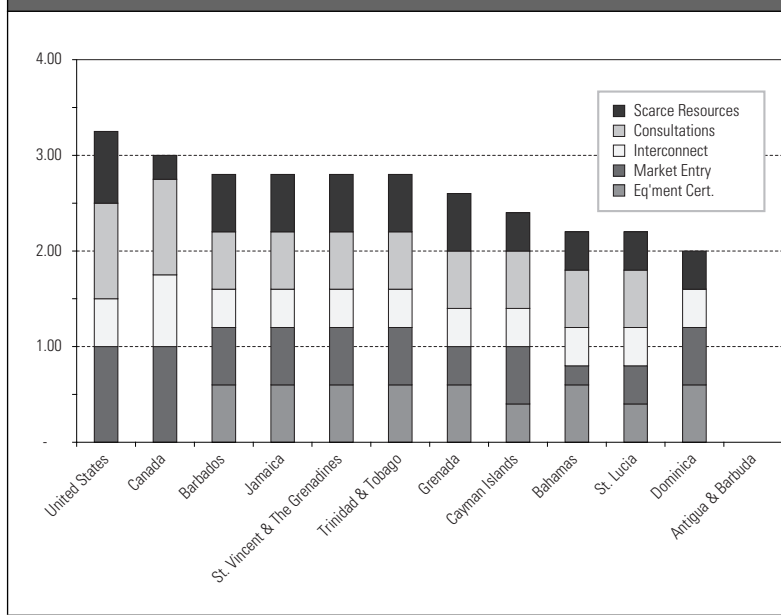
All the regulators included in the study provide some level of information about their mission on their website. In outlining its mandate, CRTC effectively uses hyperlinks to tie its mandate to the various enabling legislations. The FCC uses a similar approach with links to additional information about its commissioners and the various departments that make up the commission. This is a very helpful feature.

Only in the North American context was the issue of language relevant. CRTC’s website is in English and French. This is understandable as Canada has two official languages. In the case of FCC only the “Consumer Centre” area of the site is available in English and Spanish.

Ten of the twelve sites surveyed provide links to sites of other local and international organisations. APUA provides no links. The FCC site does not have a specific page with links to external local or international agencies, only hyperlinks to related agencies such as Lifeline Across America. This is a universal access type programme, which seeks to ensure that everyone has access to telephone service. Grenada, St Lucia, St Vincent and Trinidad & Tobago provide good examples of links as the available links are categorised by types, e.g. local, regional and international.

Ten of the sites surveyed use other navigation tools such as search engines and or site maps to help the user around their

**Figure 3. Individual NRA Performance - Business Information**



sites. The NRAs of Dominica and Grenada do not employ these tools on their site. The FCC and CTRC used both tools. Caribbean regulators show a preference for the use of search engines with seven opting for search engines and one using a site map. Unfortunately in the case of St Lucia and St Vincent the search feature did not work.

Half of the sites surveyed provide users with specific contact details to key personnel within the NRA. Generally the other half just provides general contact information such as a general email address or that of the person responsible for maintaining the site. If regulatory agencies are to effectively carry out their functions, accountability and transparency are key attributes. As such, specific information about the individuals responsible for key roles and information on how to contact them will help to facilitate accountability and transparency. Among the Caribbean regulators, the FTC in Barbados and NRAs in St Vincent & the Grenadines, Dominica and Cayman Islands provide good examples in this regard as they provide the names and contact information (at least email) for key officials at the agencies. The site for the regulator in Cayman for example, gives the positions, the name of the incumbent and both email and telephone contact.

In terms of general organisation, Caribbean websites tend to be structured more around publications or around policy themes. For example on the OUR's site, the sub headings under the telecommunications page are as follows:

- Consultative documents
- Responses

- Proposed Rule Making
- Determination Notices
- Reconsiderations
- Licensing

On its main page TATT has headings like publications and forms and the page is full of links to various documents.

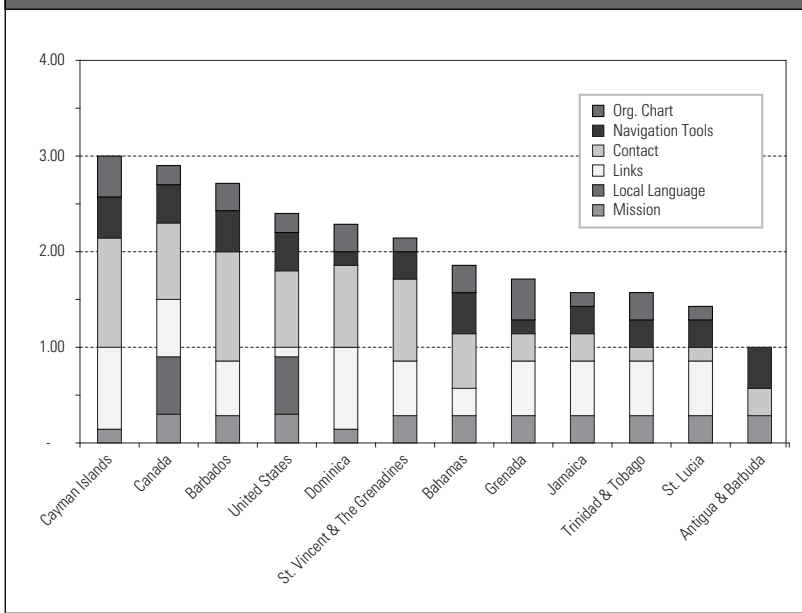
In comparison CRTC's website is more aligned to the main functions of a NRA. From the main page you can link to:

- Complaints and inquiries
- Consumer information
- Online services
- Public proceedings, etc.

As such, the site is organised around the functions and services that the agency provides. In other words, the way in which the user interfaces with the site tends to mirror the service flow rather than the document flow. It is my view that this format presents a more service oriented face to the public.

The FCC website is structured in such a manner that the user is guided to the location of the information. This is done in much the same way as books and other materials are catalogued in a physical library. Another helpful feature is that there is evidence that in cases where information has been relocated on the site or moved to another site, linkages to the new location are provided. This is important given the dynamism of the ICT sector, change is a feature of the day-to-day experience.

**Figure 4. Individual NRA Performance (General Information)**



## Universal Service / Universal Access

Of all the categories surveyed, this proved the most challenging to source a meaningful body of information. Eleven of the twelve sites provide varying levels of information on this area. The overall scores are shown in Figure 5.

Generally the Caribbean regulators provide such information in the form of past consultations or draft policy documents. The Dominica NRA simply has a general link to the ECTEL site, no specific reference to this and other consultations are made on the site, despite the fact that there is an area marked for current consultations and recent documents.

The websites of the other ECTEL members provide information on a recently concluded public consultation on universal service regulations. A copy of the draft policy document was either on the website of the individual member states or a link was provided to the document or just to the ECTEL site in the case of Dominica.

In Trinidad & Tobago the work done to date on the issue of universal service or universal access has been carried out by the ministry with responsibility for telecommunications. TATT has made comments on the issue in various consultation documents and is expected to commence consultation on the issue.

The FCC provides information on policy and provided a link to Universal Service Administrative Company that gives information on various programmes. CRTC also provide policy information in various documents.

With market convergence, the concept of universal service or universal access is also undergoing change. The current discourse speaks of universal service in terms of the availability and affordability of broadband access. This may to some extent explain the generally outdated and or fragmented view of this type of information.

## Overall Scores

Both FCC and CRTC have scored above 3, firmly identifying their respective websites as being at the interactive level and in some areas they operate at the transactional level. Three of the ten Caribbean countries (Barbados, Jamaica and Trinidad & Tobago) score just above 2, indicating that overall the online presence in these jurisdictions are at the enhanced level, where updated information is available in the web environment. There are also some interactive capabilities being developed. The Cayman Islands score slightly below 2, and is essentially at a comparable stage as the first three. The NRAs in the OECS countries of Grenada, St Vincent & the Grenadines and St. Lucia score over 1.5. The score for The Bahamas is also in that range. The other OECS country in the sample score about 1.2. Antigua & Barbuda receives the lowest overall score, which is below 1.

Figures 7 - 9 show how the regulators in various groupings (ECTEL members, other Caribbean and North American NRAs) score against the ideal framework developed for this study.

The overall score is intended to get to a quantitative measure to capture the overall effectiveness of the websites in the various countries. However this one value does not portray some notable features on the various sites.

## Conclusions & Recommendations

Fourteen websites from twelve countries or markets were reviewed. Of the twelve markets assessed, ten are fully liberalised while two are predominantly government controlled, with pockets of competition in some segments of the market. Eleven of the markets surveyed have an independent regulatory agency and in some cases multiple agencies.

Antigua & Barbuda is not fully liberalised and the only market without an independent regulator. It is also the market with the lowest overall score. The score is also markedly below that of other similar size economies and markets within the region. Although this one instance is not adequate to make a generalised observation, it does tend to support the view that where the government performs the role of owner and operator of telecommunications networks and services plus determines and implements policies, the level of regulatory oversight is limited at best. This seems to extend to the online presence as well.

Of note too is the fact that Guyana, which still has significant government ownership and control in major market segments, does not have a known online regulatory presence. This further supports the view that there is a direct correlation between level of privatization and competition in a market and the rigour and transparency of the regulatory processes. This seems to obtain even in the face of online capabilities, which can be used to improve the transparency and accountability in the regulatory processes.

With regards to regulatory models, of the ten Caribbean NRAs included in this study, only the Cayman Islands and Trinidad & Tobago have a single regulator covering the full range of regulatory issues; economic, technical and consumer affairs. For the other islands there are multiple agencies with responsibility for specific areas. Based on the results the regulatory model (single vs. multiple agencies) did not seem to have an impact on the level of development and effectiveness of the NRAs websites. Maybe the fact that an effort was made to include all the relevant agencies where multiple agencies exist would mask any potential differences.

A notable observation is that in multi agency environment in the Caribbean, features such as hyperlinks are not used sufficiently if at all to provide the user with ready access to information on separate sites. In the case of Jamaica, for example, there are three regulatory bodies (OUR, Spectrum Management Authority (SMA) and Fair Trading Commission (FTC)).<sup>5</sup>

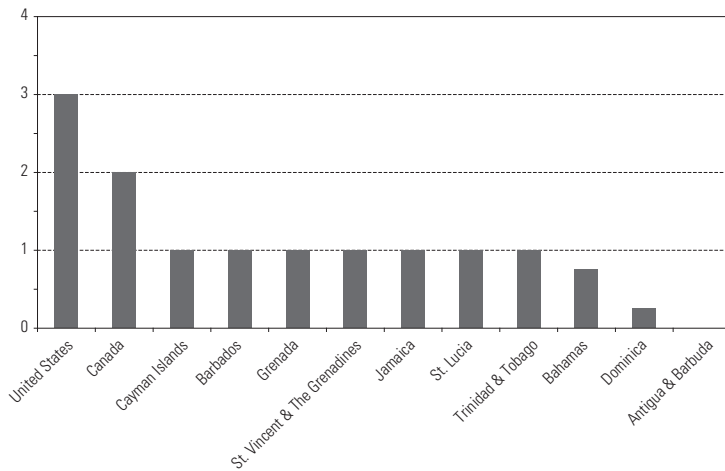
However, the OUR does not provide a link from its site to either of the other two agencies. The SMA provides links to both of the other agencies. In the case of Barbados the FTC provides a link to the Telecoms Unit, however there is no link from Telecoms Unit to FTC

Although it was not one of the main sites reviewed the ECTEL site provides an interesting case. On that site the laws

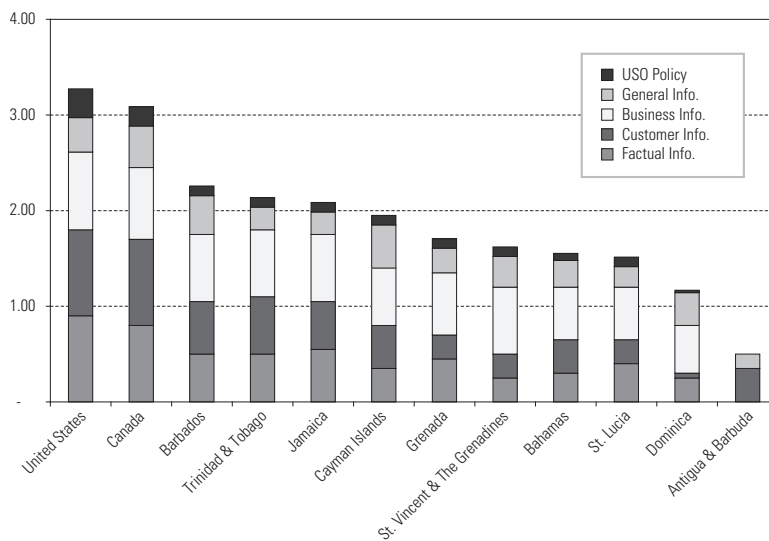
and regulations of member states are provided. Given the structure and the interrelatedness of the individual NRAs to the regional regulator, very limited use is made of automatic linking or hyper linking the information of the respective NRAs to that of ECTEL.

Within the context of multiple regulatory agencies, websites offer a golden opportunity to present a seamless presence to

**Figure 5. Individual NRA Performance - USO Policy**



**Figure 6. Total with Category Contributions**



the user, through linking of sites and effective use of hyper-linking. This is very easy and inexpensive to achieve. It is recommended that tools such as hyperlinks are used more effectively to create easy access to related information on the sites of related agencies. The North American markets offer good examples in the use of this approach.

In the area of factual information all the sites (except Antigua & Barbuda) have good to fair representation of information especially legal, regulatory and news. Five of the twelve jurisdictions have scores at or above the enhanced category. Of the five, Canada and USA have scores in the interactive range.

With respect to the Caribbean markets, the area in which there is the least development is in the area of statistical information. In five of the ten markets, there is no evidence of market statistics on the sites. Four countries (Barbados, Grenada, Jamaica and Trinidad & Tobago) got scores that rate them in the enhanced category. There is room for improvement in this area.

Several of the sites have a specific area dedicated to customer information. Where this occurs there tends to be more emphasis on consumer related information. The North American regulators provide good benchmarks in this area. The Barbados FTC, St Lucia and The Bahamas have a section dedicated to customer information.

Capabilities for providing information on prices and other customer rights information are generally well-developed across all the NRAs. FAQ format is a popular mode for providing non price rights information. Ten of the twelve sites provide information on public hearings / consultations. The more developed markets of USA and Canada effectively use their

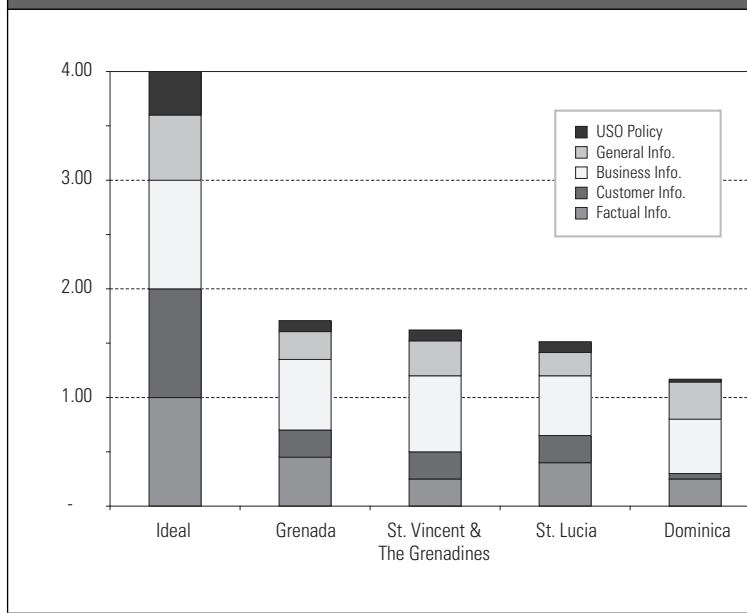
web presence to facilitate transactions such as electronic filing of feedback in consultations and the processing of licensing. The Caribbean is also highly capable in this area with eight of the ten countries graded at the interactive level as they provide facilities to download information needed to participate in consultation processes.

The function of addressing and providing visibility of the resolution of consumer complaints is an application which I believe NRAs could use to encourage the average citizen to interface with the agency online. Thirty three percent of the sites surveyed did not have information about a customer complaints process. Of those with a customer complaints process, eighty eight percent have an online element, where the user can at a minimum download a complaints form. Fifty eight percent of the sites had no information on complaints monitoring.

Where internet and computer access is not pervasive, there may be concerns as to the accessibility of such key information to the average citizen. Nevertheless, NRAs should not use this as a reason for not having such information and processes online. This development should be encouraged, as it can be used as a tool to encourage the use of information and communication technology by the general citizenry.

In the business information category, with the exception of Antigua & Barbuda, the other countries score at or above the enhanced level. Particularly in the areas of licensing and equipment certification there are several instances where Caribbean NRAs are using their websites in an interactive mode to allow businesses to download application forms. Here, the performance of the Caribbean regulators demon-

Figure 7. Ideal vs. ECTEL Members



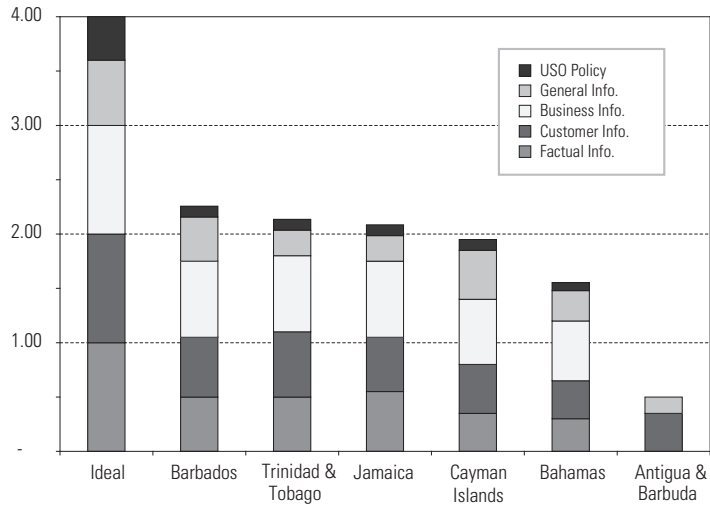
strates how small economies can use the technology to improve their competitiveness.

In the general information category Cayman Islands attains the highest overall rating. All the sites have the NRA's mission statement. Over 80% have links to other sites and use tools such as site maps and search engines to facilitate easier navi-

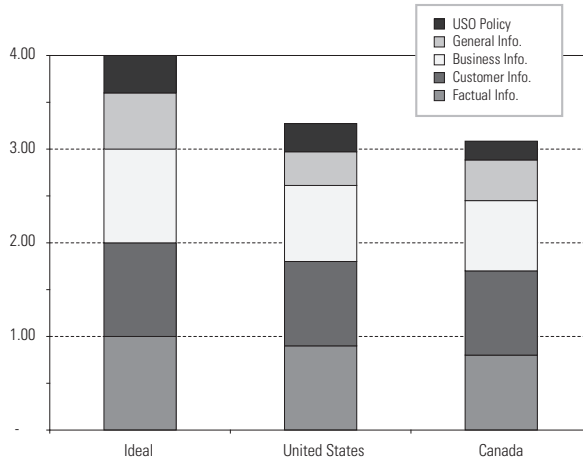
gation. Only 50% of the sites have specific contact details for key officials at the agency. This is an area that needs improvement, and can be done with very little effort.

A notable best practise observed on the North American websites is that they are organised more around the functions and services that the agency provides, and less around policy

**Figure 8. Ideal vs. Scores of other Caribbean NRAs**



**Figure 9. Ideal vs. scores of North American NRAs**



themes and publications. This structure more effectively captures the process flow in terms of how the various publics interact with the regulator. As such, they present a more service oriented face to the public. I would therefore recommend this approach to NRAs that are redesigning their sites or those establishing sites for the first time.

From the survey it is clear that all the NRAs are using their web presence to enhance their service delivery. They are achieving varying levels of success. Individual agencies can improve their website by adopting the best practises from other agencies.

## Notes

<sup>1</sup> The OECS countries are Antigua & Barbuda, The Commonwealth of Dominica, Grenada, Montserrat, St Kitts & Nevis, St. Lucia, St. Vincent and the Grenadines. Anguilla and British Virgin Island are associate members.

<sup>2</sup> The year in which full market access was legally permitted.

<sup>3</sup> The way in which the independent regulatory institutions have been established in these markets vary. In Barbados the FTC is responsible for price regulation, competition issues and consumer protection, while the Telecommunications Unit in the Ministry of Energy and Public Utilities is responsible for regulating the technical aspects of the sector.

In Jamaica the responsibilities are shared among the OUR, FTC and the SMA. The OUR has responsibility for economic regulations (price, quality etc), FTC for general competition issues and SMA has responsibility for radio frequency and spectrum.

In Cayman Islands ICTA regulates the entire industry. In Trinidad & Tobago TATT also regulates the entire industry. In the OECS, there is a regional body, ECTEL, which is responsible for coordinating and harmonising the policies and regulations of the five member states, Dominica, Grenada, St. Lucia, St. Kitts & Nevis and St. Vincent & the Grenadines.

<sup>4</sup> <http://www.fcc.gov/Reports/ar2007.pdf>

<sup>5</sup> The Fair Trading Commission in Jamaica has responsibility for general competition issues and is not an industry specific regulator. However, the OUR is expected to collaborate with the FTC on issues that touch on general competition rules.

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# Benchmark Indicators for African National Telecom Regulatory Authority Websites

Monica Kerretts-Makau\*

## Introduction

The concept of governance in recent years has evolved with the introduction of information and communication technologies (ICT). Governments can now provide services without the need for the traditional face-to-face interaction. This undoubtedly represents a marked change; more so, for African countries whose governance measures are increasingly measured by their ability to reduce bureaucracy levels through the use of e-governance.<sup>1</sup> In this model, a government is expected to incorporate three types of interactions namely: government-to-government (G2G), government-to-business (G2B) and government-to-citizen (G2C).

It is not surprising therefore that e-government has become an important theme and benchmark for the assessment of development via the ability to facilitate government services through ICT initiatives such as web portals. As most African national regulatory authorities (NRAs) already have a website or are in the process of establishing one, it is clear that this is viewed as an important or necessary activity. A website provides a fundamental window to realise the true spirit of e-government. A properly built website provides citizens and other stakeholders with one of the best interfaces to the regulatory agency. It allows for self-service around the clock and reduces long queues and time as is evident in many African government agencies. In addition, international and local businesses can search for and even apply for certain facilities online without having to make a physical journey to the government agency. A website thus becomes a virtual representation of the entire organization in cyberspace (Wattegama 2007).

As Mahan (2005) correctly observes, the importance of a national telecom regulatory authority website can never be underestimated. A NRA is one of the key government agencies

in any country. It is the apex body that is largely responsible for the healthy growth of the telecom sector and the diffusion of telecom services to the public at all levels. It serves a large group of stakeholders varying from citizens and consumers to incumbent operators and prospective investors. Regulators set standards for transparency and accountability and thus, a well-designed and informative website will also demonstrate the extent and facility with which the NRA uses the technologies and services it regulates. A well-maintained website increases confidence in the regulator's skills and capabilities and thus provides a window upon which to evaluate the level of e-governance within a country.

While there exists a plethora of e-government initiatives taking place within African governments, supported by international agencies, actual analysis of the type of services provided using e-based technologies has received little attention or speculation as to what constitutes effective components. Focusing on African telecom regulatory authorities, this survey follows from a similar study carried out during March-April 2004 (Mahan 2005) which focused on 22 African NRA websites. Unlike the previous study however, this study evaluates a total of 30 countries out of 54 countries in Africa. The increase in number no doubts marks an increase over the past four years in the use of websites as a tool in regulation.

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\* Special thanks to Alvaro Mailhos who was responsible for putting the analyzed data sets together and ensuring that all figures were correctly formatted and calculated. Special mention is also extended to Albert Nsengiyumva for his contribution on the regional overview of North and West Africa; and to Dongola Kikuni who ensured that content from French websites had been analyzed correctly.

Finally, it is recognised that a website presence indicator for NRAs cannot capture the access that citizens have to these websites, nor can it capture the overall effectiveness, efficiency or transparency of the regulator. What this benchmarking process does attempt however, is to clarify the type of information and level of interactivity and in so doing assess a country's progress in its e-governance initiatives.

## Overview of the African Context

### Economic overview

In 2006, world population amounted to 6.6 billion inhabitants, with 923 million in Africa, the second most populated region after Asia (with 3.9 billion inhabitants). Although the African continent during the past five years has seen an increase in its overall gross domestic product (GDP), it remains the world's poorest and most under-developed continent, with a GDP of USD 996 billion compared to the global GDP of USD 48,800 billion, representing little over two percent of the world's GDP (UNDP 2006). Within Africa, the distribution of wealth is rather uneven between countries.

Out of a total of 54 African economies, South Africa alone accounted for a GDP of USD 240 billion, 25% of Africa's total GDP. Africa's low economic performance can largely be attributed to the effects of tropical diseases, the slave trade, corrupt governments, failed central planning, the international trade regime and geopolitics as well as widespread human rights violations, the negative effects of colonialism, despotism, illiteracy, superstition, tribal savagery and military conflict (ranging from civil war to guerilla warfare to genocide). Widespread poverty, illiteracy, malnutrition and inadequate water supply and sanitation, as well as poor health, affect a large majority of the people who reside in the African continent, where 36.2% of the population is living on less than \$1 per day. According to the United Nations' Human Development Report in 2003, the bottom 25 ranked nations (151st to 175th) were all African nations.

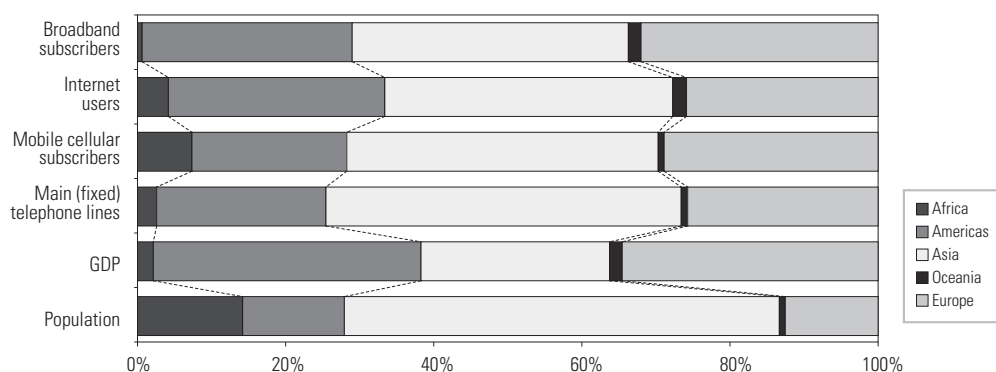
### The communications sector

Unlike the other industry sectors in Africa, the telecom sector continues to present great opportunities for Africa. The liberalization of the sector, the extension of services by multinational conglomerates and the active competition currently in place in the sector have all contributed to the telecom revolution. This growth is largely due to the initiation of liberalization and privatization of the sector in many African countries. Many African governments have developed their telecommunication infrastructure by privatizing their former state-owned enterprises. However, the greatest growth in this sector has come about due to the licensing of new mobile operators in to the Africa market. As a result, Africa has been the fastest-growing mobile market in the world during the past five years. There are now more than 85 million mobile users in Africa (ITU 2007). Mobile telephony has had a positive and significant impact on economic growth and this impact may be twice as large in developing countries as in developed countries.

Nonetheless, with regards to access to ICT, Africa is lacking in investment intensive infrastructure, such as main telephone lines and fixed broadband. While there were 1,270 million main (fixed) telephone lines worldwide in 2006, fewer than 2% of these were located in Africa, whereas Asia had a share of 48% (ITU 2007). Clearly, Africa still has great potential to improve its telecom usage and infrastructure deployment.

Due to prohibitively high tariffs and limited computer literacy, the number of broadband subscribers in Africa is rather small. While the world saw 281 million broadband subscribers by the end of 2006, one million, less than 0.4%, had subscribed in Africa. Since broadband access is a major tool for e-government as well as e-commerce, this is a striking indicator for Africa's future development. Broadband access has spread rapidly in Asia, where 104 million persons have subscribed for high-speed Internet access, followed by Europe and the Americas with 89 and 80 million subscribers respectively. Mobile cellular technology has a higher coverage rate in the region.

Figure 1. Regional overview of main indicators



Cheaper infrastructure and larger regional penetration, cheaper handsets, competitive markets and business models oriented to the needs of the poorer segments of the population (such as affordable prepaid cards) have resulted in a mobile boom in Africa during the last decade. Nevertheless, the share of Africa with 7.2% of the worldwide 2.7 billion mobile subscribers shows still a lot of potential growth.

Africa already experienced a significant yearly growth of mobile penetration. While Africa had 198 million mobile cellular subscribers in 2006, Asia had 1,137 million, Europe 768 million and the Americas 558 million subscribers respectively. The African mobile market is still far away from saturation while the trend in several countries in the world is towards a second mobile per person. In 2006, Africa had a penetration of mobile cellular subscribers per 100 inhabitants of 22, 62 for the Americas, 29.3 for Asia, 94.3 for Europe and 72.6 for Oceania. The internet market is the most competitive one in Africa, with 68.6% of the economies allowing full competition and another 11.8% partial competition. Within Africa, the largest number of monopolies is found in Sub-Saharan Africa. Figure 1 provides a summary of the ICT sector in Africa in comparison with other regions in the world.

The changes in privatization and liberalization that occurred in Africa mainly between 1994 and 2003 also marked the creation of independent regulatory authorities in the sector. By mid-2007, ITU records indicated that 83% of African countries had established regulatory authorities. Although the number of African authorities is quite impressive, the staff of a well-functioning regulatory authority needs to be well-educated, trained and networked with colleagues from other countries (Melody et al. 2003). As the ICT environment is changing rapidly, keeping the policy and regulatory frameworks in line with the constant evolution of technologies, applications and services is a challenge for governments and regulators around the world.

In view of the changes in the telecom sector as discussed above, this benchmarking provides a window to assess an aspect of how African regulatory agencies are performing in providing balanced and useful information to all their stakeholders.

## Regional overview

The African continent comprises several regional blocks under the umbrella of the African Economic Community (AEC) that sits within the African Union.

*The Southern and Eastern African region* consists of: the Southern African Development Community (SADC) with 15 member states,<sup>2</sup> the Common Market for Eastern and Southern Africa (COMESA)<sup>3</sup> with 29 member states that also act as a preferential trading area, and the East African Community (EAC)<sup>4</sup> with five states. The stated goals of these three organizations include free trade areas, customs unions, a single market, a central bank and a common currency. In keeping with the trend of the telecom growth in Africa, the Eastern and

Southern African countries have seen a large increase in growth in the telecom sector. Uganda leads in this sector with the largest number of operators (five), while Kenya, Tanzania and South Africa follow closely with three licensed operators each. The telecom industry in this region is mainly spearheaded by COMESA and EAC.

*The West African region* is composed of the Economic Community of West African States (ECOWAS)<sup>5</sup> and 15 West African countries (Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo). Compared to the other region blocks, ECOWAS is very proactive in creating initiatives to foster cooperation and integration of telecom and information technology activities. The ECOWAS Treaty foresees the harmonization of legislation, including in the telecom sector, similar to the EU model. Its main objective is to form a unified economic zone in West Africa through economic integration and shared development in various industries, including telecommunications.

The Council of Ministers of ECOWAS has determined that the following items are priorities for the region:

- harmonization of regulatory frameworks and institutions;
- evolution of a regional regulatory framework – the ECOWAS ICT Task Force has been established to harmonize ICT policies of member countries;
- fostering competition;
- building a robust regional backbone infrastructure capable of supporting seamless cross-border connectivity;
- reducing costs associated with rights of way through the installation of optical fibre cable on power lines to carry electricity supply between countries that have electricity;
- granting operating licences on a priority basis to private investors that are interested in entering the markets in the region.

### *Regional Regulatory/Supervisory Body*

In 2002, ECOWAS was responsible for the creation of the West African Telecommunications Regulatory Association (WATRA), the main objective of which is to coordinate dialogue regarding telecommunications and regulation in the West African region. WATRA is an association of regulators and the respective government ministries of West African Territories responsible for telecom matters. WATRA is intended as a vehicle to foster continued development of information communications technology within the sub-region, and decisions and directives issued by the Conference of Regulators are binding on all national regulators. In this respect, WATRA encourages the establishment of consistent standards throughout the region to facilitate the deployment of interoperable ICT systems and services.

FRATEL, covering Central Africa and West Africa, is the French speaking network of telecom regulators, created in October 2003 in Bamako. FRATEL's aim is to establish and strengthen cooperation and exchange between its members. The network's task is to further the exchange of information, to contribute within its means to the training, coordination and technical cooperation between its members, and to contribute to the study of any matter related to telecom regulation. The network is coordinated by the chairperson of a committee composed of two other regulators. ARCEP (the French regulator) acts as the secretariat. This institution is still in its embryonic stage with very few tangible activities to assist national

telecom regulators in the francophone countries particularly in Central and West African regions where regulators are struggling with shortage of capacity to address the market demand.

The *Northern African region* comprises the Arab Regulators Network of Telecommunications and Information Technologies and represents 15 Arab states both from Africa and Arabia. The main objectives of the network is to exchange experiences in telecom regulation, with a view to harmonizing the practices of regulation in the Arab countries and working out policies and models of regulations, equitable and transparent procedures so as to encourage development and modernization of telecom networks and services, as well as information tech-

Figure 2. Africa



nologies in the Arab world. It is evident that the North African region is shifting from an African based regulatory perspective to an Arabic based regulatory network through leadership from United Arabic Emirates and Saudi Arabia.

## Methodology

### Country selection

For the purpose of this survey, Africa was broadly defined as the group of countries or region as recognized by the United Nations (UN), whose boundaries were used to recognize a country as an independent territory or not. The countries comprising Africa is thus depicted in figure 2.

Given the large number of countries, for evaluation purposes the clustering of countries was thought to be necessary. This was seen as a means of fairly evaluating each country on the benchmark criteria and at the same time providing comparisons within each cluster grouping. Although this survey sought to reveal best practices in each country, ranking per se was only a byproduct of the exercise. Table 1 illustrates the considered comparative evaluative criteria and reason for elimination.

The choice made was to use the regional grouping based on geographical location. This was found to be the best means of grouping the NRAs as there was no pre-defined category such as income levels. The geographical clusters used for the evaluation are listed in table 2 and rely heavily on the UN country classification.

- Southern Africa: Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe.
- Eastern Africa: Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, Sudan, Tanzania and Uganda.
- Island countries: Comoros, Madagascar, Mauritius, Seychelles and Reunion

- Central Africa: Cameroon, Central African Republic, Chad, Congo, Congo DRC, Equatorial Guinea and Gabon.
- Northern Africa: Algeria, Egypt, Libya, Mauritania, Morocco, Tunisia and Western Sahara.
- West Africa: Benin, Burkina Faso, Cape Verde, Gambia, Ghana, Guinea, Guinea Bissau, Ivory Coast, Liberia, Mali, Niger, Nigeria, Senegal, Togo, and Sierre Leone.

Each of the 54 countries within these clusters was then checked for the telecom regulator information at the International Telecommunication Union (ITU) website, or through the regional groupings such as ECOWAS, EAC, COMESA, SADC and AU. As noted by Hargittai (2000), assessing for presence through search engines can be deceptive and therefore every effort was made to contact the regional groupings or send email to contacts residing in those countries to ascertain the missing gaps.

An initial attempt was made to determine whether an NRA was independent but it became quickly apparent that it was difficult to draw the line between the independent and quasi-independent. The second and perhaps more important reason was that the methodology of this survey is not intended to evaluate the performance of the NRA per se, but rather the performance of the NRA's website. It was therefore decided that a country's inclusion would be based on the country having an independent regulatory authority not linked to the operator or ministry and having a functioning website.

Each website was then checked to see if it was at a stage in which it was productive to evaluate for a comparative survey. In a few instances, websites were still under construction and thus were not included. Also, if a government agency (usually a ministry) is engaged in carrying out the duties of the national regulator, it was not considered for benchmarking purposes, and likewise if the regulatory function was combined with the fixed line telecom operator's website. Figure 3 indicates the percentage of countries included in this study.

**Table 1. Clustering considerations**

Method	Reason for elimination or selection	Selected or eliminated
Human Development Index	As clearly evidenced from the Human Development indices of UNDP, the income of a country is not directly co-related to its living standards and or whether the community will have available ICT technologies.	Eliminated
Based on e-government index of the UN	This was deemed reasonable as it indicates how each NRA is using its web presence in providing its services compared to other government organizations. However, for evaluation purposes there is less reason to compare the NRA to other government agencies and in addition the data was outdated (2001), nonetheless it does provide an indication of e-government presence.	Eliminated
African ranking 2005 (Mahan)	A total of 22 NRA were surveyed. Given that the criteria used in this study is drawn from this previous study this survey was seen as a good comparative measure of progress.	Eliminated
Regional economic groupings	The choice of selecting regional groupings was drawn from the African Economic Community (AEC), an organization of African Union states establishing grounds for mutual economic development among the majority of African states. These groupings provide substantive evaluative criteria as member countries are responsible for enforcing agreed frameworks within each grouping and providing a unified means of cohesion on policy ideas and implementation.	Eliminated

Of a total of 54 countries in Africa, 30 have regulatory institutions with websites that could be classified as independent, accounting for 55% while 24 did not have websites accounting for 45% of the countries in Africa.

In the Eastern Africa region only Somalia did not have a regulatory authority whereas Burundi and Djibouti had this function within the ministry and or combined with the operator. The Eritrean website could not be located.

Of the five Island countries, Comoros and Seychelles had the regulatory function under the ministry while the Reunion website could not be located.

Of the seven countries in Central Africa, only two – Cameroon and Gabon – had NRA websites. The others were

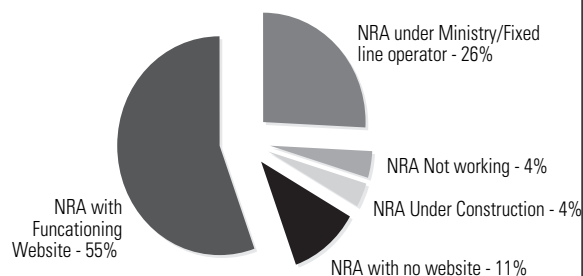
within the ministry or with the telecom operator. Because of this small number, it was decided to merge the analysis of Cameroon and Gabon into the West African region.

Of the ten countries in the Southern African region, Swaziland was the only country that had the NRA under the ministry. The Lesotho and Zimbabwe NRA websites were not working.

In the West African region, ten countries had websites and five did not. By far this was the region with the highest number of countries either having no NRA or having the regulatory function within the ministry or fixed line operator.

In the Northern African region, only Libya and Western Sahara had this function under the ministry.

**Figure 3. Country selection for African NRA website study**

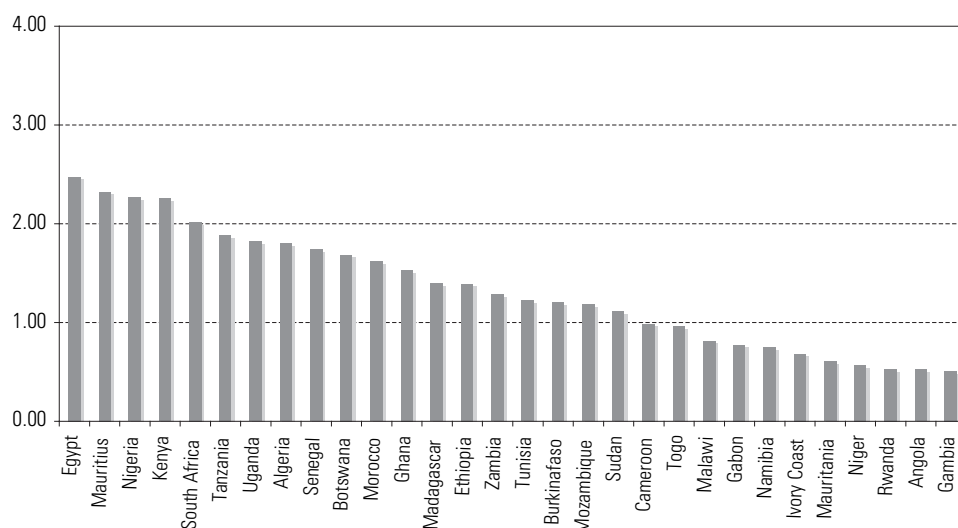


## Ranking the NRA websites

Each website was assessed across different categories of information provision. To achieve a consistent ranking, each element was given a score of 1 to 4 based on the degree of richness. The stages were identified as follows:<sup>6</sup>

- **Emerging:** Only basic and largely static information is available.
- **Enhanced:** Content and information is updated regularly, and information is available not only in its original format (such as acts and legislation) but is also explained and digested.

**Figure 4: Country benchmarking - Africa**



- **Interactive:** Users can download forms, contact officials and make requests. Available information has further value-added, such as being hyper-linked to relevant legislation.
- **Transactional:** Users can submit forms online – for example to request information, or to submit a request for licence form.

The benchmarking was based on qualitative evidence, but subjectivity was reduced by using the above-defined categories rather than relying on merely perceptions.

## Findings

This study evidences significant differences among the NRA websites in terms of information provision, usability and functionality. The websites that were assessed as being the most functional, well-designed and with the best range of user-friendly information are at the left side of figure 4.

As shown in figure 4, the NRA of Egypt scored the highest ranking (score of 2.48) and was assessed to be almost fully at the interactive level. In addition, this NRA had an overall average score of the highest benchmark across all subcategories with several of the subcategories benchmarked as interactive (score of 3) – having most of the items linked, forms in PDF or online, downloadable and hyperlinked to relevant legislation. Key best practises of the National Telecommunication Regulatory Authority (NTRA) of Egypt include:

- A clear awareness of who the client/users are and what they need. This is one of the only websites where one does not have to search within several banner headings to find the key service categories.
- The entire website is organised against very clear service provision categories such as Frequency Spectrum, Type Approvals, Licensing and Regulation with clear subcategories of functions and activities that a prospective client would need.

- Table 2 provides an example of the indication of the main subcategories provided within the websites and the sub-links within the individual categories.

As illustrated in table 2, the Egyptian NRA not only made clear choices of ensuring that each subcategory provided adequate information but also in addition ensured that items such as regulations and forms for each category were linked therein. The majority of the NRA websites in Africa had items such as *Regulation* as a separate category with all regulations of the sector dumped into this category. The Egyptian NRA website thus serves as a best practise website for other NRAs to emulate.

Nigeria, Mauritius Kenya and South Africa were also benchmarked as providing an enhanced level of information via their NRA websites. Following closely were Uganda, Algeria, Senegal and Tanzania. Together, these NRA websites were considered to have had adequate content that allowed the user to make informed decisions. The content in most of the categories was available via downloads. As for the Egyptian website, these had most of their functional categories clearly organised for the user. In contrast, they significantly differed from Egypt in the interactivity of the content such as less hyper-linked content to relevant legislation and lack of variety of forms available.

The nine websites scoring a benchmark of between 1.74 and 2.48 (out of 4, that is ranging more towards the rank of enhanced information provision) exhibited clear efforts in providing detailed content, relevant topic banners and sub-menu categories within each banner, simplified explanations of the function of each content provided, downloadable content in PDF, and so forth. In addition and with exception when compared to the other NRAs, these provided a good detail of information of the legal and regulatory framework used, the ongoing cases and hearings and recent legislation changes.

The NRA websites for the Ivory Coast, Rwanda, Togo, Gambia, Niger, Mauritania and Angola performed poorly. These websites simply did not provide relevant content other than

**Table 2. Best practice example of links under categories from the NRA of Egypt**

Frequency Spectrum	Type Approvals	Licensing	Regulations
Chart	Procedures	Service Procedures	Interconnection Framework
Guidelines for importers	Type Approval List	Telecom Service Forms	Competition Policy
Guidelines for users	Regulations	Wifi Form	Global Peering Exchange
Regulations	For Importer	Applications Form	Inmarsat Service Providers
For Importers	For Manufacturer		VSAT Regulations
Forms	Forms		Licensed Telecom Chart
Client Docs	Type Approval Form		Class C License
Importers Doc	Conformity Form		Standard License
Technical Forms	Importers Requisition Form		Universal Service

basic introductory pieces and very little digested or descriptive information and in many instances having no information at all.

There were nine NRA websites benchmarked with a category of enhanced or close to enhanced accounting for 30% of the NRA websites evaluated in Africa, with the remaining 70% benchmarked as static.

When compared to the Mahan (2005) rankings based on data from 2004, there are few differences with the same NRAs having performed well. Figure 5 provides a comparison of the countries that were benchmarked in 2004 and 2008.

The benchmark scores show a marked improvement from 2004. In 2004 Mauritius was benchmarked as one of the NRA websites that did not provide relevant content other than basic information, in this assessment it has moved up the benchmark category being rated as one of the best NRA websites. Egypt's website also shows a big improvement having been ranked at 1.42 and moving up to 2.48 in 2008. The Zambian website which had a Universal Access category and information in 2004 had no information updated or provided as at the current review of NRA websites. Tanzania remained at the same benchmark level while the rest marked significant improvements providing more content and information than for the previous review of 2004.

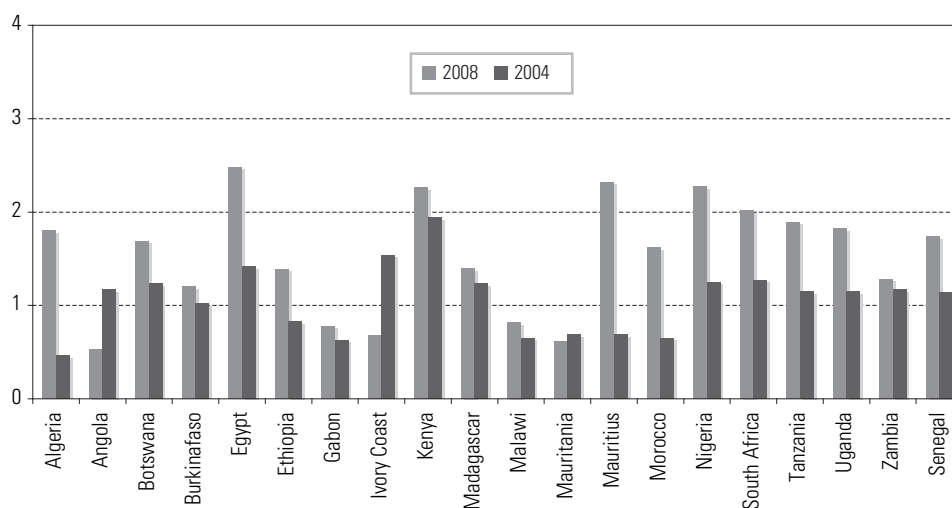
When viewed as regions, as depicted in figures 6 to 11, the island countries of Mauritius and Madagascar scored the highest average benchmark of 1.86. Mauritius raised the regional score with a benchmark of 2.32, and was rated as one of the highest in Africa. The Northern African region with 1.54 fol-

lowed this closely. The performance within this region was different across the five NRA websites. Egypt had the highest benchmark score in the region (2.48) and as well this benchmark was the highest for Africa. Performing poorly within this region was Mauritania which had an average benchmark of 0.61 and was also one of the lowest NRA website benchmark scores in Africa.

The Eastern African region followed that of the Northern Africa with a regional benchmark of 1.50. The Eastern African region also performed much better comparatively across all the categories. The highest NRA website benchmark within this region was Kenya with 2.26 while the lowest was Rwanda with 0.53. It should be noted that Rwanda has just recently (2008) officially joined the Eastern African economic block and its NRA will be aligning itself within the regional bodies of EAC. Both the Southern African region and Western & Central African regions comparatively did lower than the other regions scoring benchmarks of 1.18 and 1.12 respectively. The Southern African region in spite of the strong SADC economic block, was mainly boosted by the South African NRA website which had the highest benchmark within the region at 2.02 and also one of the highest in Africa. Significantly disappointing within this region were the NRA websites of Malawi, Angola and Namibia which all had a benchmark below 1. The above results show that NRA websites across the African continent overall remain within the emerging category (1.33), implying that information via NRA websites is very basic and largely static.

The overall benchmark values shown in the regional graphs are only a snapshot of the overall situation and do not depict

Figure 5: Comparison data Mahan (2004) and Kerrets (2008)





## Overall country benchmarks

Figure 6. Eastern African Region

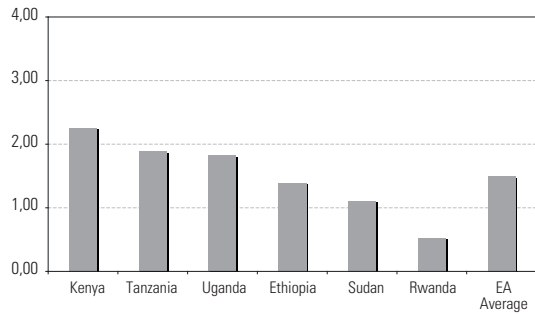


Figure 7. Island Countries

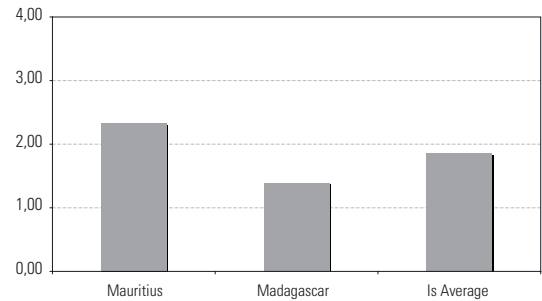


Figure 8. Southern African region

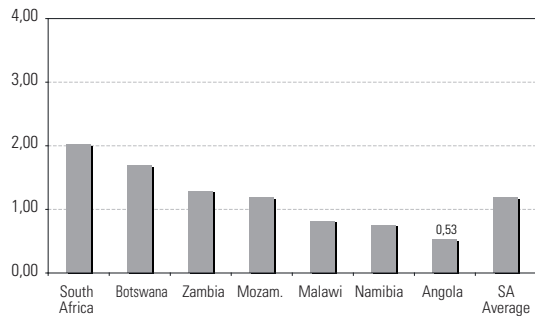


Figure 9. West &amp; Central African region

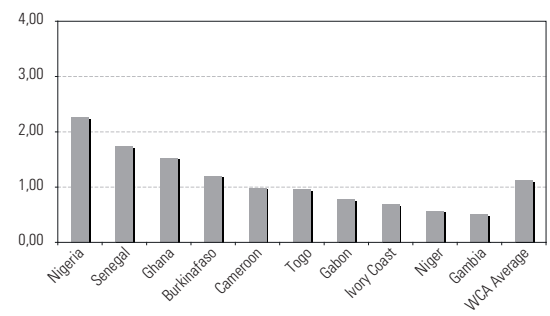


Figure 10. Northern African region

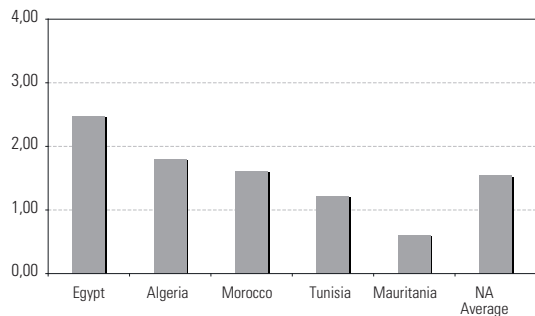
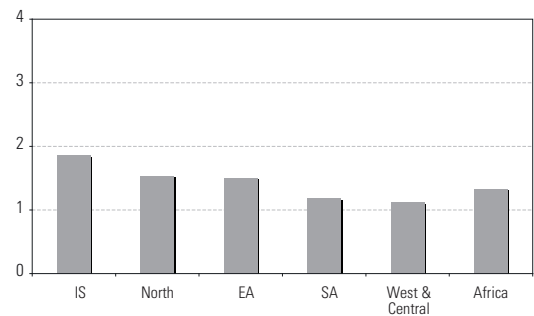


Figure 11: Regional benchmarks - Africa



the actual differences in the content and the ability of the websites to inform and communicate to the public, citizens and other government and non-governmental agencies. Each NRA differed significantly in the type of content provided. The following sections highlight best practice benchmarks and delve in more detail into each section and subcategory that was benchmarked.

## Factual information and news

A common denominator for compared NRA websites is the provision of the main legislative background information, statistical information such as sector indicators and sector news. Figure 12 provides the ranking assessment for this category across the 30 countries evaluated Africa.

Overall the best websites in this category were Egypt, Ghana, Kenya, Uganda, Mauritius and Morocco each having a benchmark at the enhanced level and bordering on being interactive. This implies that content was regularly updated, informative, hyperlinked and could be easily downloaded (benchmarks scores ranging from 2.6 to 2.8).

However, the actual benchmark within each subsection differed substantially. For the *news* section, Rwanda, Mauritania, Burkina Faso and Nigeria had scanty information on sector news, whereas in the Southern African and Western African region, Namibia and Gambia had no news respectively. The News information provided by other countries related to activities being handled by the regulator. The type of news provided

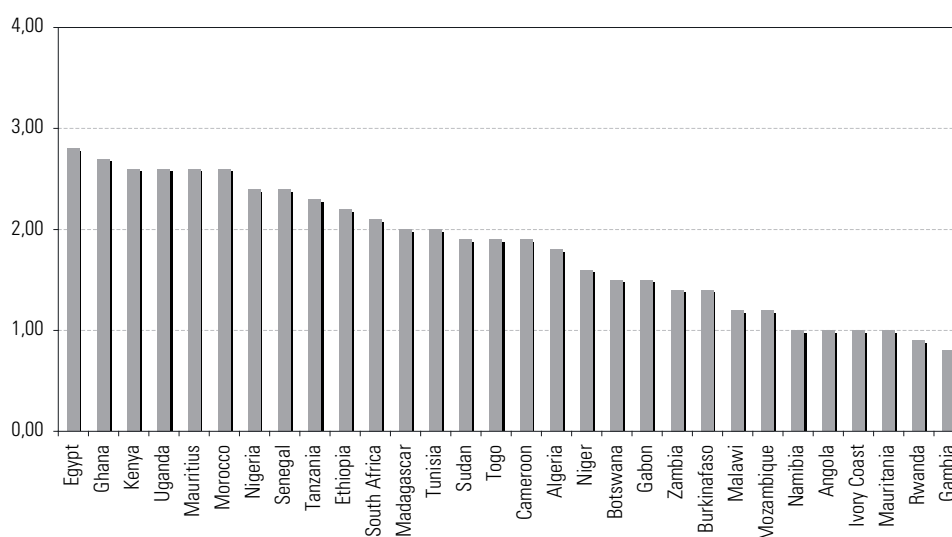
ranged from news on press reports made by the regulator such as press statements by the Director Generals and press releases of notices to the operators or change of policy and or legislation.

Of exception were the Egyptian, Tanzanian, South Africa, Mauritius and Gabon NRA websites where news on the sector was also linked to the press clipping and all news items were categorised with past years also available for review. The Mauritius news was archived by year dated as far back as 2003. Sudan and Mauritius and Morocco were the only NRAs to provide comprehensive news on what was happening internationally (with the Morocco NRA categorising this under the Events banner with links to International, National and Local banners).

Overall, the news category did not refer to happenings in regard to the operators and their activities. Nor did it convey information on investment discussions that have been taking place in the region (the Kenyan NRA was the only to offer a downloadable guide for investors). A quick read of any of the regions' newspapers online reveals a great number of events taking place in the sector yet in spite of this, most NRAs did not have up-to-date information.

The location of the news section on the website was similar across all countries with a few exceptions. Most countries had a news section on the centre column of the home page or the left hand side of the website or at the top level with a clear banner marked news (see Kenya, Uganda, South Africa). Many of the NRAs had also placed the most recent news on the centre column of the home page (Tanzania, Egypt) and had included latest consultative documents and press releases on the same

Figure 12. Country benchmarks - Factual Information and News



## Factual Information and News

Figure 13. Eastern African Region

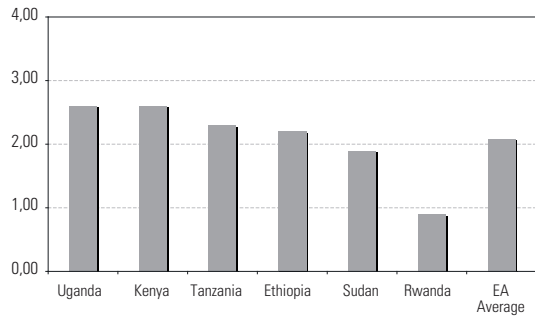


Figure 14. Island Countries

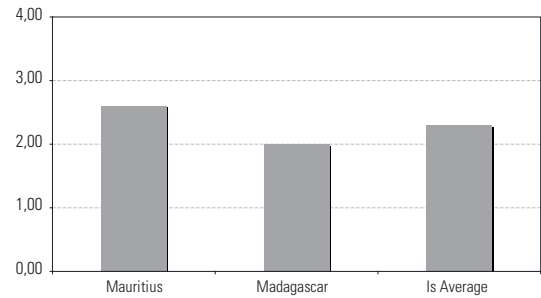


Figure 15. Southern African region

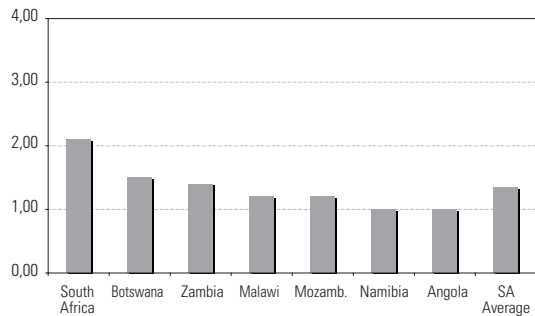


Figure 16. West &amp; Central African region

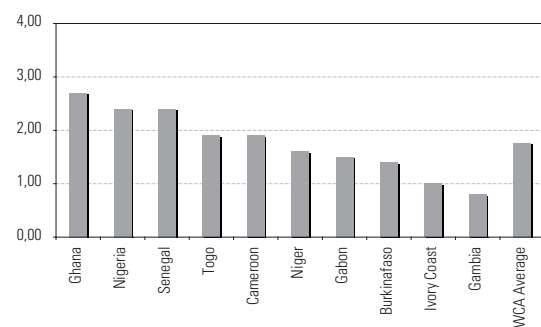


Figure 17. Northern African region

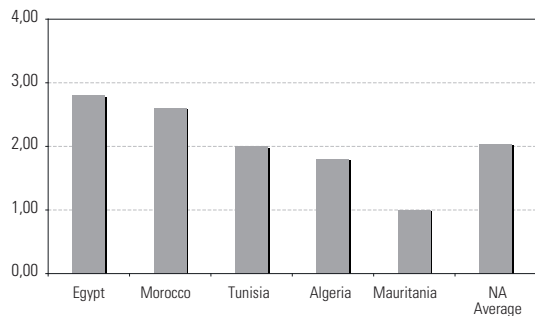
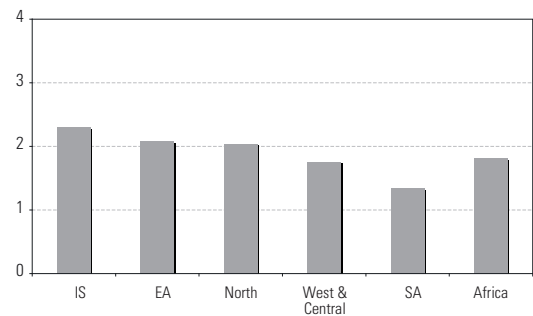


Figure 18. Regional benchmarks



section. Others marked items such as Press Releases or What's New? or Recent Publications (see Tanzania, Sudan, Ethiopia, Botswana).

*Statistical indicators and sector indicators* were poorly provided across all countries. Where provided, data was often incomplete and focussed mainly on tariffs – some as old as 2006 (Namibia), and/or the list of licensed ISPs and mobile operators (Botswana). Some NRA websites such as for Rwanda did not provide any information. Most were rated as 0 or 1. Of exception were the NRA websites for Uganda, Egypt, Ghana, Senegal and Morocco for which the statistics provided were detailed and offered users full information on the current level of telecom penetration with different indices. This marked improvement from the previous assessment (see Mahan 2005), for which Uganda website had no statistics on its website. The Ethiopian NRA provided a comparative analysis of the sector with statistical information with other countries in sub-Saharan Africa; this was the only NRA to do so.

Given that this information is readily available, it is surprising that most NRAs have neglected this important area on their websites. Significantly disappointing was the South African website where no statistical information was found yet overall its rankings are significantly higher than other African countries. This also applied to Ivory Coast, Gambia, Gabon, Botswana, Zambia, Sudan, Mauritius and Mauritania where no comparative statistical information was provided online.

A common denominator for the compared websites is the provision of main *legislative background information*. As this is a basic category of information that is readily available, it was

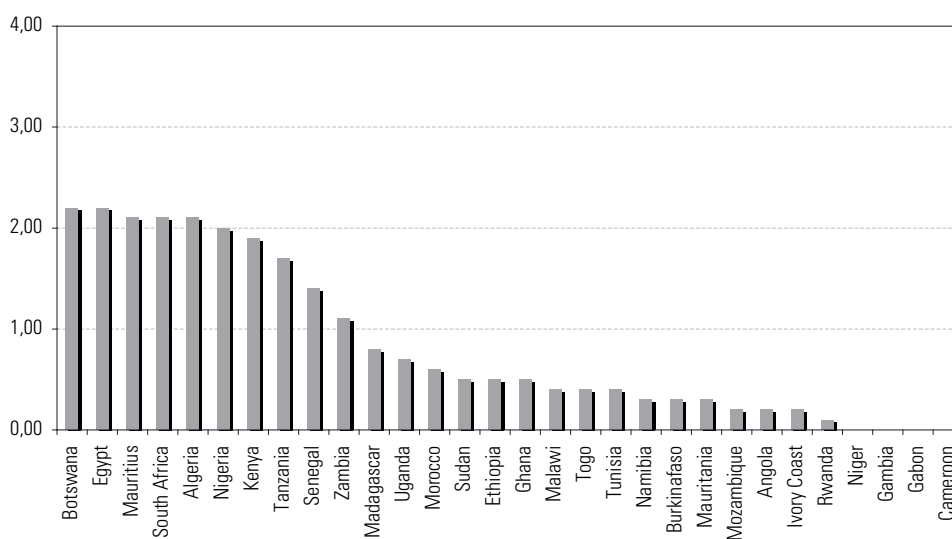
not surprising to find that all the NRA websites reviewed had provided this information. In addition, most of the legislative documents could be downloaded for easy reading in PDF. Two NRAs stand out as best practise in this subcategory:

- South Africa's NRA website offered access to legislative documents currently in progress, pending and in force. This provides the user with sufficient knowledge to know what policies are expected.
- Egypt's NRA website has organised the legislative documents in the relevant service categories. Thus under the banner of Frequency, one would find the legislation relating to frequency allocation.

Few NRAs, however, provided relevant online information regarding the legislative framework for investment and for related fields such as guidelines to personal data protection. While all countries did avail the regulatory and policy documents, very few took the initiative to also provide a summative analysis of the policies. It seems therefore that the assumption is that all readers understand legal documentation.

When viewed as regions, the total average of differences within the *factual information* category evens out as depicted in figures 13 to 18. The island countries having only two countries had the highest average at 2.30, with the two individual countries' averaging scores above 2. The Eastern African region with six countries had an average benchmark of 2.08. Within this region, the Ugandan, Tanzanian and Kenyan websites achieved significantly higher scores when compared to web-

Figure 19. Country benchmarks - Consumer and Citizen Information



sites in the other regions. This may be attributed to the close collaboration that these three countries have between their NRAs. The Northern African region (with five countries) had an average benchmark of 2.04. The African average of 1.81 in this category therefore shows a move from providing only emerging information (information that is basic and largely static) to providing content that is regularly updated and also downloadable.

## Consumer and citizen information

The objective of this section is to assess the degree to which NRA websites cater to the needs of the end consumers and provide information to citizens. Special emphasis was given to evaluate the type of consumer rights information available, the complaint process in place, information about public hearings and statistical information on consumer attention and complaints resolution.

As shown in figure 19, the websites that performed well were those of Botswana, Egypt, South Africa, Mauritius, Algeria, Kenya and Tanzania. These websites had content that could be termed as complete, up-to-date and contextualised – with benchmarks ranging between 2 and 2.20. Most of the information on consumer affairs was also downloadable. However when each category is viewed in detail significant differences occur in the type of content provided.

For the category of *consumer and citizen information*, Kenya scored the highest benchmark (3.5), falling between interactive and transactional. A best practise here was the provision of tariff information and numbering plans under the consumer affairs banner. Almost all other benchmarked countries had this information located in the statistics section or under the *news* headings and *press release statements*. Consumers would therefore have to look through the entire website to find the information likely to be the most relevant to them. In addition, Kenyan tariff information could be downloaded and was compared over a number of years. Egypt followed closely scoring a benchmark of 3 (interactive).

While Egypt's website had no dedicated consumer affairs section, the entire website was *consumer centric*. Thus consumer information such as numbering and tariffs, was clearly highlighted with a section on FAQs provided under each banner heading. South Africa, Tanzania and Ghana also scored highly with content being rated between enhanced and interactive (benchmarks of 2 and 2.5 respectively). NRA websites providing no information in this subcategory in Eastern and Southern Africa were Rwanda, Uganda, Namibia, Ethiopia, Cameroon and Gabon. For West and North Africa, the websites for Burkina Faso, Ivory Coast, Togo, Nigeria and Gambia had no information in this category.

Largely disregarded by all NRAs evaluated was the issue of *consumer and citizen rights*. Egypt scored the highest with a benchmark of 3 and Botswana and Tanzania followed in this category with a benchmark of 2.5 (falling between enhanced

and interactive). Of significant concern was a lack of information on quality of service parameters used to evaluate operators, which is a basic role of the regulatory agency, except for Botswana and Egypt, this aspect was hardly covered by the other NRAs online. In addition, all the NRAs except for Egypt did not cover information on possible hazards of equipment.

The section for *complaints process* varied across the NRAs. Scoring a benchmark of between enhanced and interactional (3.5) were Botswana and Tanzania, whereas Egypt rated at 3 and Mauritius at 2.5. Botswana and Mauritius provided a downloadable complaints management procedure while Tanzania provided a complaints form both in Swahili and English. These four NRAs were considered best practise in this section. Fourteen NRAs provided no complaints forms accounting for more than 40% of the NRAs analysed. Nonetheless, on the complaints process most countries assumed this to be an aspect that should either be written directly to the Director General of the NRA by providing a post box or email address while others provided an online form for one to fill in with no particular address as to where this should be directed.

On the issue of *public hearings* the Kenyan website stood out having the public hearings banner categorised into current, past and ongoing, allowing the user to know what has taken place and is currently being reviewed. The South African NRA also had a public comments section allowing users to make an online comment on any of the public hearings. The South African NRA also had its public notices well laid out, providing details of the public hearings or amendments about to take place, links to the various laws concerned, the process in place and what it would affect. This was exceptional among all the sites reviewed. Both of these two websites benchmarked a score of 3.5. The Botswana website also stood out by having a rulings and judgements section though in all the three cases this section was not directly under the consumer affairs banner.

*Statistical information on consumer attention and complaints resolution* was not covered by the NRAs except for Mauritius which provided a downloadable PDF document that analysed the complaints received and resolutions resolved during the year. The Nigerian NRA also had a best practise benchmark documenting and archiving complaints received by year (2007-2005).

Overall, what becomes evident within this section is that consumers are required to obtain information relevant to their needs that is scattered across the different banner headings rather than located in one place. Further, information on number portability, setting of call centres and telephone number coding which is available in most of the websites reviewed by Wattegama (2007) for the Asian region is not provided by the African NRAs. No doubt, the issue of consumer and citizen information still has a long way to go as depicted through the African average for this category which benchmarked a score of 0.84 as shown in figure 19. This may be attributed to the fact that Internet penetration as shown in Figure 1 is still very low and therefore perceived as an unlikely means of citizen participation and information retrieval.<sup>7</sup>

## Consumer and Citizen Information

Figure 20. Eastern African Region

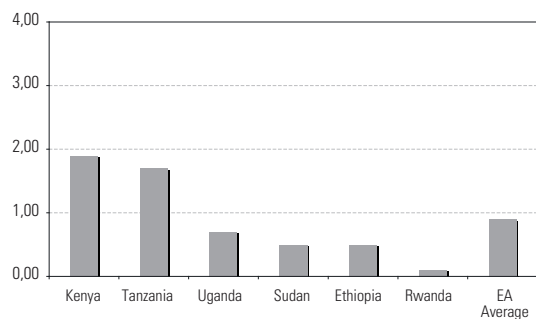


Figure 21. Island Countries

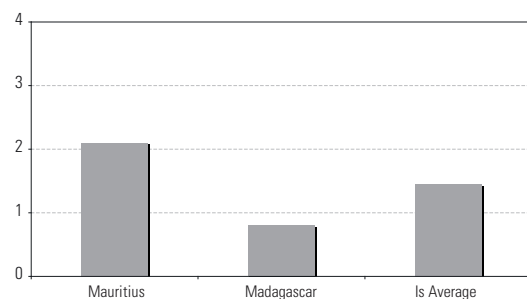


Figure 22. Southern African region

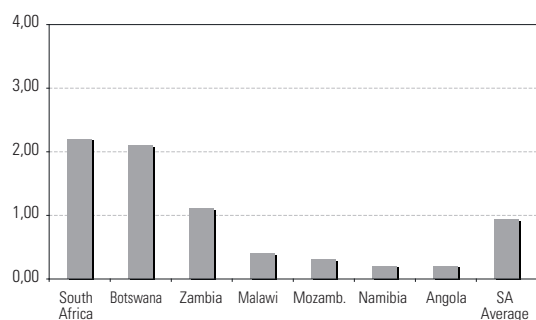


Figure 23. West &amp; Central African region

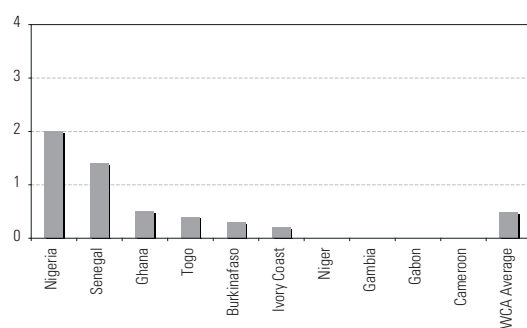


Figure 24. Northern African region

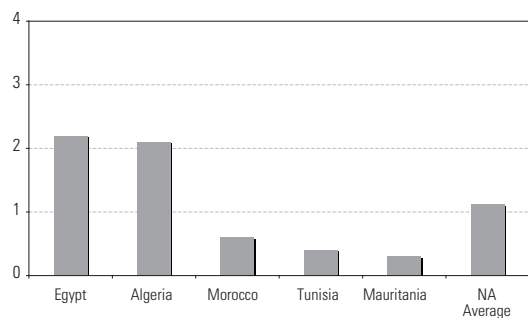
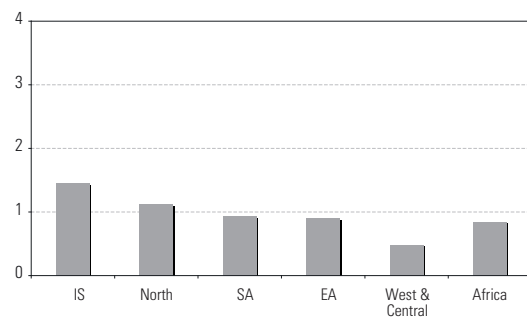


Figure 25. Regional benchmarks



Overall the regional scores do not show a marked difference as evidenced in figures 20 to 25. The performance across Africa was disappointing within this category and overall had the second lowest benchmark with the Universal Access category scoring the lowest. The island countries of Mauritius and Madagascar performed comparatively better than the rest of the regions with an average benchmark of 1.45. Nonetheless this was also the lowest performing category within this region, with Madagascar not providing detailed information in this category.

The Eastern and Southern African region benchmarked average scores of 0.90 and 0.93 respectively. Performing well within the Southern African region were the NRA websites of Botswana and South Africa. Both had content directed toward the consumer with information about hearings and complaint processes also available. Performing poorly within this region was Angola, which provided only scant information on consumer issues. The Northern African region performed slightly better than the other regions, and followed the Island region in overall ranking with a benchmark of 1.12. Egypt and Algeria performed well in the region each with a benchmark of above 2.

The West & Central African region performed poorly scoring an average score of 0.48. This was the lowest benchmark across the regions. Nearly all NRA websites in this region, with the exception of Nigeria and Senegal, scored a benchmark of 0. Given that this region has active membership through ECOWAS there is need to review the attention given to consumers within this region.

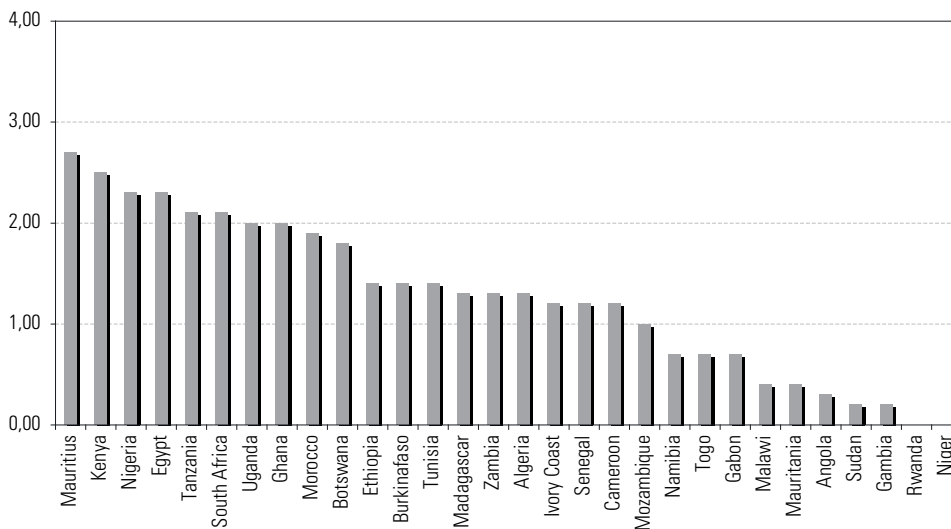
## Business information

This section deals with the information usually sought by business firms and investors such as market entry details, inter-connection information, scarce resource allocation, process for equipment certification and any publications/consultancy work done in the area. Figure 26 depicts the individual benchmark scores for this category.

*Business information* was a strong category across all websites. Even most websites which scored lowest in overall ranking offered licensing forms available for download. Mauritius, Kenya, Nigeria, Egypt, Tanzania, South Africa, Uganda and Ghana scored the highest benchmarks, as shown in Figure 26, having content that was rated between enhanced and interactive. The NRAs of Angola, Sudan, Gambia, Rwanda and Niger scored poorly, with almost no information provided within this category.

As for the other categories reviewed, actual content within this category differed. For *equipment certification*, the websites for Kenya, Tanzania, Ethiopia, Mauritius, Zambia and Botswana had the highest scores rating between interactive and transactional at 3.5. These websites cover detailed aspects of equipment certification and provide good best practises for other NRAs. For example, the Kenyan NRA had this content located on the *standards and type approval* banner. The content included list of equipment approved and rejected in Kenya, approval fees and forms. The Tanzanian NRA in addition had a checklist of equipment certification form. Those not scoring highly in this section include Malawi, Mozambique,

Figure 26. Country benchmarks - Business Information



## Business Information

Figure 27. Eastern African Region

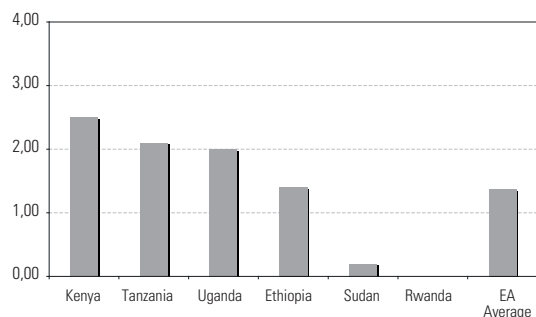


Figure 28. Island Countries

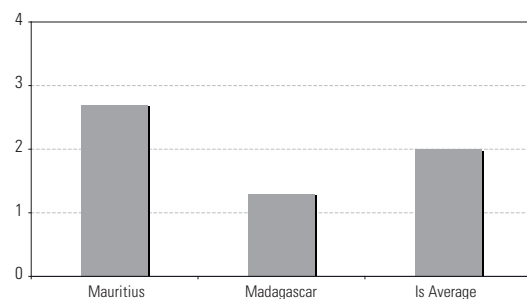


Figure 29. Southern African region

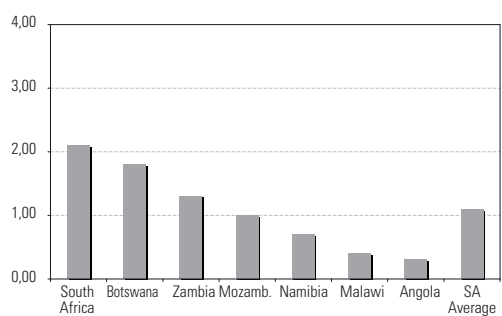


Figure 30. West &amp; Central African region

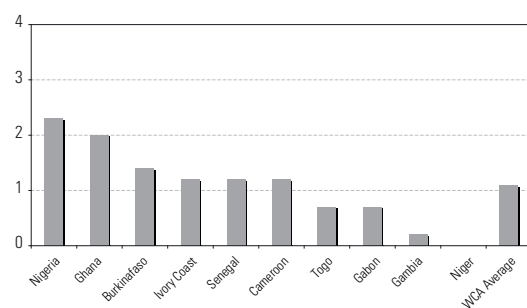


Figure 31. Northern African region

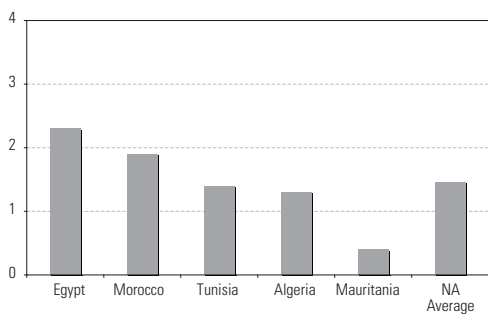
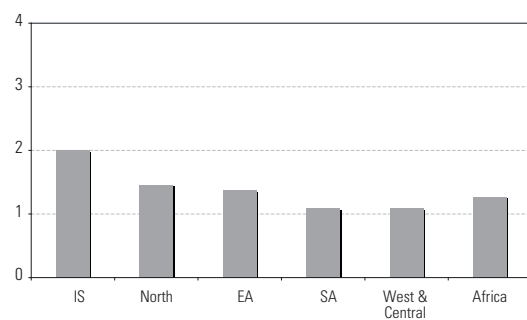


Figure 32. Regional benchmarks





Namibia, Angola, Rwanda, Cameroon, Gabon and South Africa from the Southern African and Eastern African regions; Tunisia, Egypt, Morocco and Mauritania from the North African region; and Ivory Coast, Senegal, Togo, Nigeria and Gambia from the West African region. All these NRAs did not have any information available on this topic.

Information on *scarce resources* such as spectrum allocation was available and well-explained on the websites for Egypt, Niger, Ghana, South Africa, Kenya, and Uganda which stood out with details on procedures for monitoring and policy information on spectrum.

On *market entry* information, Egypt scored a benchmark of 4, rating at enhanced. This was the only category to receive a rating of enhanced within Africa. Tanzania, Mauritius, Kenya, Namibia, South Africa and Botswana followed closely scoring a benchmark of between interactive and transactional (rating at 3.5). These NRAs had market entry details such as licensing procedures that were accompanied by forms. Most of the NRAs did not provide a reading on the telecom market and what one needs to do. Namibia had an interesting link to the Tourist board of Namibia while Mauritius provided information on the meaning of licenses and what they were for. For *interconnection*, nearly all the NRA websites provided no information except for Algeria, Tunisia, Egypt, Nigeria, Uganda and South Africa, the latter having exceptionally detailed information on interconnection agreements made between different service providers.

Lacking on most of the websites were *consultative papers* with the exception of Mauritius and Algeria which both had a large number of consultancy publications and Tanzania which had one paper on 'Telephone Tariffs Trend Analysis' (2000-2006).

The regional average benchmark in this category shows a slight improvement from the *consumer and citizen information* category. The African average of 1.27 is thus a marked improvement from the consumer and citizen African average of 0.84. As depicted via the regional benchmark (figures 27 to 32), the island NRAs of Mauritius and Madagascar both had the highest average benchmark scores within this category at 2 with the NRA of Mauritius scoring the highest benchmark in this category across Africa.

This was followed by the NRA websites for Algeria, Tunisia and Egypt pushing the average scores for the Northern African region to 1.46. The Eastern African region comparatively had more countries providing content with the exception of NRA of Rwanda, which had no online information in this category and therefore lowered the regional average. The Southern African region and the West & Central African regions both had low benchmarks of 1.09. Within the Southern African region, only the NRA websites of South Africa and Botswana had detailed information in this category compared to the other four countries in this region with Angola having the lowest benchmark in this region. The NRA websites in West & Central Africa also had a low input in this category with Nigeria and Ghana having the

relatively better content than the other eight countries in this region.

The business category shows need for improvement given that the majority of information to be provided is readily available and simply needs to be placed on the website with some analysis for the user.

## General information

This section, *general* information, looks for more general features such as mission statement, local language translation, links to other national and international sites, contact details of key officials, ease of navigation and organization chart.

As illustrated in figure 33 and in the regional comparisons in figures 34 to 39, the benchmark scores within this category differ significantly when compared to the performance in the other categories. NRA websites that been ranked poorly across the other categories having generally fared better for the *general information* category. Most of the websites were generous in providing information about the regulator and the regulatory agency such as organizational charts and mission statements, as well as links to local and international sites.

Almost all websites had content on the *mission statement* of the NRA. In addition, many included a historical account of the founding of the NRA and its main objectives within the telecom sector.

While there was effort made to provide information on the organization of the NRA, the depiction of an organogram within the NRAs was only done by slightly more than half of the thirty NRAs analysed. Malawi, Namibia, Cameroon, Gabon and Rwanda in East & Southern Africa had no *organogram* provided while in Western and Northern Africa, Tunisia, Mauritania, Ivory Coast, Togo, Niger and Gambia had no organogram provided.

The use of *links to other institutions* both locally and internationally was adequately detailed by most websites. The Ethiopian, Sudan and Angola websites provided long lists of links to most of the international telecom institutions. This was in contrast to the minimalist content these NRAs provided in other benchmarked categories. In addition, the NRAs of Egypt, Morocco, Nigeria and Burkina Faso had categorised the links section to local, international and national.

The category of *contacts* differed across the NRAs benchmarked. While most provided contact details of the regulator, not many made effort to provide contact details of key officials within the regulatory institution. Tanzania, Rwanda and Sudan were the exception in Eastern Africa while in the Southern African and Western African region, the Zambian, South Africa and Nigeria NRAs stood out. These NRAs had detailed contacts and email addresses of each head of the department within the NRA.

While effort was made to check what the national language of the country was before checking on the aspect of local language, this was difficult to ascertain. Some countries had what

they called national languages and then a list of local languages. For this reason, it was decided that national languages would be utilised as the criteria. Thus if a country had more than one national language cited in the UN country analysis then this would be the criteria used on the website in determining if one or more languages were utilised.

In Eastern Africa, only Tanzania included Swahili (a language also cited as the national language in Kenya) text in one of the categories – consumer complaints. It should be noted that 99% of Tanzanians speak Swahili a language that is also used as a business language in the country. All the other sections were in English. In Rwanda, both French and English were given as options on the website (languages spoken by 7% of the population) however, Kinyarwanda a language noted as the national language and spoken by 100% of the population was not provided, despite the fact that all government paper work is done in these three languages. The Sudanese NRA stood out having English, French and Arabic as language options with all three cited as national languages. In the Southern Africa, Angolan and Mozambican websites were only in Portuguese.

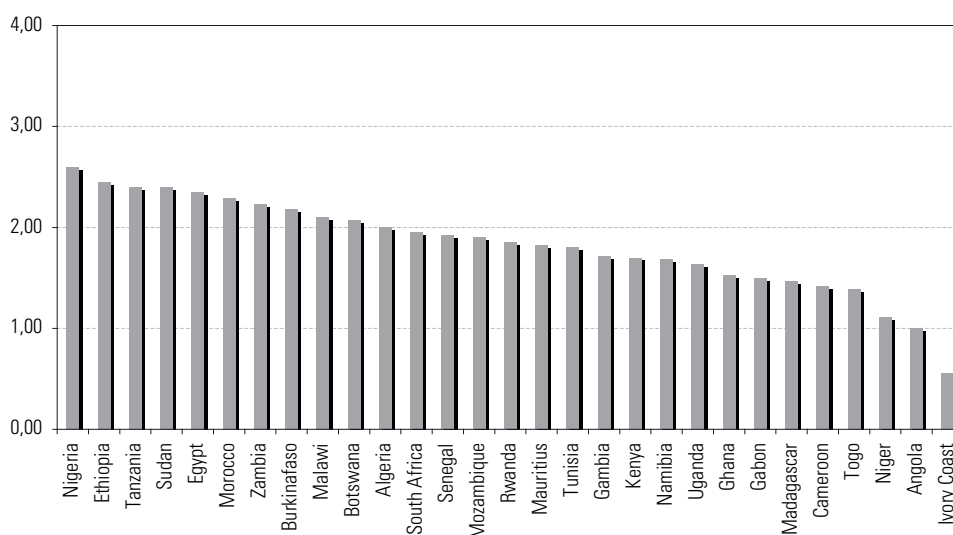
The overall ease and use of navigation across all the websites varied. Four websites stood out however out of the 30 NRAs evaluated, namely Egypt, South Africa and Mauritius and Nigeria – providing ease of drop-down menus at the top of the page and links with well-categorised sections within each topic. Morocco, Algeria, Senegal, Uganda, Kenya and Tanzania also had well designed websites, with clear banner headings that facilitated locating information.

NRAs that could do with some improvement include Sudan, which was crowded with information on its centre and left hand columns making it confusing initially to get around. The Tanzania website also had a lot of information crowded onto the main pages rather than using the menu bars available in the left hand columns. The NRAs of Mauritania, Ivory Coast, Niger, Gabon, Rwanda and Cameroon while neat had minimal information with few banner headings that made it difficult to find relevant information.

Overall, as reviewed above, the regional averages of the general category were more or less even with the African average of 1.81. The highest benchmark came from the Eastern African region (2.07). This is not surprising given that each the six countries in this region provided detailed content and scored relatively high benchmarking between 1.7 and 2.45. The lowest benchmark came from West & Central Africa (1.59) for which Ivory Coast and Niger NRA scored relatively lower scores compared to the other eight countries in this region.

Given that the *general information* category contains information that can be easily obtained, these section should have benchmarked higher scores than it did across all the NRAs.

Figure 33. Country benchmarks - General Information



## General Information

Figure 34. Eastern African Region

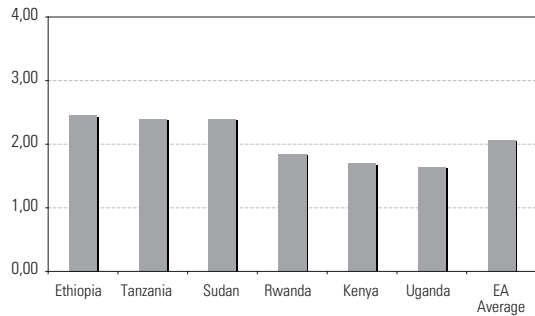


Figure 35. Island Countries

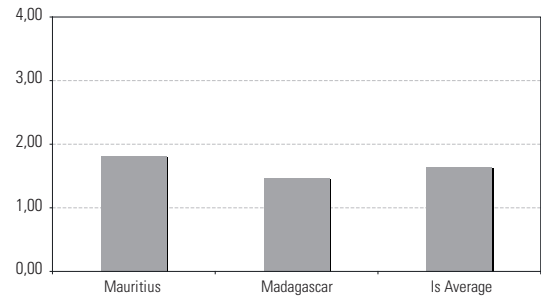


Figure 36. Southern African region

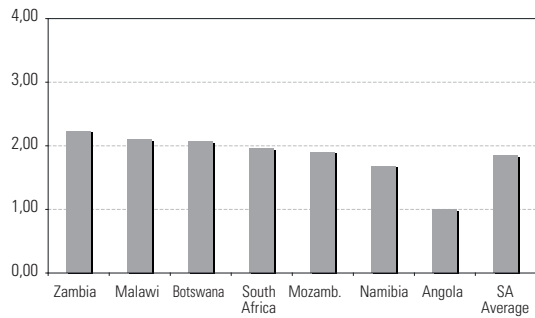


Figure 37. West &amp; Central African region

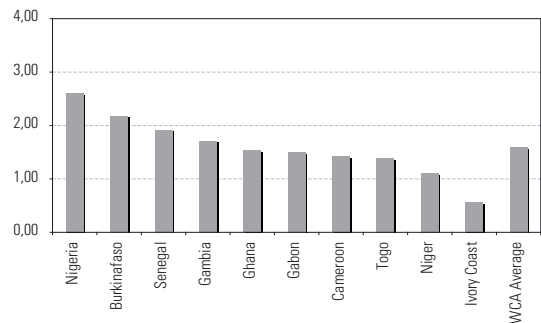


Figure 38. Northern African region

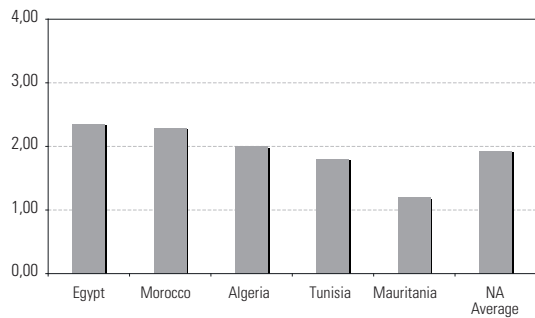
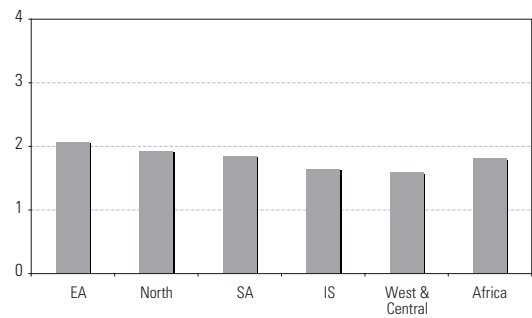


Figure 39. Regional benchmarks



## Universal Access (UA)

This final section, *universal access*, addresses policy information, reports and plans on universal access. As shown in figures 40 to 46, most NRAs benchmarked relatively low marks compared to the other categories thus lowering the regional average score in this category to stand at 0.80.

In Eastern and Southern Africa, Kenya, Uganda Mauritius and Mozambique stood out having a dedicated banner headings for this section, highlighting relevant policy and activities being undertaken. The Uganda NRA provided a diagrammatic representation of the process. The Tanzania NRA made mention of its UA policy but provided no details. The regional average for this region was 1 and is not surprising given that the NRAs of Rwanda, Tanzania and Sudan provided no information.

In North Africa, the websites of Algeria and Egypt stood out having a dedicated banner for UA. The regional average score for North Africa was 1 and was also lowed by Tunisia, Morocco and Mauritania none of which provided online content in this category.

In West & Central Africa, the NRAs of Nigerian and Senegal had information provided on the Universal Access while not specifically within a dedicated UA banner. The rest of the NRAs had no mention of UA within their website bringing down the regional average benchmark to 0.5.

The island countries of Mauritius and Mauritania both had UA policies provided online and thus not surprisingly had a

regional average benchmark of 1.75 making it the highest when compared to the other regions.

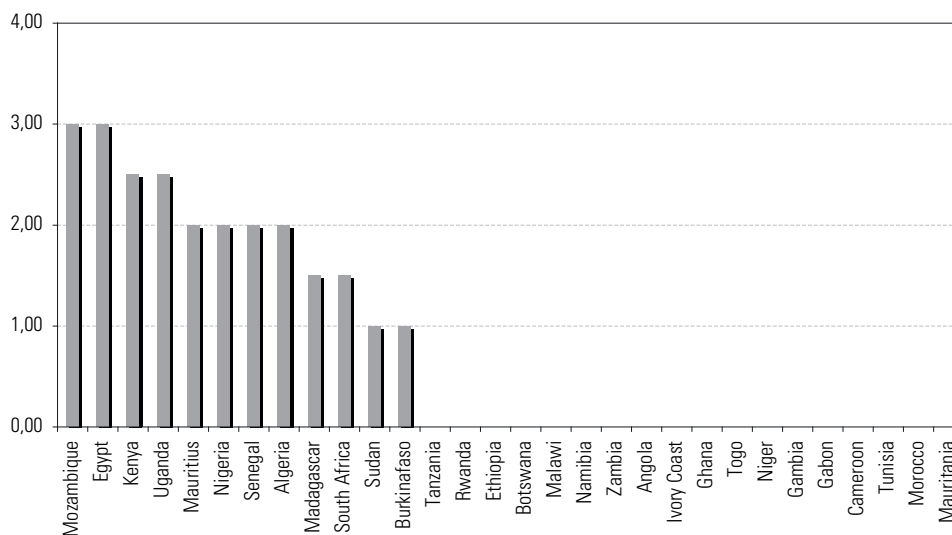
The low benchmark scores in this category may be explained by the relative newness of UA as a new policy that has been adapted by most NRAs across Africa. It is hoped therefore that as NRAs in Africa begin to adopt universal access policies that they will be keen to follow the footsteps of NRAs like Egypt, Uganda and Kenya which have provided online details of the proposed policy and projects envisioned.

## Conclusions and recommendations

On the basis of the findings of this survey, an immediate observation is the number of websites that have come under review. Out of the 54 countries Africa, only 55% (30) were reviewed as having independent regulatory bodies with a website. This is comparative to Asia (see Wategama 2007) where three out of ten NRAs or 29% of NRAs did not have a website as at 2005. While it may be unfair to attribute the lack of this information to lack of understanding of role of regulator, and that this may be due to lack of other issues such as resources and lack of regulatory body institutions that are in place, it nevertheless indicates a need for improvement and raises concerns regarding e-governance.

Another noteworthy observation is the issue of language presentation of the NRA. While almost all websites have presented their information in either French, English or Arabic, its is surprising that none has made effort to present the informa-

Figure 40. Country benchmarks - Universal Access



## Universal Access Information

Figure 41. Eastern African Region

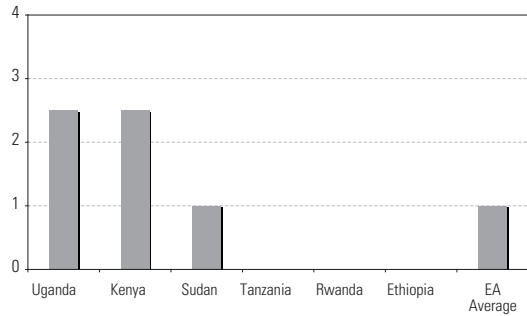


Figure 42. Island Countries

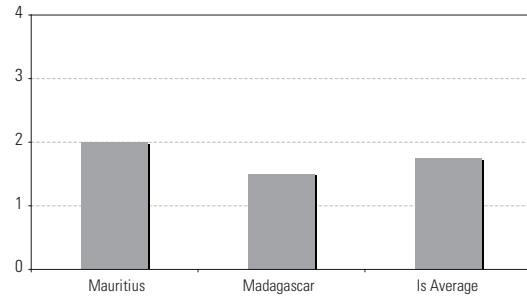


Figure 43. Southern African region

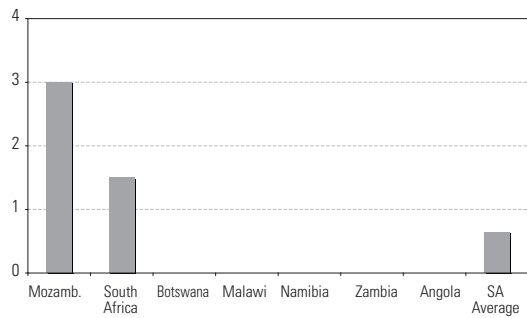


Figure 44. West &amp; Central African region

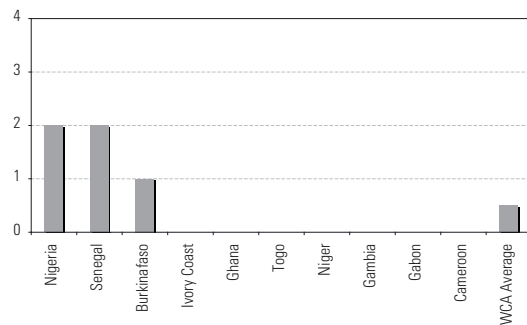


Figure 45. Northern African region

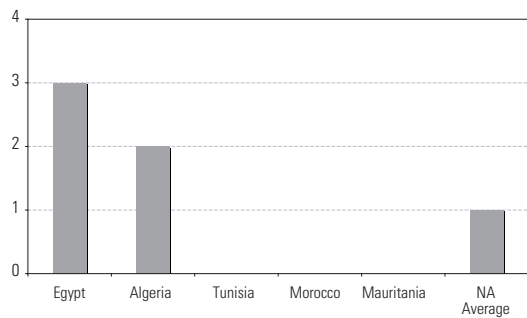


Figure 46. Regional benchmarks



tion in local languages given that majority of the African populace speak at least more than one local language and have a common local language understood by many. This is therefore an issue for reconciliation given that the issue of literacy while classified in the international languages has a different bearing when taken in the context of local languages.

In addition, given the three main international languages dominate Africa (English, French and Arabic) effort should be made to ensure that the options for viewing the NRA websites in other languages is available. Of exception are the North African NRA websites who all provided options for English or French as an alternative to Arabic. It is recommended that African NRAs make effort to provide these two languages options in their websites.

The type of information provided across the African sites also raises issues of concern. While there is a remarkable improvement from the last review done by Mahan (2005), information still remains largely factual with very little effort made to explain and allow the reader to digest the information provided. Where information was available for downloading, this was mostly for legal and policy documentation. Nonetheless even this was explained separately. Disappointing across all the sites was a lack of effort made to analyse the statistical information that was laid out on the websites. Most of the information was laid out without any effort for comparative analysis across all the years. This type of information would be very informative to many stakeholders and in addition provides information for researchers and journalists internationally on the development growth of a country.

In addition, except for information regarding licensing procedures, many websites lacked the information usually sought by businesses and investors. For example, none of the websites had a list of equipment that was prohibited in the country nor did they have an analysis of the telecom environment in their respective countries.

Presenting information that was useful to consumers is another category that was also neglected by the majority of the African NRAs. For example information about consumer complaints was scantily available with a few lines rather than an explanation of what one needs to do in different scenarios. The Kenyan NRA website offers a section on consumer complaints procedures and information on current and ongoing complaints. Most of the NRAs therefore neglected information on the type of complaints a consumer can make, whom to contact in the different scenarios and toll-free numbers for making complaints (not one NRA had a free toll number available). Given the prevalence of mobile phones now in Africa, it would be expected that the regulators in conjunction with the operators provide a toll-free number for handling complaints procedures.

In addition, content on quality of service (QoS) parameters and health and environment issues were covered by fewer than three of the 30 NRAs reviewed. Given that websites are meant to be a window into what is happening both within the internal regulatory environment and external environment, these two

aspects are strongly encouraged as content that should be readily available for consumers to make well-informed decisions.

Revealing and in need of improvement was the level of the NRA to participate as a vehicle for participating in regulatory processes. Nearly all the websites could be overall ranked as between the *emerging* and *enhanced* levels – i.e. as having largely static information that is updated regularly but not explained and digested. Where information was downloadable this was mostly limited to policy and legal documents. None of the African NRA websites could overall be considered as at the *interactive* and *transactional* levels – i.e. with information having further value-added such as being hyperlinked to relevant legislation, facilitating real-time online submission of forms and emails, and so forth.

NRAs should be aware that a valuable amount of traffic will be from researchers, journalists and international investors who further broker information to the general public. Thus a newsroom feature or consumer information banner that has further links to information within the website is very important for facilitating information dissemination via these users.

As noted in the introductory section of this chapter, the most important message this survey could communicate would be that all African NRA sites could be improved with little effort. While in the past blame has been placed on the lack of human and financial resources this argument is no longer warranted. Given that the websites already exist, specific improvements needed relate mainly to the uploading of relevant information and as well making it more functional.

Nonetheless, a number of assumptions need to be addressed by regulators in order to fulfil basic conditions for web presence success – that is, a websites' ability to be interactive and dynamic. This includes but is not limited to:

- common understanding of the role and opportunities to apply ICT in general and web presence in particular in communicating to the various stakeholders in the sector;
- existence of human resources within the agency to support content development and technical know-how to ensure that the website is accessible, user-friendly, up-to-date and most importantly that the relevant content is continuously provided;
- basic conditions of ICT access and usage within the country in particular to connectivity to the Internet. Content relevancy and actual effectiveness of the website will not be achieved readily without this factor being addressed.

Perhaps, the most important lesson that African NRAs can learn is that there is no need to reinvent the wheel. Other NRA websites exist that are open to the public for any NRA to copy and learn from in improving the effectiveness of their own websites. We hope that this study has contributed to this process by pointing to some of the best practices in the region.

## Future studies

This study sought to focus on the available information uploaded as content in NRA websites. It sought to focus on the relevance of the information in providing informed decision making for the would-be user. However, this study did not delve into the actual process of choice of content and whether in actual fact these websites are frequently visited and for what type of information. Such a study, in the form of a qualitative and quantitative questionnaire to NRAs, would enhance this study by providing useful feedback on what users expect NRAs to provide.

In the same vein, it would be useful to initiate a study that focused on the de facto interactivity of the websites. What is the response time for queries made online? What type of online queries can one make? An email sent to a number of NRAs during this study to clarify location of information received no feedback revealing a need to ensure that features made available via the NRA websites are in use.

In conclusion, websites are increasingly a key element in evaluations of NRA performance. For the future, website content and interactivity will be a progressively important factor in assessing regulatory effectiveness. NRAs therefore need to ensure that websites are up-to-date and relevant. One way to do this is to keep seeking feedback from their clients (journalists, researchers, businessmen, government and non-government institutions) and as well share their experiences with other NRAs both in the region and internationally.

## Notes

<sup>1</sup> Most lending institutions such as the World Bank and International Monetary Fund (IMF) now use e-governance as a measure in determining financing and development improvement within a country.

<sup>2</sup> <http://www.sadc.int/>

<sup>3</sup> <http://www.comesa.int/>

<sup>4</sup> <http://www.eac.int/>

<sup>5</sup> <http://www.ecowas.int>

<sup>6</sup> See Chapter 2 for a full description of the NRA benchmarking methodology.

<sup>7</sup> However, this presumes that only individuals are obtaining and using such information. In reality, NGOs, the media and other community intermediaries may use the NRA website to obtain information to be more widely diffused.

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# Benchmarking Asia Pacific National Telecom Regulatory Authority Websites

Lara Alawattegama and Chanuka Wattegama

## Introduction

A national telecommunication regulatory authority, like any other government organisation, uses its website not only to deliver citizen services but also to improve transparency and effectiveness in its regulatory functions. This study benchmarks the way in which national regulatory authorities (NRAs) use their websites to improve their overarching objectives pertaining to regulatory affairs. The survey intends to evaluate how well Asian NRAs achieve this objective with regard to telecom operators, investors, consumers, researchers and the general public. The results of the survey provide a useful tool for regulators to improve their websites.

## Previous initiatives similar to this study

The methodology and structure for this website survey have been largely guided by previous studies, the key of which are summarised below:

- A study jointly undertaken by the United Nations (UN) and the American Society for Public Administration (Ronaghan 2001), in which the goal of the study was to objectively present facts and conclusions defining a country's e-government environment and demonstrate its capacity to sustain online development. This was accomplished by a comparative analysis of fundamental ICT indicators and critical human capital measures for each UN Member State. An important outcome of this study was a final measure, the E-Government Index, a useful tool for policy-planners.
- LIRNE.NET (Mahan 2005) conducted a study focussing on the African region. This survey which is more relevant to this website survey, benchmarks the websites of independent NRAs of 22 African states. This study has grown out of a

collection of preliminary regional surveys examining the extent to which NRAs were using websites to inform and communicate with stakeholders – including citizens, businesses and other governmental and non-governmental organizations.

- A study by LIRNEasia (Wattegama 2007) created a methodology to benchmark the NRA websites in the Asia-Pacific region, evaluating their usefulness in providing e-government services to telecom operators, investors, consumers, researchers and even the general public. Each website is awarded marks for quality of the e-government portal that it provides to its stakeholders. The study evaluated 27 NRA websites of out a total of 62 economies.

As an improvement to the LIRNEasia methodology, this study focused more on the regulatory functions of an NRA without focussing on the e-government angle. NRAs need to place greater importance on their regulatory functions. Therefore, the study took a more regulatory focus with an emphasis on transparency and accountability while also assessing and ranking the provision of relevant information to stakeholders, including consumers.

## Selection of economies and websites

The selection of economies to include in the survey was based on a minimal criterion to ensure the maximum number of NRA websites within the Asia-Pacific region could be included. It does not discriminate based on geography within the region, or on levels of economic or human development achievements. The criteria are as follows:

1. All economies must belong to the Asia and Pacific regions as follows:  
**Asia** – the group of economies that are in the region bordered by Russia, Turkey and Egypt and the Indian and Pacific oceans (Wattegama 2007). This includes the island nations within the Indian Ocean; and  
**Pacific** – the island nations situated in the Pacific Ocean.
2. All the International Telecommunication Union (ITU) member states within this region were selected as within the scope. This is because not all economies are recognised as sovereign nations with independent NRAs.
3. Effort was made to determine which authority was conducting telecom regulatory functions. In some economies the regulatory body was the Ministry of Telecommunications and Posts. When this was the case, then the website for this authority was assessed.
4. The authority selected within each country needed to have a functional website. The study excluded economies with websites under construction such as Afghanistan.
5. The website needed to have an English version.<sup>1</sup>

A total of 31 economies out of 62 have been selected based on this criteria. The number of economies that were rejected for the various reasons are shown in table 1. Further details are shown in Annex 1.

## Clustering

Criteria	Number of economies excluded for not meeting the criteria
NRA does not have a website	22
English language version not available	6
Website under construction	3
<b>Total excluded</b>	<b>31</b>

Clustering economies is a useful method for the purpose of comparative assessment.

LIRNEasia's previous study (Wattegama 2007) clustered economies based on their e-readiness levels. With the change of focus for this current survey, however, e-readiness was no longer an appropriate measure. Therefore clustering was based on the total number of access paths (mobile and fixed telephone connections per 100 inhabitants), as this is a good indicator of telecom sector development in a given country.

Four clusters were identified and the countries were grouped into these quartiles. Except for the first quartile (with seven) each of the others has eight economies.

Table 2. Access paths per 100 inhabitants of selected economies

	Country	Number of access paths (mobile and fixed) per 100 inhabitants
1	Myanmar	1.2
2	Papua New Guinea	2.5
3	Nepal	6.4
4	Uzbekistan	9.4
5	Cambodia	18.1
6	Bhutan	20.6
7	Bangladesh	22.4
8	India	23.3
9	Lebanon	49.5
10	Georgia	50.9
11	Pakistan	51.1
12	Philippines	55.1
13	Sri Lanka	55.6
14	Vietnam	59.8
15	Azerbaijan	65.6
16	Jordan	90.4
17	Thailand	91.4
18	Brunei	99.9
19	Malaysia	104.2
20	Maldives	114.9
21	Saudi Arabia	130.9
22	New Zealand	142.4
23	Bahrain	149.2
24	Australia	149.5
25	Israel	166.6
26	Singapore	168.9
27	Taiwan	168.6
28	Qatar	178.6
29	Hong Kong	200.2
30	Macau	202.1
31	United Arab Emirates	205.0
Source: ITU (2007).		

## Methodology

Four aspects of the NRA sites were assessed.

### 1. Factual information and News

Focuses on information flows that are largely one-way. There are little or no interactive aspects to this component. This area attempts to evaluate the transparency of the NRA through ranking work plans and budgets. In addition to these elements, the section comprises legislation, statistics,

annual reports and sector news amongst others. This section carries 40% of the overall score.

### 2. Business information

Deals with information and areas that are useful to operators, investors and prospective new entrants. It addresses issues pertaining to market entry, interconnection and scarce resources. Importance is given to the provision of online forms and enquiries being followed-up on. This section carries 24% of the overall score.

### 3. General

Deals with areas that are of general importance to all stakeholders such as white papers, organisational charts, contact details and local language availability. The general section is important because it covers elements that are related to all the sections and therefore need to be easily accessed. This section carries 24% of the overall score.

### 4. Consumer related information

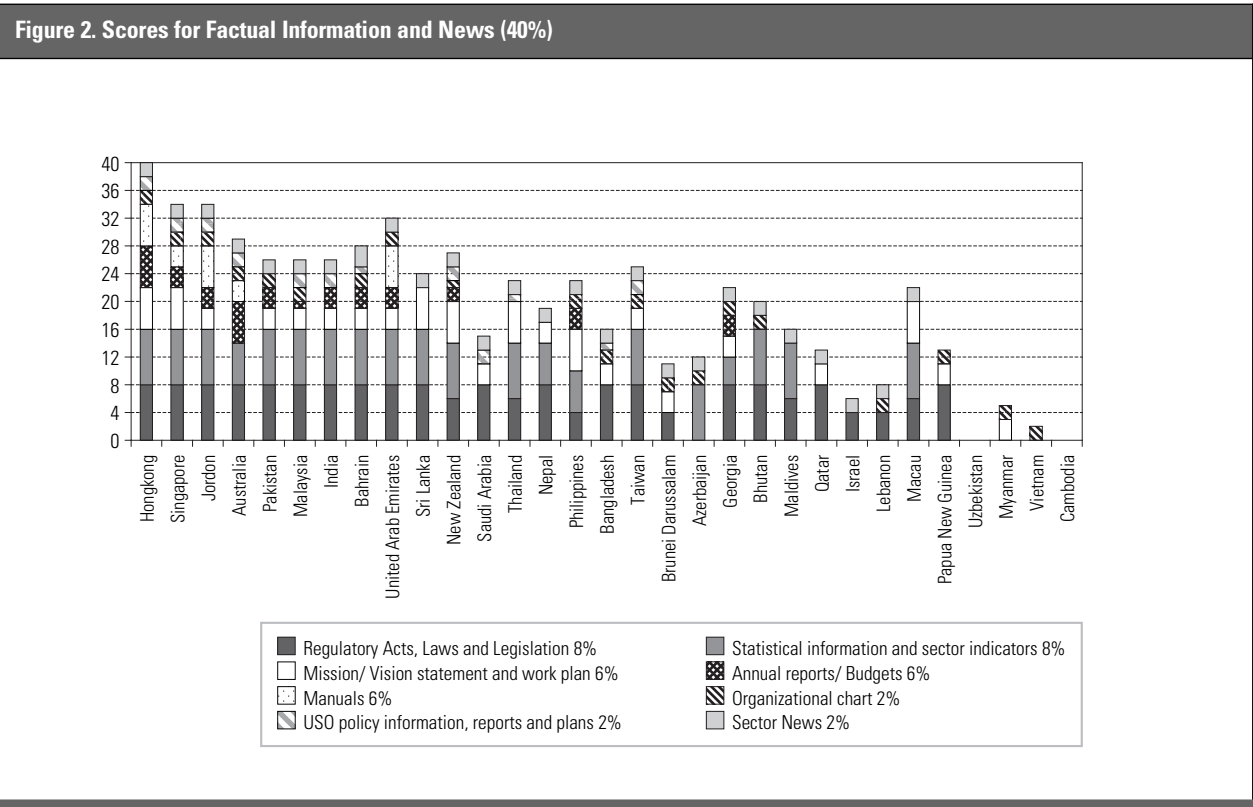
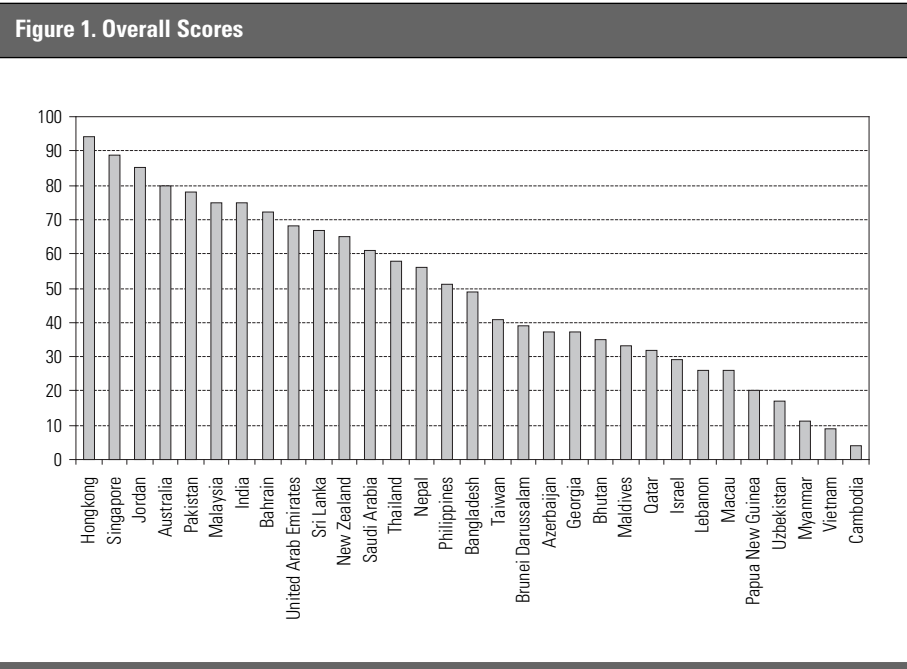
Deals with factors that are useful to consumers and includes consumer rights information and complaints processes. This category has a strong emphasis on interactive functions. This section carries 12% of the overall score.

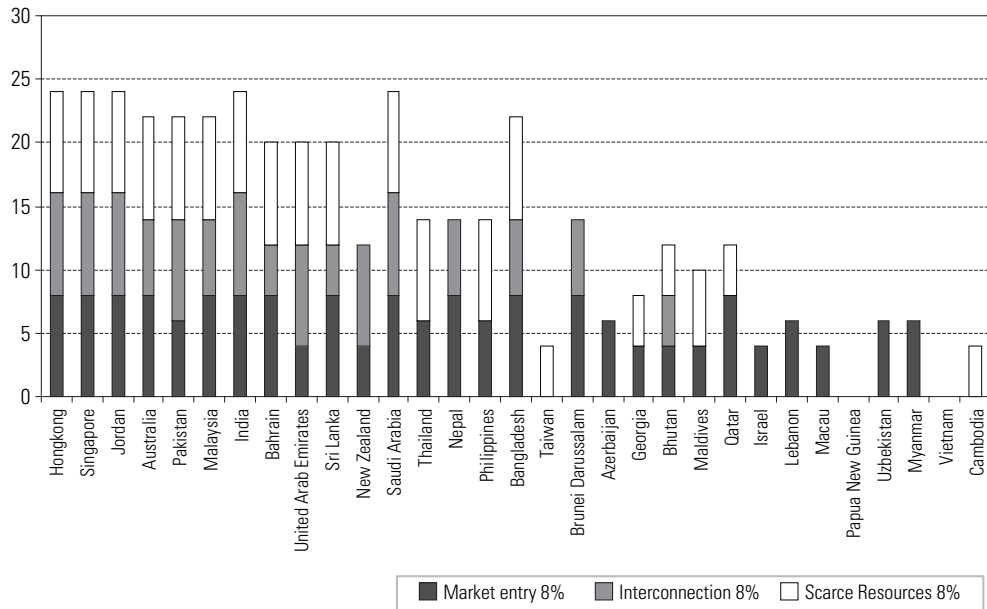
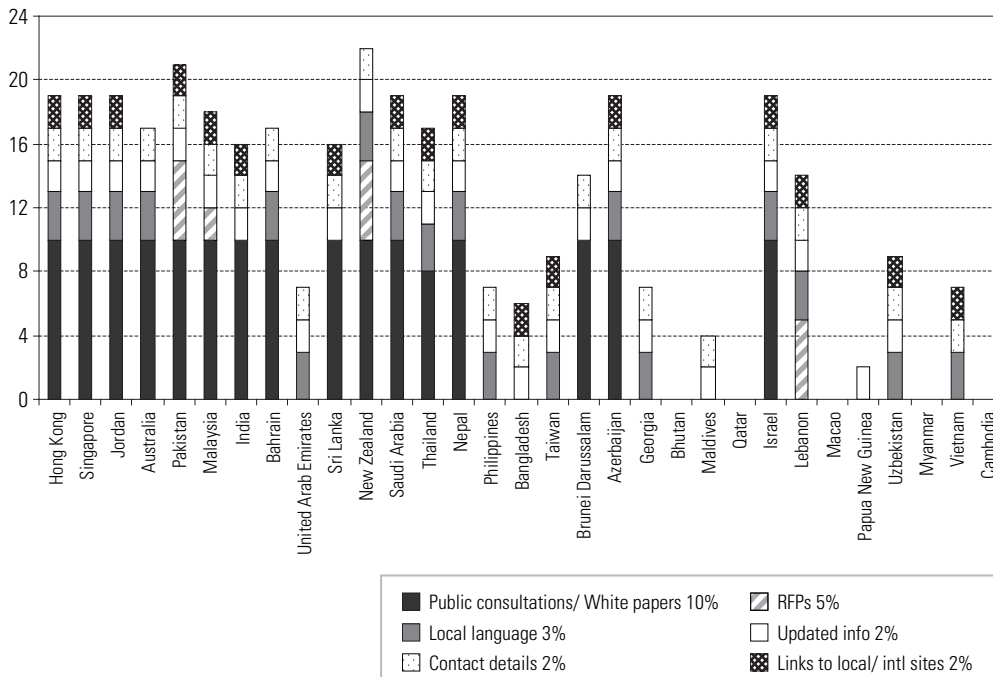
Within each of these four main categories are sub-categories. As table 4 illustrates, each of the sub-categories are allocated a percentage of the total score.

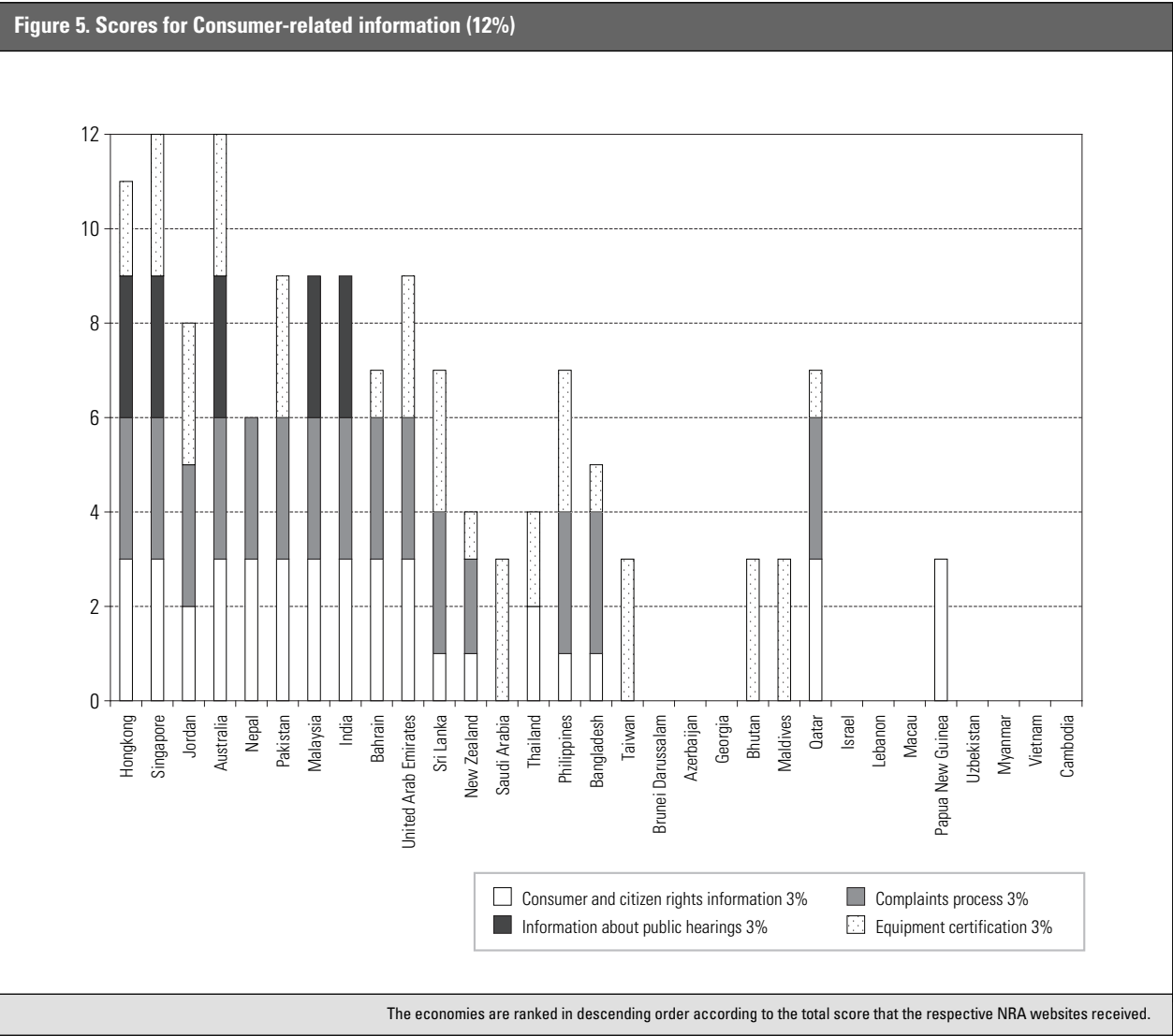
Table 3	
Cluster number	Economies
Cluster 1	Cambodia, Bangladesh, Bhutan, Myanmar, Nepal, Papua New Guinea, Uzbekistan
Cluster 2	Azerbaijan, Georgia, India, Lebanon, Pakistan, Philippines, Sri Lanka, Vietnam
Cluster 3	Bahrain, Brunei Darussalam, Jordan, Malaysia, Maldives, Thailand, Saudi Arabia, New Zealand
Cluster 4	Australia, Hong Kong, Israel, Macau, Qatar, Singapore, Taiwan, United Arab Emirates
Note: Cluster 4 economies have the highest number of access path figures, whereas Cluster 1 has the lowest.	

Table 4. Weighting of categories and sub-categories			
	Category	Category weight	Sub Category
			Sub-category weight
1	Factual information	40%	Regulatory acts, laws and legislation
			8%
			Statistical information and sector indicators
			8%
			Mission / Vision statement and work plan
			6%
			Annual reports / Budgets
			6%
2	Business information	24%	Regulatory manuals
			6%
			Organizational chart
			2%
3	General information	24%	USO policy information, reports and plans
			2%
			Sector News
			2%
			Market entry details
			8%
			Interconnection information
			8%
4	Consumer-related information	12%	Scarce Resources
			8%
			Public consultations / White papers
			10%
			RFPs
			5%
			Local language
			3%
5	Consumer-related information	12%	Contact details
			2%
			Updated information
			2%
6	Consumer-related information	12%	Links to local / international sites
			2%
			Consumer and citizen rights information
			3%
7	Consumer-related information	12%	Information about public hearings
			3%
			Equipment certification
			3%
8	Consumer-related information	12%	Complaints process
			3%

## 2. Results



**Figure 3. Scores for Business Information (24%)****Figure 4. Scores for General Information (24%)**



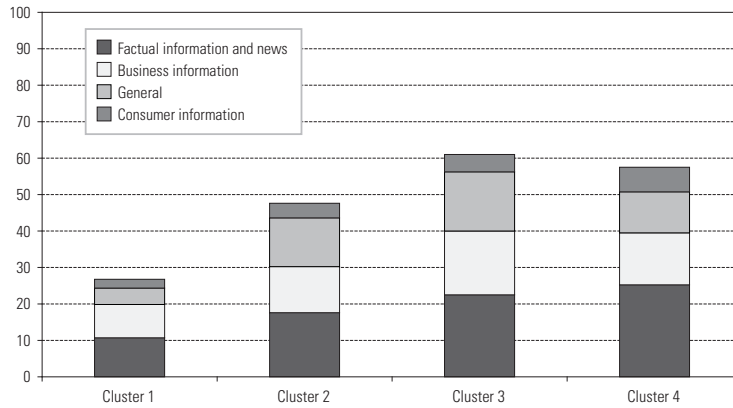
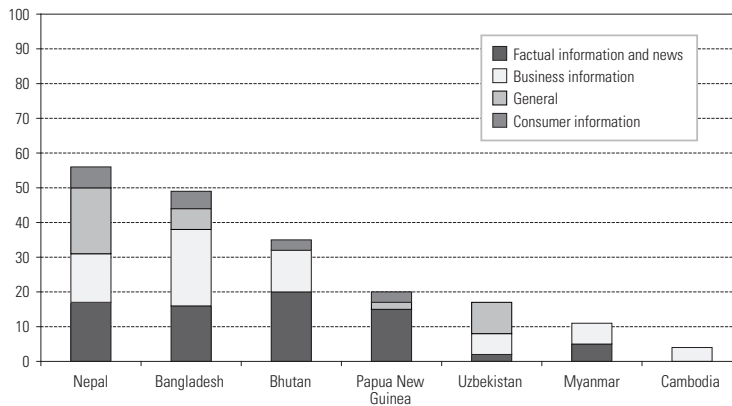
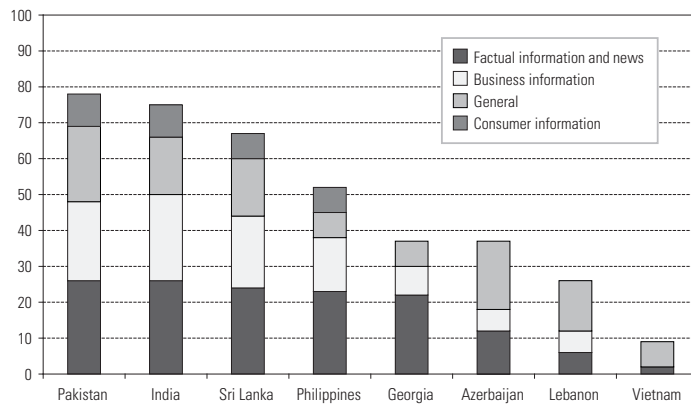
**Figure 6. Cluster performances****Figure 7. Cluster 1 performance****Figure 8. Cluster 2 performance**

Figure 9. Cluster 3 performance

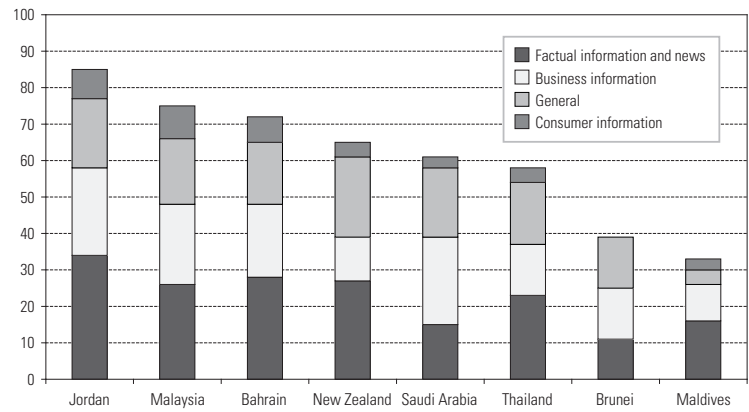
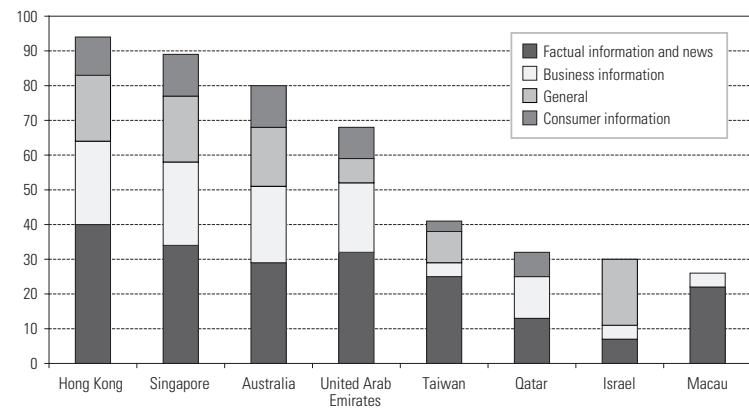


Figure 10. Cluster 4 performance





### 3. Limitations

This website survey attempts to capture as many aspects of the NRA websites as possible, however, there are still some limitations to the methodology. The following briefly describes these limitations and also explains how they were addressed.

The weighting of the sub-categories has been point of a common criticism. Given that there are no concrete rules governing how weights should be applied to the different features, there is a degree of ambiguity about the way they are allocated.

Another difficulty concerns the differences in the roles played by the NRAs. They do not all perform exactly the same functions. For example, a challenge faced by the researchers was to assess areas which were perhaps not within the purview of a particular NRA. Thus, it was decided to verify whether the NRA website presented a link to the agency responsible for that specific function and award full marks if so. Therefore some NRA sites could score good marks even if the regulator did not perform certain key functions.

The inability to review non-English websites was another limitation of this study. Many economies in Asia Pacific do not use English for their day-to-day activities. Depending on the needs, a regulator may choose not to have an English version of the website. Six economies namely Yemen, South Korea, Mongolia, Indonesia, Kuwait and China were eliminated from the study for this reason. This study assessed only 31 (50%) of a total of 62 economies. For this reason it can be argued it is not representative of the region. However one-third of the economies in the region do not have NRA sites (some of these are micro states) so the exclusion due to language is not as large as it may seem.

### 4. Conclusion

Overall the websites performed relatively well in the factual information and news section with some exceptions. Of the 31 sites that were reviewed 58% obtained total marks and 93% scored at least half the marks allocated for the section regulatory acts, laws and legislature. In the statistical information and sector indicators section, 55% scored total marks whilst 68% obtained at least half of the possible maximum score. Overall, 55% of the economies obtained at least half of the marks allocated for that category. Of the total 31 economies included in the study, 80% had sector news made available via their websites. With regard to the clusters, the four clusters obtained the following average scores of 10.7, 17.6, 22.5 and 25 respectively out of a total of 40.

The section that focused on present and future operators and investors was called business information and carried 24 % of the total score. Most of the websites appear to have a satisfactory amount of data on market entry, interconnection and scarce resources. 42% obtained full scores for market entry information with 74% obtaining at least half the score. 26% of

the economies received full scores for the interconnection section with 52% obtaining at least half the score. 45% of the economies reviewed obtained full marks for scarce resources whilst 65% obtained at least half of the marks allocated for the section. An admirable fact is that 80% of the economies provided contact information and the same number provided updated information on the website. It can be argued that updated information should be given importance within every section but this would make allocating scores a more tedious task. The clusters obtained 9, 12.5, 17.5 and 14 respectively. It is useful to note that cluster 3 has obtained a higher score than cluster 4, which is against the expected pattern. This could be due to the fact the economies in cluster 3 have economies that are growing and hence place more importance on information provision to these stakeholders.

The general category is important as it includes sections that are of general significance across all activities of the NRA. Within this category, 49% of the economies scored full marks for the provision of public consultation and white papers. 55% of the economies reviewed obtained at least half of the total marks allocated for the section. The clusters obtained the following scores: 4.5, 13.4, 16 and 11 out of a total of 24%. It is interesting to note that 58% of the economies had a local language version of their site as well. This adds value to the argument for local languages. Cluster 3 has obtained the highest score for this category. It is unusual for cluster 4 to obtain the second lowest score for this category but this is perhaps caused by the emphasis that the websites place on consumer affairs.

Consumer-related information carries a total of 12%. This category comprises four sections that were allocated 3% each. Under consumer and citizen rights information 39% of the economies obtained full scores. 41% of the economies have comprehensive information on the complaint process. However, countries scored low marks on the sections for equipment certification and information on public hearings, with only 35% and 16% obtaining full marks for the sections respectively. Most of the websites did not have any information for these two sections. However, it must be noted that equipment certification may not be in the domain of all NRAs such as India. As noted above, in the rare instances that this situation arose, if the website provided a link to the relevant authority for this function, full marks were accorded. The clusters obtained the following marks: 2.4, 4, 4.8 and 6.8. Here it can be noted that the margin between clusters 3 and 4 are greater than for the others. This is because the economies that belong to this cluster all have mature markets that place more emphasis on consumer affairs.

As figure 6 shows cluster 3 obtained an overall score higher than that of cluster 4. Cluster 3 scored the highest score under business information and general.

Within each cluster, economies performed differently in the four categories, with some scoring more points for one and less for another. In cluster 1, Nepal proves to be the best performer with an overall score of 56/100. However, all six other

economies within this cluster score less than 50% this reduces the overall cluster average to 26.8 percent. Overall, the cluster seems to score the least for the consumer-related information category and perform best in the business information section. This could be explained by the relative early stage of development the sectors in these economies are in. The NRA will place more focus on factors such as licensing, frequency allocation and interconnection details, whilst the NRA's with more mature sectors place greater focus on consumer affairs as the other areas have already been developed.

Cluster 2 performs overall better than cluster 1 which does not prove to be surprising. The economies in cluster 2 have more sophisticated regulation regimes than cluster 1 and hence will perform better in the survey. The cluster average was 47.6. The top three performers were Pakistan, India and Sri Lanka scoring 78, 75 and 67 respectively. Cluster 2 scores the lowest for the consumer related information category like in cluster 1. However, it scores the highest marks in the general category.

The average score for cluster 3 which is 61/100 is the highest of all four clusters. This is unusual as one would assume cluster 4 to have the best results. It could be argued that cluster 3 economies are those that have the highest growth rates and this is shown through the survey results. The top three performers are Jordan, Malaysia and Bahrain which scores of 85, 75 and 72 respectively. The cluster scores the lowest points for consumer related information and highest points for the business information category.

The fourth cluster consists of the economies with the highest number of access lines per 100 inhabitants. The cluster average was 57.5 percent. The top three performers were Hong Kong, Singapore and Australia with scores of 94, 89 and 80. Cluster 4 performed best in the factual information and news category and scored the lowest in the general category.

To reduce the subjective element, this study did not place any importance on the usability and aesthetics of the websites. But it needs to be noted that websites such as those belonging to regulatory agencies of Singapore, Hong Kong, Pakistan and Australia were user-friendly. The sections were clearly labelled and did not require much searching to obtain the required information whilst other sites required the constant use of the search function (where available) to obtain information.

The researchers noted many of the websites have made significant progress since the last survey that was carried out in 2005, although a more substantive comparison is not possible due to the changes in the methodology. The number of NRAs having a website also has increased. It has been noted that many sites obtained low scores for not having basic information, they can provide with least effort. The top few websites can be recommended as benchmarks, and should be used as guides for others who are looking to improve their websites.

## Notes

<sup>1</sup> This research does not suggest that every NRA should have a website in English. If not for the practical difficulty we faced to evaluate sites with non-English versions, the number of websites surveyed would have been higher. In the future we will attempt also to evaluate the non-English sites with the assistance of local research partners.

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Annex 1. List of economies that came within the scope of study						
	Country	National Telecommunication Regulatory Authority	Regulator site	English version available? (Y / N)	Considered for survey? (Y / N)	If not reason
1	Afghanistan	Afghanistan Telecom Regulatory Board (ATRA)	<a href="http://www.atra.gov.af/index.htm">http://www.atra.gov.af/index.htm</a>	Y	N	UC
2	Armenia	Ministry of Transport and Communication	<a href="http://www.mtc.am/">http://www.mtc.am/</a>	Y	N	UC
3	Australia	Australian Communication and Media Authority	<a href="http://www.acma.gov.au/WEB/HOMEPAGE/pc=HOME">http://www.acma.gov.au/WEB/HOMEPAGE/pc=HOME</a>	Y	Y	-
4	Azerbaijan	The Ministry of Communications and Information Technologies	<a href="http://www.mincom.gov.az/en/main.html">http://www.mincom.gov.az/en/main.html</a>	Y	Y	-
5	Bahrain	Telecom Regulatory Authority	<a href="http://www.tra.org.bh/en/home.asp?dfitlng=1">http://www.tra.org.bh/en/home.asp?dfitlng=1</a>	Y	Y	-
6	Bangladesh	Bangladesh Telecom Regulatory Commission (BTRC)	<a href="http://www.btrc.gov.bd/">http://www.btrc.gov.bd/</a>	Y	Y	-
7	Bhutan	Bhutan Infocomm and Media Authority	<a href="http://www.bicma.gov.bt/index.html">http://www.bicma.gov.bt/index.html</a>	Y	Y	-
8	Brunei Darussalam	Authority for Info-communication Technology Industry	<a href="http://www.aiti.gov.bn/index.htm">http://www.aiti.gov.bn/index.htm</a>	Y	Y	-
9	Cambodia	Ministry of Posts and Telecommunications	<a href="http://www.mptc.gov.kh/">http://www.mptc.gov.kh/</a>	Y	Y	-
10	China	Ministry of Information Industry	<a href="http://www.mii.gov.cn/">http://www.mii.gov.cn/</a>	N	N	EVNA
11	Cook Islands	-	-	-	N	NA
12	Fiji	Telecommunication Unit	-	-	N	NWS
13	Georgia	National Communication Commission	<a href="http://www.gncc.ge/index.php?lang_id=ENG&amp;sec_id=10050">http://www.gncc.ge/index.php?lang_id=ENG&amp;sec_id=10050</a>	Y	Y	-
14	Hong Kong	Office of the Telecommunications Authority	<a href="http://www.ofta.gov.hk/en/index.html">http://www.ofta.gov.hk/en/index.html</a>	Y	Y	-
15	India	Telecom Regulatory Authority of India (TRAI)	<a href="http://www.trai.gov.in/Default.asp">http://www.trai.gov.in/Default.asp</a>	Y	Y	-
16	Indonesia	Badan Regulasi Telekomunikasi Indonesia (BRTI)	<a href="http://www.brti.or.id/index_en.php">http://www.brti.or.id/index_en.php</a>	N	N	EVNA
17	Iran	Ministry of Posts, Telegraph and Telephone	-	-	N	NWS
18	Iraq	Ministry of Transport and Communication	-	-	N	NWS
19	Israel	Ministry of Communications	<a href="http://www.moc.gov.il/8-en/MOC.aspx">http://www.moc.gov.il/8-en/MOC.aspx</a>	Y	Y	-
20	Japan	Ministry of Internal Affairs and Communication	<a href="http://www.soumu.go.jp/joho_tsusin/eng/index.html">http://www.soumu.go.jp/joho_tsusin/eng/index.html</a>	N	N	NFPS
21	Jordan	Telecommunication Regulatory Commission	<a href="http://www.trc.gov.jo/index.php?option=com_frontpage&amp;Itemid=1&amp;lang=english">http://www.trc.gov.jo/index.php?option=com_frontpage&amp;Itemid=1&amp;lang=english</a>	Y	Y	-
22	Kazakhstan	Telecommunications and Post Dept	-	-	N	NWS
23	Kuwait	Ministry of Communication	<a href="http://www.moc.kw/">http://www.moc.kw/</a>	N	N	PP
24	Kyrgyzstan	State Communications Agency	-	-	N	NWS
25	Laos	Ministry of Communications, Transport, Posts and Construction	-	-	N	NWS
26	Lebanon	Ministry of Telecommunications	<a href="http://www.mpt.gov.lb/">http://www.mpt.gov.lb/</a>	Y	Y	-
27	Macau	DSRT	<a href="http://www.gdti.gov.mo/eng/News/index.html">http://www.gdti.gov.mo/eng/News/index.html</a>	Y	Y	-
28	Malaysia	Malaysian Communication and Multimedia Commission	<a href="http://www.skmm.gov.my/">http://www.skmm.gov.my/</a>	Y	Y	-
29	Maldives	Telecom Authority of Maldives (TAM)	<a href="http://www.tam.gov.mv/">http://www.tam.gov.mv/</a>	Y	Y	-
30	Marshall Islands	Cabinet	-	-	N	NWS
31	Mongolia	ICTA	<a href="http://www.icta.gov.mn/">http://www.icta.gov.mn/</a>	N	N	EVNA
32	Myanmar	Ministry of Communications, Posts, and Telegraphs	<a href="http://www.mpt.net.mm/">http://www.mpt.net.mm/</a>	Y	Y	-
33	Nauru	Directorate of Telecommunications	-	-	N	NWS
34	Nepal	Nepal Telecommunication Authority	<a href="http://www.nta.gov.np/">http://www.nta.gov.np/</a>	Y	Y	-


	Country	National Telecommunication Regulatory Authority	Regulator site	English version available? (Y / N)	Considered for survey? (Y / N)	If not reason
35	New Zealand	Commerce Commission	<a href="http://www.comcom.govt.nz/index.aspx">http://www.comcom.govt.nz/index.aspx</a>	Y	Y	-
36	Nieu	-	-	-	N	NA
37	North Korea	-	-	-	N	NA
38	Oman	Telecommunication Regulatory Agency	<a href="http://www.tra.gov.om/telecom.htm/">http://www.tra.gov.om/telecom.htm/</a>	Y	N	UC
39	Pakistan	Pakistan Telecommunication Authority (PTA)	<a href="http://www.pta.gov.pk/index.php?cur_t=vnormal">http://www.pta.gov.pk/index.php?cur_t=vnormal</a>	Y	Y	-
40	Palau	-	-	-	N	NA
41	Papua New Guinea	Independence Consumer and Competition Commission	<a href="http://www.iccc.gov.pg/home.htm">http://www.iccc.gov.pg/home.htm</a>	Y	Y	-
42	Philippines	National Telecommunication Commission	<a href="http://portal.ntc.gov.ph/wps/portal/!ut/p/_s.7_0_A/7_0_9D?cID=6_0_FM&amp;nID=7_0_LU">http://portal.ntc.gov.ph/wps/portal/!ut/p/_s.7_0_A/7_0_9D?cID=6_0_FM&amp;nID=7_0_LU</a>	Y	Y	-
43	Qatar	Supreme Council of Information and Communication Technology	<a href="http://www.ict.gov.qa/output/Page2.asp">http://www.ict.gov.qa/output/Page2.asp</a>	Y	Y	-
44	Samoa	Ministry of Posts and Telecom	-	-	N	NWS
45	Saudi Arabia	Communications and Information Technologies Commission	<a href="http://www.citc.gov.sa/citcportal/Homepage/tabid/106/cmspid/%7B611C6EDD-85C5-4800-A0DA-A997A624D0D0%7D/Default.aspx">http://www.citc.gov.sa/citcportal/Homepage/tabid/106/cmspid/%7B611C6EDD-85C5-4800-A0DA-A997A624D0D0%7D/Default.aspx</a>	Y	Y	-
46	Singapore	Infocomm Development Authority	<a href="http://www.ida.gov.sg/home/index.aspx">http://www.ida.gov.sg/home/index.aspx</a>	Y	Y	-
47	Solomon Islands	Ministry of Transport, Works and Communication	-	-	N	NWS
48	South Korea	Korea Communication Commission	<a href="http://www.kcc.go.kr/gts.do?a=user.index.IndexApp&amp;c=1001">http://www.kcc.go.kr/gts.do?a=user.index.IndexApp&amp;c=1001</a>	N	N	EVNA
49	Sri Lanka	Telecommunication Regulatory Commission	<a href="http://202.124.172.4/trc_test/index.php">http://202.124.172.4/trc_test/index.php</a>	Y	Y	-
50	Syria	Syrian Telecommunication Establishment	-	-	N	NWS
51	Taiwan	National Communication Commission	<a href="http://www.ncc.tw/">http://www.ncc.tw/</a>	Y	Y	-
52	Tajikistan	Ministry of Communications	-	-	N	NWS
53	Thailand	National Telecommunication Commission	<a href="http://eng.ntc.or.th/index.php">http://eng.ntc.or.th/index.php</a>	Y	Y	-
54	Timor-Leste	-	-	-	N	NA
55	Tonga	Telecommunication Commission	-	-	N	NWS
56	Turkmenistan	Ministry of Communications	-	-	N	NWS
57	Tuvalu				N	
58	UAE	Telecommunication Regulatory Commission	<a href="http://www.tra.gov.ae/">http://www.tra.gov.ae/</a>	Y	Y	-
59	Uzbekistan	Communications and Information Agency	<a href="http://www.aci.uz/en/news/">http://www.aci.uz/en/news/</a>	Y	Y	-
60	Vanuatu	Ministry of Public works, Transport, Communication and Civil works	-	-	N	NWS
61	Vietnam	Ministry of Information and Communications	<a href="http://www.mic.gov.vn/details_e.asp?Object-271032875&amp;news_ID=4539827">http://www.mic.gov.vn/details_e.asp?Object-271032875&amp;news_ID=4539827</a>	Y	Y	-
62	Yemen	Ministry of Telecommunication and Information Technology	<a href="http://www.mtit.gov.ye/">http://www.mtit.gov.ye/</a>	-	N	EVNA
<b>Abbreviations for table:</b> EVNA      English version not available NWS      No website UC      Under construction						

## **Annex**




**Autorité de Régulation de la Poste et des Télécommunications**

[www.arpt.dz](http://www.arpt.dz)




**Regulatory Authority for Post and Telecommunications**



[Accueil](#)
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[Agenda](#)
[Plan du site](#)
[Archives](#)

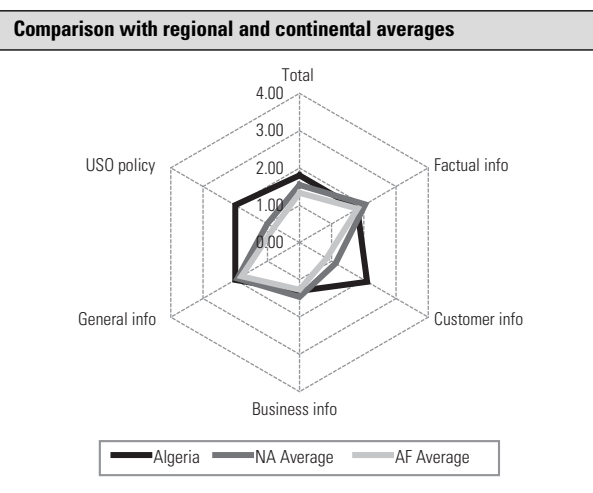
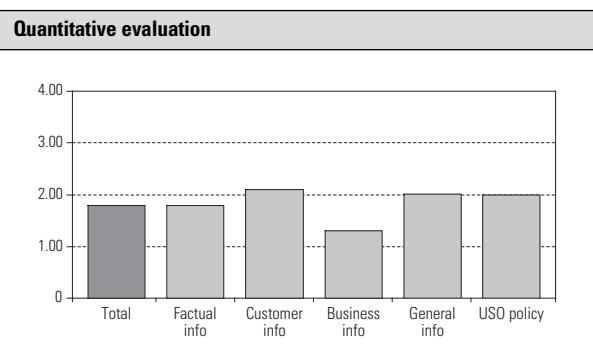
**L'ARPT**  
Réglementation  
Actualités  
Procédures & Formulaires  
Observatoires  
Publication  
Grands Dossiers  
Plan de numérotation  
Service universel  
Secteur Postal

**Actualités**  
- Communiqué : Campagne d'identification des cartes SIM anonymes. (ES / ES) NEW !  
- Appel à manifestation d'intérêt dans le cadre du lancement du processus d'octroi de licences de téléphonie mobile de 3ème génération:(ES/ES/AB)  
- La lettre de la Présidente du Conseil de l'ARPT: C'est avec conviction, détermination et beaucoup de fierté que je m'engage, en ces jours, dans mes nouvelles fonctions de Présidente du Conseil de l'Autorité de Régulation de la Poste et des Télécommunications. (L'ing)  
- Installation de la nouvelle Présidente du Conseil de l'ARPT. (L'ing)  
**Nouveau plan de numérotation téléphonique :** (ES / ES)  
- Liste des opérateurs titulaires d'autorisations relatives à la fourniture des

**Messagerie**  
(Prières uniquement)  


**Procédures & Formulaires**  
- Exercice de l'activité « Centre d'Appels » ou « Call Center ». (L'ing).  
- Liste des équipements agréés. (L'ing).  
- Exercice de l'activité postale dans le cadre de la simple

Category	Sub Category	
<b>Factual information &amp; news</b>	1,80	Regulatory acts, legislation laws 2,50
		Statistical information and sector indicators 1,00
		Sector news 2,00
<b>Consumer and citizen information</b>	2,10	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.) 2,00
		Consumer and citizen rights information 2,00
		Complaints process 2,50
		Information about public hearings 2,00
		Statistical information on consumer attention and complaints resolution 2,00
<b>Business information</b>	1,30	Equipment certification 2,00
		Market entry details (such as licensing) 1,50
		Interconnection information 2,00
		White papers / consultancy papers 1,00
		Scarce resources (e.g. spectrum allocation) 0,00
<b>General information</b>	2,00	Mission statements 2,00
		Local languages
		Links to local and international sites 2,00
		Contact details of key officials (phone numbers, emails, or on line contact form) 2,00
		Ease of use (navigation tools, website maps, search engine, overall organization) 2,50
		Organization chart (or equivalent) 1,50
<b>Universal service / universal access</b>	2,00	Policy information, reports and plans 2,00
<b>Total (weighted)</b>		1,80



# Angola

Angolan Institute of Communications (INACOM)
www.inacom.og.ao



## INSTITUTO ANGOLANO DAS COMUNICAÇÕES

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O INACOM

Sector Telecom

Regulamento

INACOM Inform

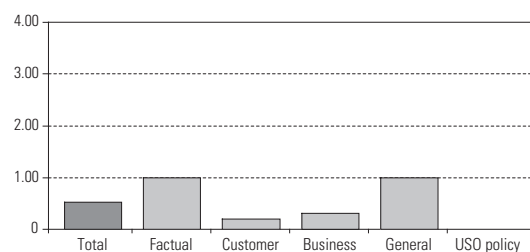
O INACOM, Instituto Angolano das Comunicações, foi criado pelo Decreto nº 12/99, de 25 de Junho, e é o organismo responsável por, em Angola, assegurar a regulamentação e monitorização da actividade de prestação de serviços de telecomunicações.

Compete-lhe ainda a planificação, gestão e fiscalização da utilização do espectro radioelétrico, em todo o território

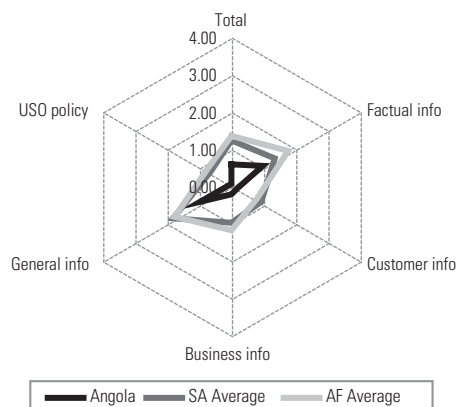


Category	Sub Category		
<b>Factual information &amp; news</b>	1,00	Regulatory acts, legislation laws	1,00
		Statistical information and sector indicators	1,00
		Sector news	1,00
<b>Consumer and citizen information</b>	0,20	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	0,00
		Consumer and citizen rights information	0,00
		Complaints process	0,00
		Information about public hearings	1,00
		Statistical information on consumer attention and complaints resolution	0,00
<b>Business information</b>	0,30	Equipment certification	0,00
		Market entry details (such as licensing)	0,00
		Interconnection information	0,00
		White papers / consultancy papers	1,50
		Scarce resources (e.g. spectrum allocation)	0,00
<b>General information</b>	1,00	Mission statements	1,00
		Local languages	1,00
		Links to local and international sites	1,00
		Contact details of key officials (phone numbers, emails, or on line contact form)	1,00
		Ease of use (navigation tools, website maps, search engine, overall organization)	1,00
		Organization chart (or equivalent)	1,00
<b>Universal service / universal access</b>	-	Policy information, reports and plans	0,00
<b>Total (weighted)</b>			0,53

## Quantitative evaluation

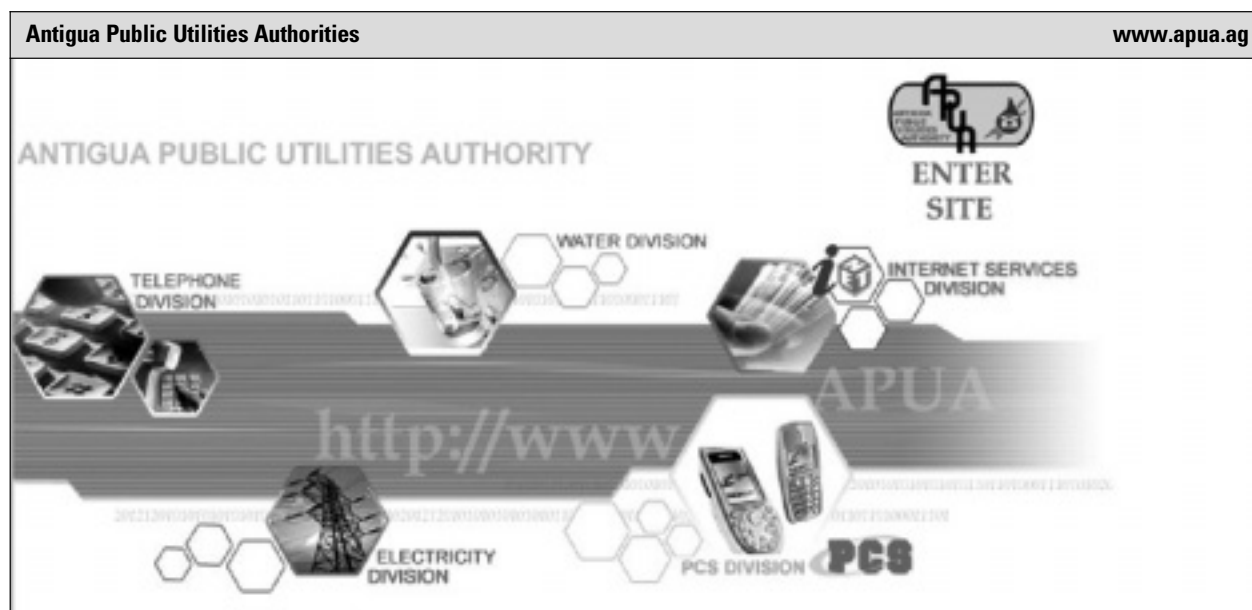


## Comparison with regional and continental averages



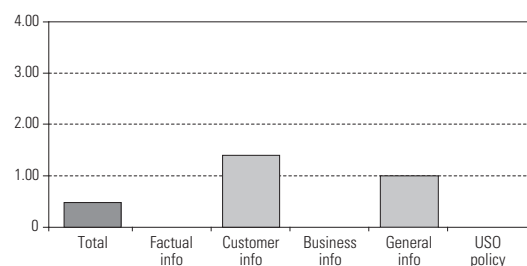


# Antigua and Barbuda

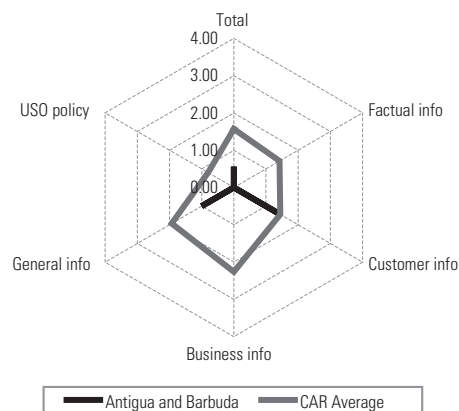


Category	Sub Category	
<b>Factual information &amp; news</b>	-	Regulatory acts, legislation laws
		0
		Statistical information and sector indicators
		0
		Sector news
		0
<b>Consumer and citizen information</b>	1.40	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		2
		Consumer and citizen rights information
		1
		Complaints process
		4
		Information about public hearings
		0
		Statistical information on consumer attention and complaints resolution
		0
<b>Business information</b>	-	Equipment certification
		Market entry details (such as licensing)
		0
		Interconnection information
		0
		White papers / consultancy papers
		0
		Scarce resources (e.g. spectrum allocation)
		0
<b>General information</b>	1.00	Mission statements
		2
		Local languages
		Links to local and international sites
		0
		Contact details of key officials (phone numbers, emails, or on line contact form)
		1
		Ease of use (navigation tools, website maps, search engine, overall organization)
		3
		Organization chart (or equivalent)
		0
<b>Universal service / universal access</b>	-	Policy information, reports and plans
		0
<b>Total (weighted)</b>		0.48

## Quantitative evaluation



## Comparison with regional and continental averages

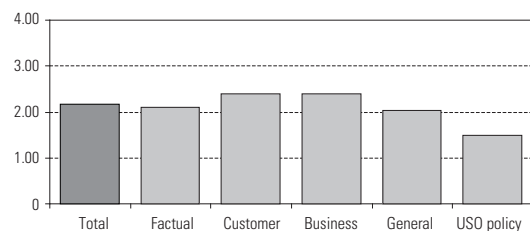


# Argentina

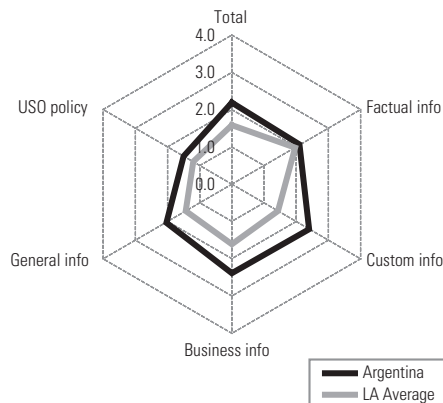
**Comisión Nacional de Comunicaciones**
[www.cnc.gov.ar](http://www.cnc.gov.ar)

Category	Sub Category	
<b>Factual information &amp; news</b>	2,1	Regulatory acts, legislation laws 2,5
		Statistical information and sector indicators 2
		Sector news 1,5
<b>Consumer and citizen information</b>	2,4	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.) 2,5
		Consumer and citizen rights information 3
		Complaints process 3,5
		Information about public hearings 1
		Statistical information on consumer attention and complaints resolution 2
<b>Business information</b>	2,4	Equipment certification 3
		Market entry details (such as licensing) 2,5
		Interconnection information 2
		White papers / consultancy papers 1,5
		Scarce resources (e.g. spectrum allocation) 3
<b>General information</b>	2,03	Mission statements 2
		Local languages
		Links to local and international sites 2
		Contact details of key officials (phone numbers, emails, or on line contact form) 3
		Ease of use (navigation tools, website maps, search engine, overall organization) 1,5
		Organization chart (or equivalent) 2
<b>Universal service / universal access</b>	1,5	Policy information, reports and plans 1,5
<b>Total (weighted)</b>		2,18

## Quantitative evaluation



## Comparison with regional and continental averages



**Australian Communication and Media Authority**

[www.acma.gov.au](#)

Australian Government  
Australian Communications  
and Media Authority

[CONTACT INFO](#)
[GLOSSARY](#)
[SITE MAP](#)

Search site

**For the public:**

- How regulation works
- Content & advertising
- Consumer & community advice

**For licensees & industry:**

- Licensing & regulation
- Service & technical requirements
- Content requirements

**About ACMA:**

- ACMA organisation

**ACMA** | Australia's regulator for broadcasting, the internet, radiocommunications and telecommunications

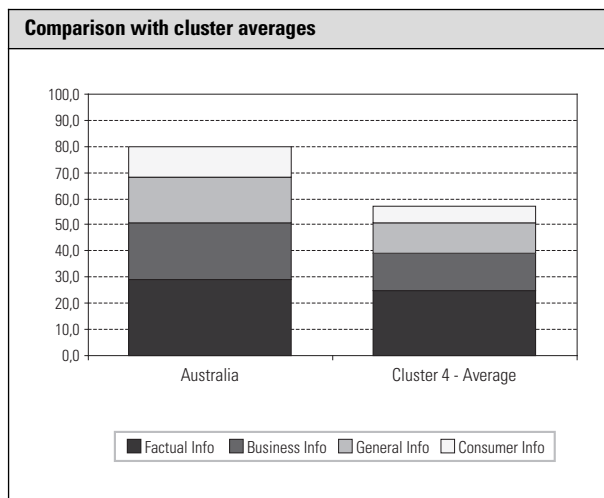
Do you only want...

- ACMA corporate?
- Broadcasting?
- Internet?
- Radiofrequency spectrum?
- Telecommunications?

**ACMA news** - All latest news...

Report prohibited online content

Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	29	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	6
		6%	Mission / Vision statement and work plan	0
		6%	Annual reports / Budgets	6
		6%	Manuals	3
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	2
		2%	Sector News	2
<b>Business information</b>	22	8%	Market entry	8
		8%	Interconnection	6
		8%	Scarce Resources	8
<b>General information</b>	17	10%	Public consultations / White papers	10
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	0
<b>Consumer information</b>	12	3%	Consumer and citizen rights information	3
		3%	Information about public hearings	3
		3%	Equipment certification	3
		3%	Complaints process	3
<b>Total</b>	<b>80</b>			

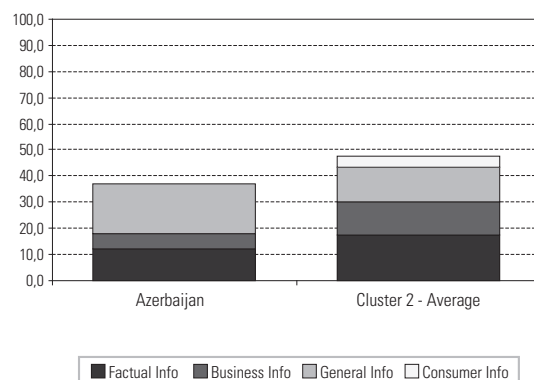


# Azerbaijan



Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	12	8%	Regulatory acts, laws and legislation	0
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	0
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	0
		2%	Sector News	2
<b>Business information</b>	6	8%	Market entry	6
		8%	Interconnection	0
		8%	Scarce Resources	0
<b>General information</b>	19	10%	Public consultations / White papers	10
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
<b>Consumer information</b>	0	3%	Consumer and citizen rights information	0
		3%	Information about public hearings	0
		3%	Equipment certification	0
		3%	Complaints process	0
<b>Total</b>	<b>37</b>			

Comparison with cluster averages



Public Utilities Commission

www.pucbahamas.gov.bs



## Public Utilities Commission



### Navigation

- About Us
- Mission Statement
- Consumer Centre
- Telecommunications
- Radiocommunications
- Electricity
- Water & Sewerage
- Licensee Directory
- News Centre
- Download Centre
- Legislation

## Welcome to the Public Utilities Commission of The Bahamas

### Consumer Advice Centre



- Your Rights
- How We Can Help
- Complaints

[More >](#)

### Telecommunications Licensing



- License Types
- Telecomms

### Latest News

Various Licensee(s) respond to licence for Resale of Services!

Proposed License for the Resale of Voice Services!

The determination of the Dispute between BTC and SRG

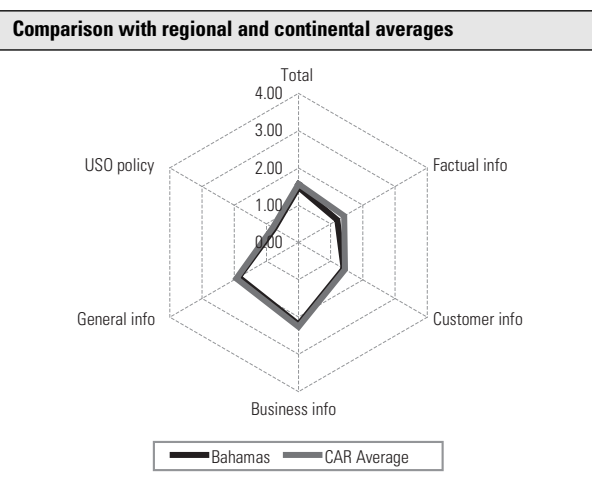
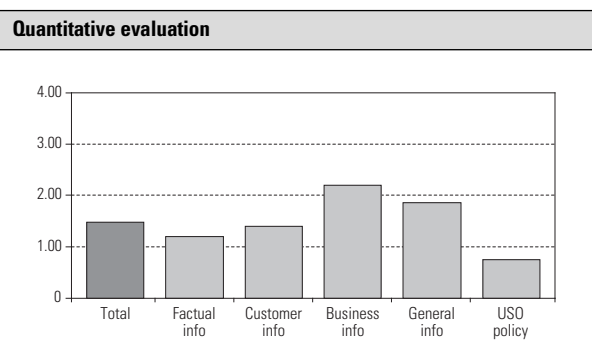
Public Notice -LONG RANGE Cordless PHONES

PUBLIC INFORMATION BULLETIN #3 of 2007!

### Latest Downloads

An Application for the

Category	Sub Category		
<b>Factual information &amp; news</b>	1.20	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	0
		Sector news	2
<b>Consumer and citizen information</b>	1.40	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	1
		Consumer and citizen rights information	2
		Complaints process	3
		Information about public hearings	1
		Statistical information on consumer attention and complaints resolution	0
<b>Business information</b>	2.20	Equipment certification	3
		Market entry details (such as licensing)	1
		Interconnection information	2
		White papers / consultancy papers	3
		Scarce resources (e.g. spectrum allocation)	2
<b>General information</b>	1.86	Mission statements	2
		Local languages	
		Links to local and international sites	1
		Contact details of key officials (phone numbers, emails, or on line contact form)	2
		Ease of use (navigation tools, website maps, search engine, overall organization)	3
		Organization chart (or equivalent)	2
<b>Universal service / universal access</b>	0.75	Policy information, reports and plans	0.75
<b>Total (weighted)</b>			1.48

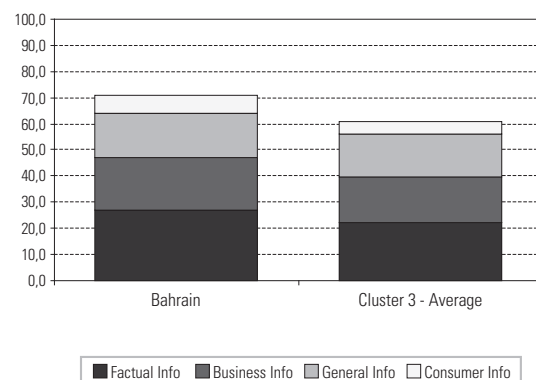


# Bahrain



Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	27	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	3
		6%	Annual reports / Budgets	3
		6%	Manuals	0
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	1
		2%	Sector News	2
<b>Business information</b>	20	8%	Market entry	8
		8%	Interconnection	4
		8%	Scarce Resources	8
<b>General information</b>	17	10%	Public consultations / White papers	10
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	0
<b>Consumer information</b>	7	3%	Consumer and citizen rights information	3
		3%	Information about public hearings	0
		3%	Equipment certification	1
		3%	Complaints process	3
<b>Total</b>	<b>71</b>			

Comparison with cluster averages



# Bangladesh

Bangladesh Telecommunication Regulatory Commission
www.btrc.gov.bd




Monday, July 28, 2008
Webmail

Web
btrc.gov.bd
Search

- Home
- About Us
- Legislation
- Policy
- Licensing
- Spectrum
- Engineering
- Projects
- Archives
- NFAP
- Operators

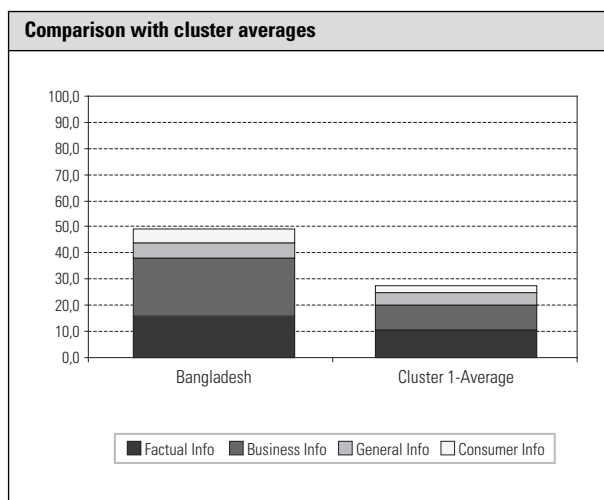
Bangladesh Telecommunication Regulatory Commission (BTRC) is an independent Commission established under the Bangladesh Telecommunication Act, 2001 (Act no. 18 of 2001) published by the Parliament in the Bangladesh Gazette, extraordinary issue of April 16, 2001. BTRC started functioning from January 31, 2002.

**Vision**

To Facilitate affordable telecommunication services of acceptable quality for all regardless of their location.

- PUBLIC CONSULTATION ON DRAFT LICENSING GUIDELINES FOR BROADBAND WIRELESS ACCESS (BWA) SERVICES IN BANGLADESH  
[Read More](#)
- APPROVED TARIFF FOR SUBMARINE CABLE RELATED SERVICES  
[Read More](#)

Category	Score	Sub Cat Weight	Sub Category	
Factual information	16	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	0
		6%	Mission / Vision statement and work plan	3
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	1
		2%	Sector News	2
Business information	22	8%	Market entry	8
		8%	Interconnection	6
		8%	Scarce Resources	8
General information	6	10%	Public consultations / White papers	0
		5%	RFPs	0
		3%	Local language	0
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
Consumer information	5	3%	Consumer and citizen rights information	1
		3%	Information about public hearings	0
		3%	Equipment certification	1
		3%	Complaints process	3
Total	17			

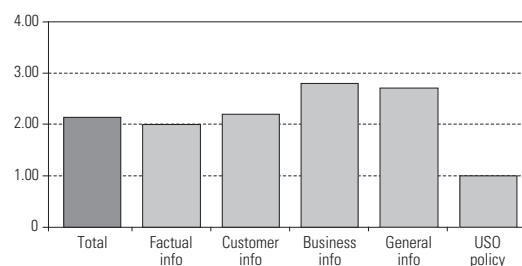


# Barbados

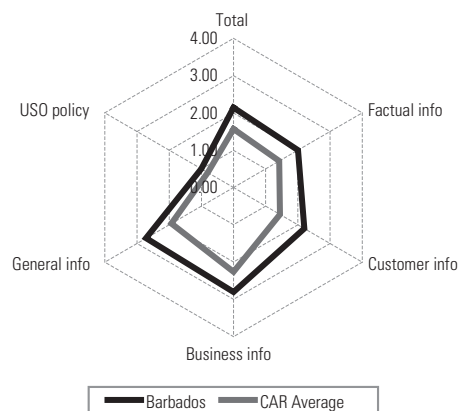


Category		Sub Category	
<b>Factual information &amp; news</b>	2.00	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	2
		Sector news	2
<b>Consumer and citizen information</b>	2.20	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	2
		Consumer and citizen rights information	2
		Complaints process	3
		Information about public hearings	2
		Statistical information on consumer attention and complaints resolution	2
<b>Business information</b>	2.80	Equipment certification	3
		Market entry details (such as licensing)	3
		Interconnection information	2
		White papers / consultancy papers	3
		Scarce resources (e.g. spectrum allocation)	3
<b>General information</b>	2.71	Mission statements	2
		Local languages	
		Links to local and international sites	2
		Contact details of key officials (phone numbers, emails, or on line contact form)	4
		Ease of use (navigation tools, website maps, search engine, overall organization)	3
		Organization chart (or equivalent)	2
<b>Universal service / universal access</b>	1.00	Policy information, reports and plans	1
<b>Total (weighted)</b>			<b>2.14</b>

## Quantitative evaluation


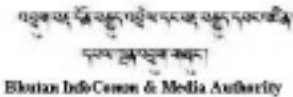


## Comparison with regional and continental averages





**Bhutan Infocomm and Media Authority (BICMA)**
[www.bicma.gov.bt](http://www.bicma.gov.bt)


[Home](#)   [Who is Who](#)   [Radiocom](#)   [Media](#)   [Telecom](#)   [Feedbacks](#)   [Papers](#)   [News](#)

[|| Bhutan Information Communications and Media Act 2006 \(English\)||](#)
[Bhutan Information Communications and Media Act 2006 \(Dzongkha\)||](#)
[Glossary](#)
[|| RULES ON ICT FACILITIES AND ICT SERVICES||](#)
[Journalist Code of Conducts](#)
[|| Abridged Journalist Code of Conducts||](#)
[Reference Interconnection Offer](#)
[||For other Rules and Regulations please refer Papers](#)

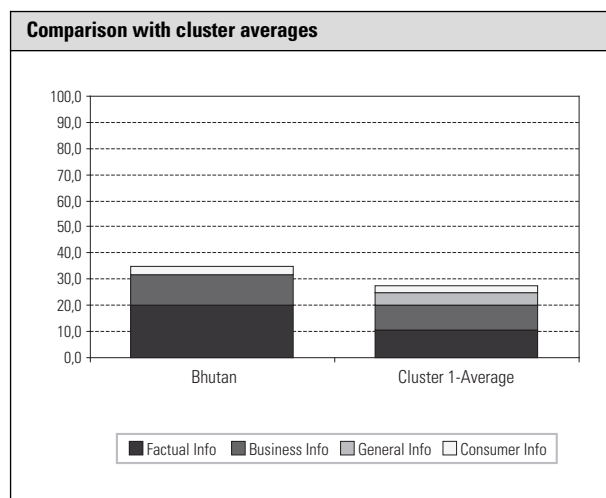
*For any comments please*

Mon, 28 Jul 108  
 FORMS  
 International Filing Permit Form

**Establishment:**

Bhutan InfoComm and Media Authority (BICMA) was established in the year 2000 with the enactment of the Bhutan Telecommunications Act. The office was then called as Bhutan Telecommunications Authority. It was renamed as Bhutan Communications Authority in the year 2003 with the establishment of new ministry for Information and Communications. In the year

Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	20	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	0
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	0
		2%	Sector News	2
<b>Business information</b>	12	8%	Market entry	4
		8%	Interconnection	4
		8%	Scarce Resources	4
<b>General information</b>	0	10%	Public consultations / White papers	0
		5%	RFPs	0
		3%	Local language	0
		2%	Contact details	0
		2%	Updated info	0
		2%	Links to local / international sites	0
<b>Consumer information</b>	3	3%	Consumer and citizen rights information	0
		3%	Information about public hearings	3
		3%	Equipment certification	0
		3%	Complaints process	0
<b>Total</b>	<b>35</b>			



# Bolivia

**Dirección General de Telecomunicaciones**
**www.sittel.gov.bo**


**SUPERINTENDENCIA DE TELECOMUNICACIONES DE BOLIVIA**

Acceso a más y mejores servicios a precios eficientes

[Inicio](#)
[Marco Legal](#)
[Resoluciones y Procesos](#)
[Informaciones](#)
[Atención al Ciudadano](#)
[Proveedores](#)



**SITTEL Informa**

SITTEL Analiza posibilidad de que usuarios presenten su C.I. para comprar un Chip

Por ahora, SITTEL aclara que no existe en la actualidad una norma vigente que obligue a las personas a presentar su carnet, pasaporte u otro documento, al momento de llenar el formulario de activación de un a línea celular Leer Mas...

**Tarifa**


**Mapa del Sitio**

- Inicio
- ¿Quiénes Somos?
- Transparencia
- Área Usuarios



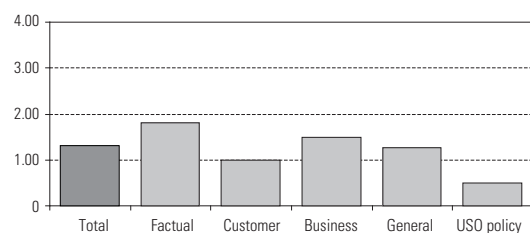
Tarja aplaudió la campaña "Obras y Servicios que integran Bolivia"

Dejar los fríos muros de las oficinas de la Superintendencia de Telecomunicaciones (SITTEL) está dando buenos resultados, el sábado 4 de julio Tarja fue el centro de la campaña "Obras y Servicios que integran a Bolivia", aplaudida por la ciudadanía por su contenido informativo respecto a los logros

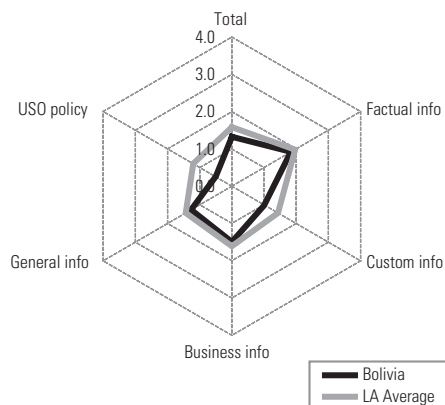
**Trafico**


Category	Sub Category	
<b>Factual information &amp; news</b>	1,8	Regulatory acts, legislation laws 2
		Statistical information and sector indicators 1,5
		Sector news 2
<b>Consumer and citizen information</b>	1	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.) 1
		Consumer and citizen rights information 2
		Complaints process 2
		Information about public hearings -
		Statistical information on consumer attention and complaints resolution -
<b>Business information</b>	1,5	Equipment certification -
		Market entry details (such as licensing) 2
		Interconnection information 2
		White papers / consultancy papers 1
		Scarce resources (e.g. spectrum allocation) 2,5
<b>General information</b>	1,26	Mission statements 1
		Local languages
		Links to local and international sites 1,5
		Contact details of key officials (phone numbers, emails, or on line contact form) 2
		Ease of use (navigation tools, website maps, search engine, overall organization) 1,5
		Organization chart (or equivalent) -
<b>Universal service / universal access</b>	0,5	Policy information, reports and plans 0,5
<b>Total (weighted)</b>		1,31

## Quantitative evaluation



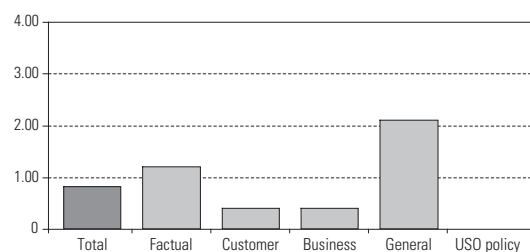
## Comparison with regional and continental averages



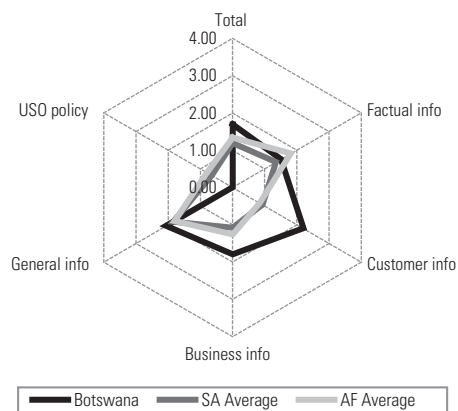


Category	Sub Category	
<b>Factual information &amp; news</b>	1,50	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	2,20	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	1,80	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	2,07	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	-	Policy information, reports and plans
<b>Total (weighted)</b>		1,69

## Quantitative evaluation



## Comparison with regional and continental averages



# Brazil

Agência Nacional de Telecomunicações

www.anatel.gov.br

Ministério das Comunicações

Destaque de Governo

ANATEL Agência Nacional de Telecomunicações

Espaço do Cidadão

Informações Técnicas

Sala de Imprensa

Conheça a Anatel

Tenho interesse em...

Pesquisa Avançada

Pesquisar...

Ok

A+

A-

Abre todas

Informações e consultas

Internet

Ondas de rádio

Direitos e Deveres

Telefonia Fixa

Telefonia Móvel

TV por Assinatura

Comunicações Via Rádio

Interação com a Sociedade

**Telefonia fixa já conta com conselhos de usuários**

Os 46 Conselhos de Usuários previstos na Resolução 490, de 24 de Janeiro de 2008, foram implantados entre 15 de maio e 23 de julho. Os conselhos deverão cooperar com a concessionária no desenvolvimento e na disseminação de programas educativos destinados à orientação dos direitos e deveres dos usuários.

**Leia mais**

**Mais notícias**

- 24/07/2008 - Anatel promove audiência pública em Porto Alegre sobre regulamentação das telecomunicações e outorgas
- 21/07/2008 - Anatel autoriza reajuste para as tarifas de telefonia

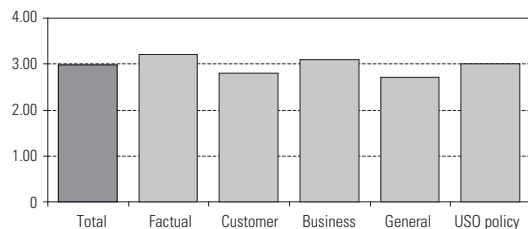
Outras

**Principais serviços**

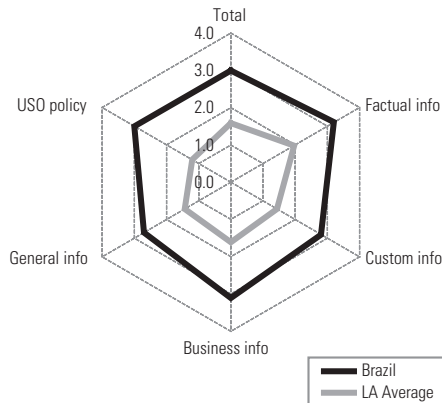
- 0800 33 2001
- Consultas Públicas
- Emissão de boletins
- Fale Conosco
- Localizar Telefones Públicos
- Preços de Ligações
- Produtos Certificados
- Ranking de Reclamações
- Tire suas dúvidas

Category		Sub Category	
<b>Factual information &amp; news</b>	3,2	Regulatory acts, legislation laws	3
		Statistical information and sector indicators	3,5
		Sector news	3
<b>Consumer and citizen information</b>	2,8	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	3
		Consumer and citizen rights information	2,5
		Complaints process	3
		Information about public hearings	3
		Statistical information on consumer attention and complaints resolution	2,5
<b>Business information</b>	3,1	Equipment certification	3,5
		Market entry details (such as licensing)	3
		Interconnection information	3
		White papers / consultancy papers	3
		Scarce resources (e.g. spectrum allocation)	3
<b>General information</b>	2,71	Mission statements	2
		Local languages	
		Links to local and international sites	2,5
		Contact details of key officials (phone numbers, emails, or on line contact form)	3,0
		Ease of use (navigation tools, website maps, search engine, overall organization)	3,5
		Organization chart (or equivalent)	2,5
<b>Universal service / universal access</b>	3	Policy information, reports and plans	3
<b>Total (weighted)</b>			<b>2,98</b>

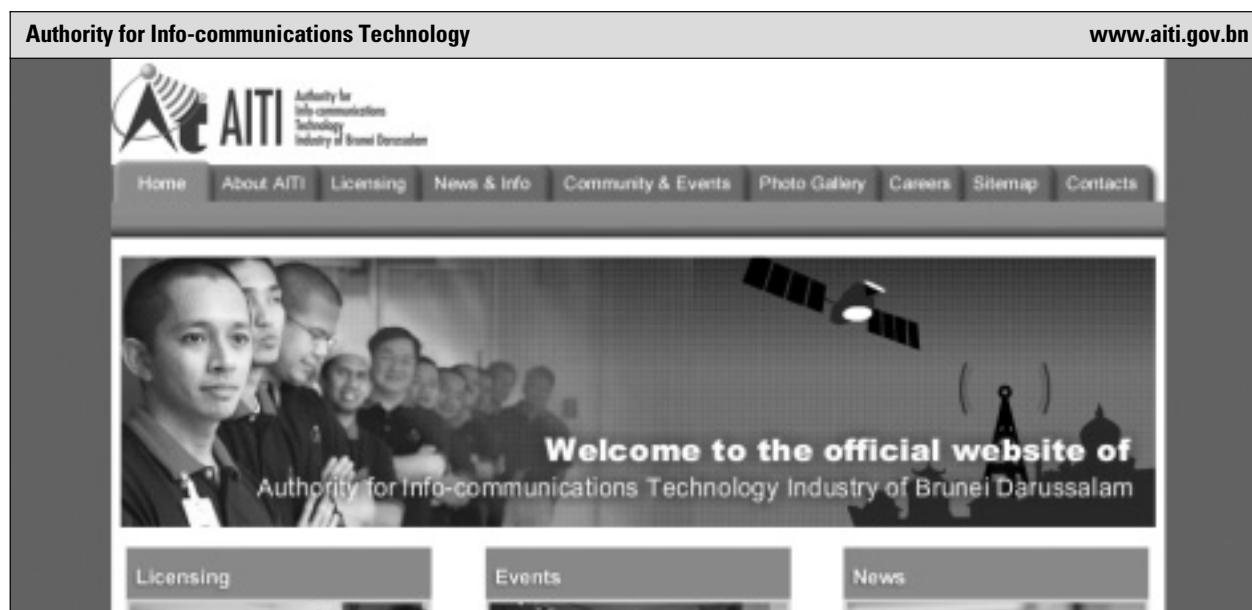
### Quantitative evaluation



### Comparison with regional and continental averages

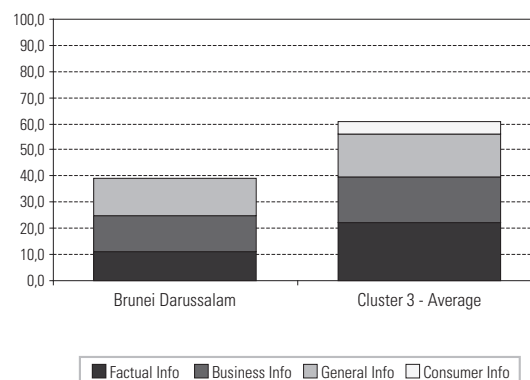


# Brunei Darussalam

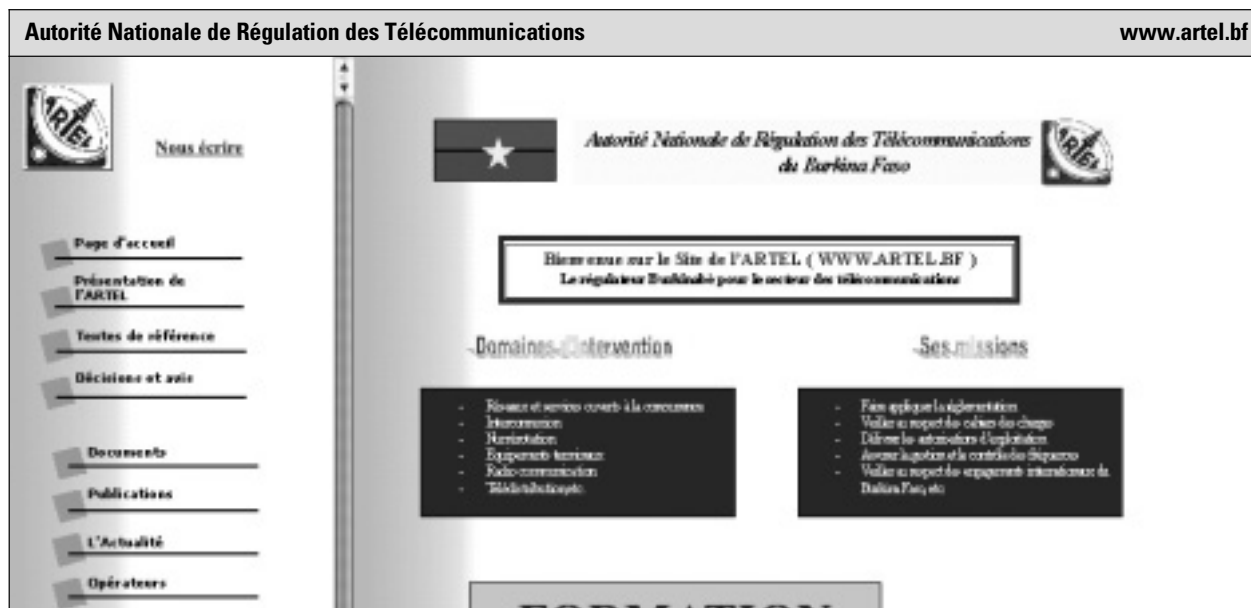


Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	11	8%	Regulatory acts, laws and legislation	4
		8%	Statistical information and sector indicators	0
		6%	Mission / Vision statement and work plan	3
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	0
		2%	Sector News	2
<b>Business information</b>	14	8%	Market entry	8
		8%	Interconnection	6
		8%	Scarce Resources	0
<b>General information</b>	14	10%	Public consultations / White papers	10
		5%	RFPs	0
		3%	Local language	0
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	0
<b>Consumer information</b>	0	3%	Consumer and citizen rights information	0
		3%	Information about public hearings	0
		3%	Equipment certification	0
		3%	Complaints process	0
<b>Total</b>	<b>39</b>			

Comparison with cluster averages

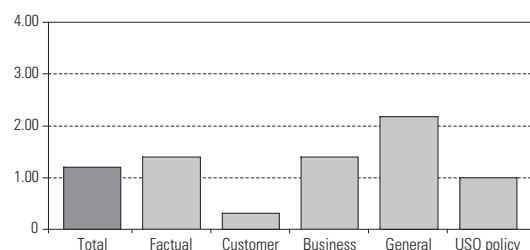


# Burkina Faso

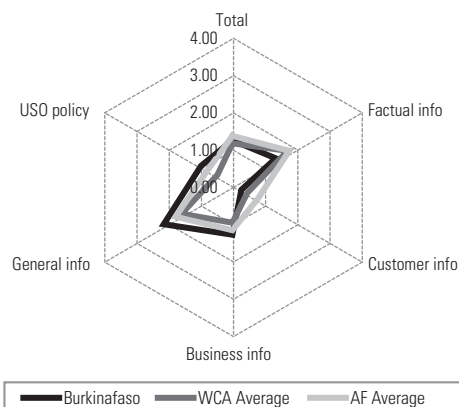


Category	Sub Category	
<b>Factual information &amp; news</b>	1,40 Regulatory acts, legislation laws	2,00
	Statistical information and sector indicators	1,00
	Sector news	1,00
<b>Consumer and citizen information</b>	0,30 Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	0,00
	Consumer and citizen rights information	0,00
	Complaints process	0,00
	Information about public hearings	1,50
	Statistical information on consumer attention and complaints resolution	0,00
<b>Business information</b>	1,40 Equipment certification	2,00
	Market entry details (such as licensing)	1,00
	Interconnection information	2,00
	White papers / consultancy papers	0,00
	Scarce resources (e.g. spectrum allocation)	2,00
<b>General information</b>	2,18 Mission statements	2,00
	Local languages	
	Links to local and international sites	3,00
	Contact details of key officials (phone numbers, emails, or on line contact form)	2,00
	Ease of use (navigation tools, website maps, search engine, overall organization)	2,00
	Organization chart (or equivalent)	1,50
<b>Universal service / universal access</b>	1,00 Policy information, reports and plans	1,00
<b>Total (weighted)</b>		1,20

## Quantitative evaluation



## Comparison with regional and continental averages

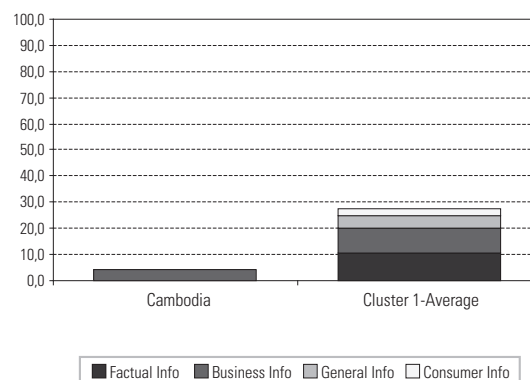


# Cambodia



Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	0	8%	Regulatory acts, laws and legislation	0
		8%	Statistical information and sector indicators	0
		6%	Mission / Vision statement and work plan	0
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	0
		2%	USO policy information, reports and plans	0
		2%	Sector News	0
<b>Business information</b>	4	8%	Market entry	0
		8%	Interconnection	0
		8%	Scarce Resources	4
<b>General information</b>	0	10%	Public consultations / White papers	0
		5%	RFPs	0
		3%	Local language	0
		2%	Contact details	0
		2%	Updated info	0
		2%	Links to local / international sites	0
<b>Consumer information</b>	0	3%	Consumer and citizen rights information	0
		3%	Information about public hearings	0
		3%	Equipment certification	0
		3%	Complaints process	0
<b>Total</b>	<b>4</b>			

Comparison with cluster averages





# Cameroon

**Agence de Régulation des Télécommunications (ART)**
[www.art.cm](http://www.art.cm)

Bienvenue sur le site officiel de l'Agence de Régulation des Télécommunications du Cameroun.
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AGENCE DE RÈGULATION DES TÉLÉCOMMUNICATIONS

RECOMMANDATION - QUALITÉ - SERVICE

Agence de Régulation des Télécommunications

République du Cameroun

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**Conseil d'Administration**  
**Direction Générale**  
**Organigramme**

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☐ Textes & Références  
☐ Lois

L'Agence de Régulation des Télécommunications est instituée par la loi de 98/054 du 14 juillet 1998 régissant les télécommunications au Cameroun.

L'ART est un établissement public administratif doté de la personnalité juridique et de l'autonomie financière, dont l'organisation et le fonctionnement sont définis par les dispositions du décret 98/197 du 08 septembre 1998. Le siège de l'ART est à Yaoundé avec trois antennes : Yaoundé, Douala, Garoua.

L'ART assure la régulation, le contrôle et la suivi des activités des exploitants et des opérateurs du secteur des télécommunications et veille également au respect du principe d'égalité de traitement des usagers.

**LE MOT DU DIRECTEUR GENERAL : "REGULER C'EST FACILITER"**

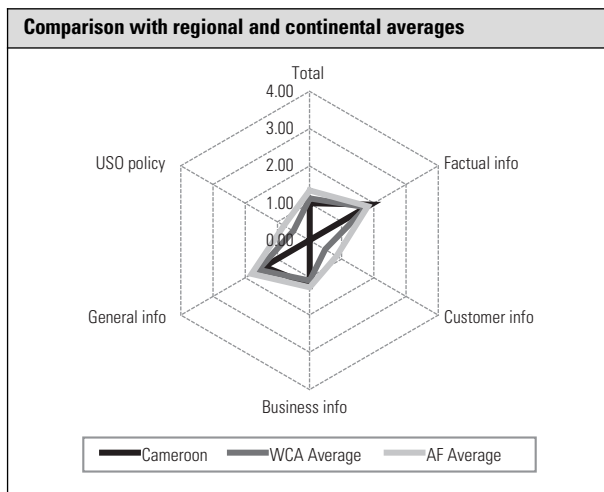
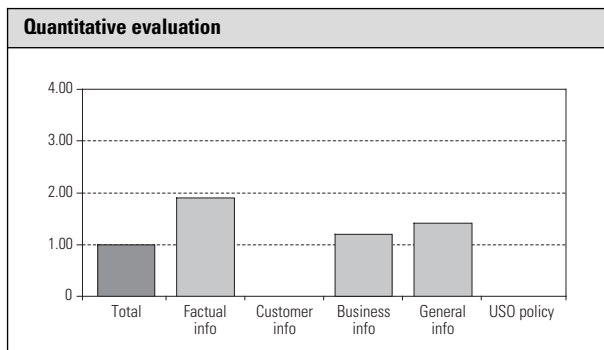
**Commune PMAH à Yaoundé du 12 au 13 avril 2007 - lire suite**

**Informations sur le second des télécoms du Tchad 2007 - lire suite**

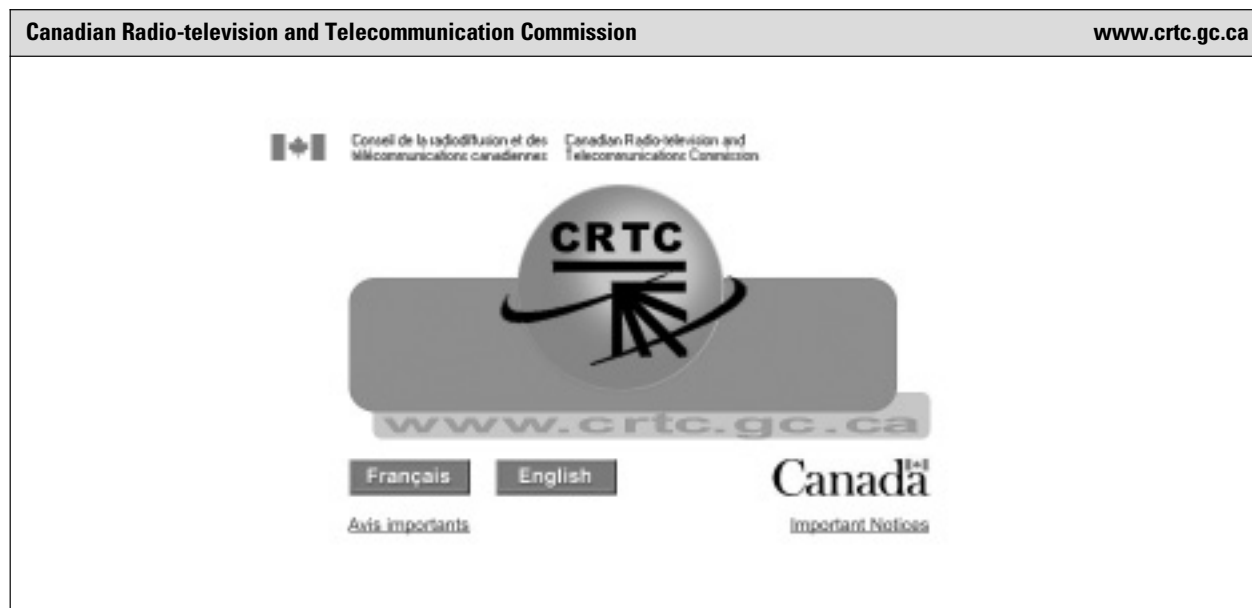
**Données statistiques du secteur année 2006 - lire suite**

**Publication n°16 du 12/04/2007**

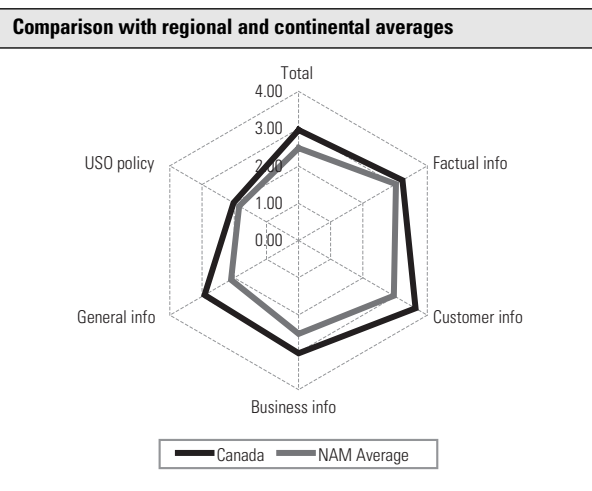
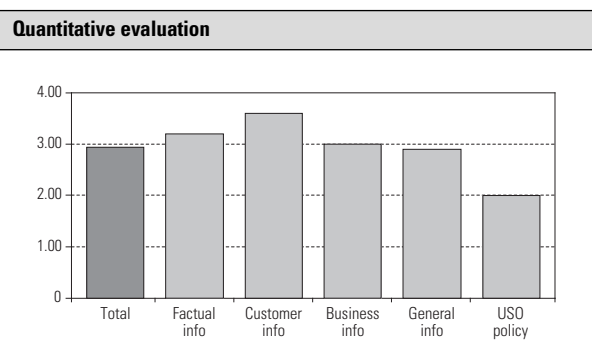
Category	Sub Category	
<b>Factual information &amp; news</b>	1,90	Regulatory acts, legislation laws 2,50
		Statistical information and sector indicators 1,50
		Sector news 1,50
<b>Consumer and citizen information</b>	-	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.) 0,00
		Consumer and citizen rights information 0,00
		Complaints process 0,00
		Information about public hearings 0,00
		Statistical information on consumer attention and complaints resolution 0,00
<b>Business information</b>	1,20	Equipment certification 0,00
		Market entry details (such as licensing) 2,00
		Interconnection information 2,00
		White papers / consultancy papers 0,00
		Scarce resources (e.g. spectrum allocation) 2,00
<b>General information</b>	1,42	Mission statements 1,50
		Local languages
		Links to local and international sites 2,00
		Contact details of key officials (phone numbers, emails, or on line contact form) 1,00
		Ease of use (navigation tools, website maps, search engine, overall organization) 1,00
		Organization chart (or equivalent) 1,50
<b>Universal service / universal access</b>	-	Policy information, reports and plans 0,00
<b>Total (weighted)</b>		0,99







Category	Sub Category	
<b>Factual information &amp; news</b>	3.20	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	3.60	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	3.00	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	2.90	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	2.00	Policy information, reports and plans
<b>Total (weighted)</b>		2.94

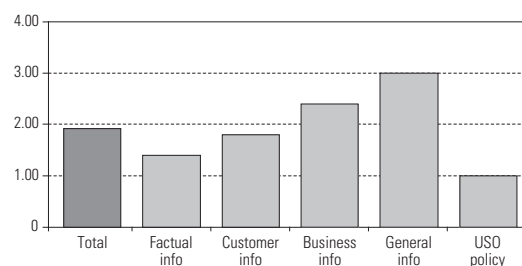


# Cayman Islands

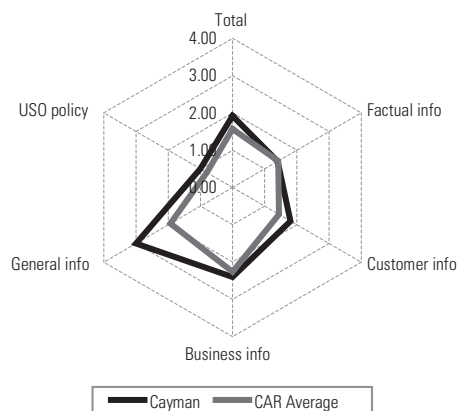


Category	Sub Category	
<b>Factual information &amp; news</b>	1.40 Regulatory acts, legislation laws	2
	Statistical information and sector indicators	0
	Sector news	3
<b>Consumer and citizen information</b>	1.80 Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	2
	Consumer and citizen rights information	2
	Complaints process	3
	Information about public hearings	2
	Statistical information on consumer attention and complaints resolution	0
<b>Business information</b>	2.40 Equipment certification	2
	Market entry details (such as licensing)	3
	Interconnection information	2
	White papers / consultancy papers	3
	Scarce resources (e.g. spectrum allocation)	2
<b>General information</b>	3.00 Mission statements	1
	Local languages	
	Links to local and international sites	3
	Contact details of key officials (phone numbers, emails, or on line contact form)	4
	Ease of use (navigation tools, website maps, search engine, overall organization)	3
	Organization chart (or equivalent)	3
<b>Universal service / universal access</b>	1.00 Policy information, reports and plans	1
<b>Total (weighted)</b>		<b>1.92</b>

## Quantitative evaluation



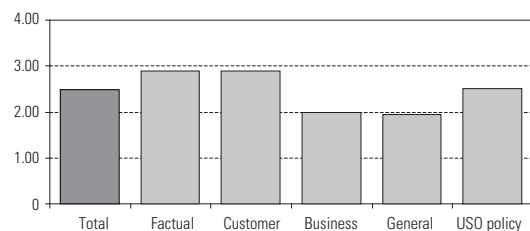
## Comparison with regional and continental averages



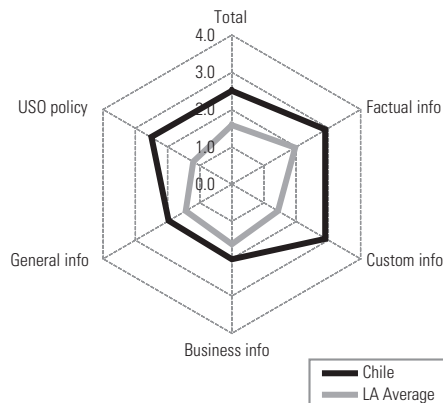


Category	Sub Category	
<b>Factual information &amp; news</b>	2,9	Regulatory acts, legislation laws 3
		Statistical information and sector indicators 3
		Sector news 2,5
<b>Consumer and citizen information</b>	2,9	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.) 2,5
		Consumer and citizen rights information 3
		Complaints process 4
		Information about public hearings 3
		Statistical information on consumer attention and complaints resolution 2
<b>Business information</b>	2	Equipment certification 1
		Market entry details (such as licensing) 3
		Interconnection information 1,5
		White papers / consultancy papers 2
		Scarce resources (e.g. spectrum allocation) 2,5
<b>General information</b>	1,95	Mission statements 1
		Local languages
		Links to local and international sites 2
		Contact details of key officials (phone numbers, emails, or on line contact form) 3
		Ease of use (navigation tools, website maps, search engine, overall organization) 1,5
		Organization chart (or equivalent) 2,5
<b>Universal service / universal access</b>	2,5	Policy information, reports and plans 2,5
<b>Total (weighted)</b>		2,49

## Quantitative evaluation





## Comparison with regional and continental averages



# Colombia

**Comisión de Regulación de Telecomunicaciones**
**www.crt.gov.co**

Comisión de Regulación de Telecomunicaciones - República de Colombia

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Información de Mercado  
Información para el usuario  
Información General CRT  
Actividades regulatorias  
Documentos y Estudios  
Noticias

**Julio 24, 2008**

Actividades Regulatorias

## Régulación de Redes en Convergencia

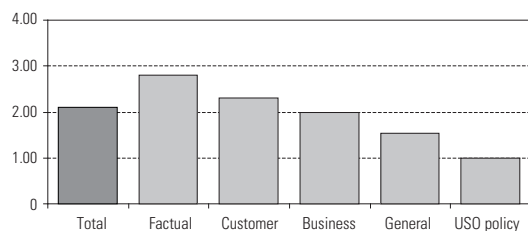
La CRT pone en conocimiento del sector el Documento de análisis de Regulación de redes en convergencia, el cual contiene un marco técnico general relativo a las redes de nueva generación y también identifica aspectos que deberán ser contemplados por la nueva regulación de cara a la convergencia. Con este documento se da inicio al proceso de discusión, encaminado a la consolidación y estructuración de una propuesta regulatoria que responde a las necesidades y requerimientos del sector.

[Más información](#)

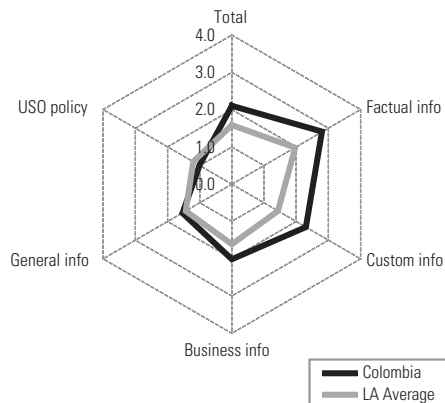
Última actualización: 04.06.08

Category	Sub Category		
<b>Factual information &amp; news</b>	2,8	Regulatory acts, legislation laws	3
		Statistical information and sector indicators	3,5
		Sector news	1
<b>Consumer and citizen information</b>	2,3	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	2
		Consumer and citizen rights information	2,5
		Complaints process	3
		Information about public hearings	3
		Statistical information on consumer attention and complaints resolution	1
<b>Business information</b>	2	Equipment certification	2,5
		Market entry details (such as licensing)	2
		Interconnection information	2
		White papers / consultancy papers	2
		Scarce resources (e.g. spectrum allocation)	1,5
<b>General information</b>	1,53	Mission statements	1
		Local languages	
		Links to local and international sites	1,5
		Contact details of key officials (phone numbers, emails, or on line contact form)	2
		Ease of use (navigation tools, website maps, search engine, overall organization)	1
		Organization chart (or equivalent)	2,5
<b>Universal service / universal access</b>	1	Policy information, reports and plans	1
<b>Total (weighted)</b>			2,1

## Quantitative evaluation



## Comparison with regional and continental averages



**Autoridad Reguladora de los Servicios Públicos**

[www.aresp.go.cr](http://www.aresp.go.cr)


**aresep**
AUTORIDAD REGULADORA DE LOS SERVICIOS PÚBLICOS

Agua · Energía · Telecomunicaciones · Transporte

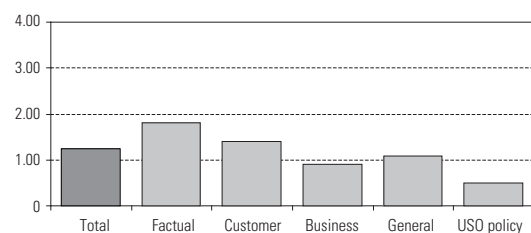
La Institución  
 Servicios Regulados  
 Audiencias  
 Resoluciones  
 Tarifas Vigentes  
 Consejos  
 Quejas y Reclamos  
 Publicaciones  
 Concursos y Oferta de Servicios



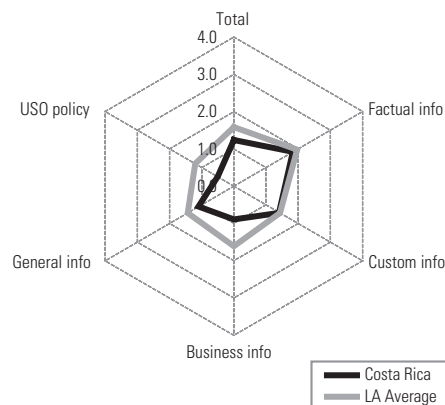
**Telecomunicaciones**  
**PROPUESTA DE REGLAMENTO DE ACCESO E INTERCONEXION** Para exponer, de conformidad con lo señalado en el artículo 36 inciso c) de la ley de la Autoridad Reguladora de los Servicios Públicos, Ley No7593, y en el artículo 77 inciso 2 de la Ley General de Telecomunicaciones, Ley No8642. La propuesta se tramita en el expediente QT-359-2008. La presentación de posiciones vence el 20 de agosto de 2008 y la Audiencia

Category	Sub Category		
<b>Factual information &amp; news</b>	1.8	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	2
		Sector news	1
<b>Consumer and citizen information</b>	1.4	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	1
		Consumer and citizen rights information	2
		Complaints process	2
		Information about public hearings	1
		Statistical information on consumer attention and complaints resolution	1
<b>Business information</b>	0.9	Equipment certification	-
		Market entry details (such as licensing)	1
		Interconnection information	1
		White papers / consultancy papers	1.5
		Scarce resources (e.g. spectrum allocation)	1
<b>General information</b>	1.1	Mission statements	1
		Local languages	
		Links to local and international sites	1
		Contact details of key officials (phone numbers, emails, or on line contact form)	1
		Ease of use (navigation tools, website maps, search engine, overall organization)	1.5
		Organization chart (or equivalent)	1
<b>Universal service / universal access</b>	0.5	Policy information, reports and plans	0.5
<b>Total (weighted)</b>			1.2

## Quantitative evaluation



## Comparison with regional and continental averages



# Cuba

**Dirección de Regulaciones y Normas - Ministerio de Informática y Comunicaciones**
**www.mic.gov.cu**


**MINISTERIO DE LA INFORMÁTICA Y LAS COMUNICACIONES DE CUBA**  
**www.mic.gov.cu**



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**Servicio Postal**  
**Espectro Radioeléctrico**

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**Informatización con garantías**  

Este año y los próximos bajo los principios de fiabilidad, estabilidad, seguridad, invulnerabilidad y soberanía en las infocomunicaciones, el uso de las nuevas tecnologías informáticas y de comunicaciones, deberá seguir extendiéndose, ampliándose y consolidándose en el país.

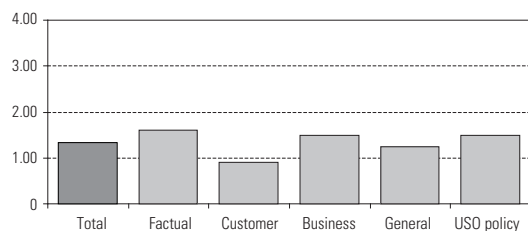
**MIC por dentro**  
**Informatización con garantías**  
**Hombres bien lejos del suelo**  
**Entregan Orden de la Estrella la Solidaridad Italiana a vicepresidente de ETECSA**  
**Excelente resultado de Cuba, la Exposición Mundial de Filatelia EFIRD 2008**  
**Conferencia Mensual de FORDES**

**Informatización de la Sociedad**  
**Política del Estado cubana en las bases**

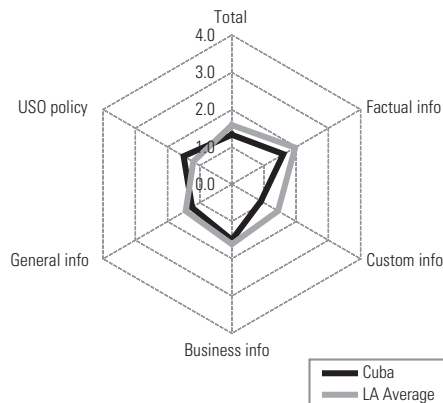
**Marco Legislativo**  
**Ordenar los servicios de las**

Category	Sub Category		
<b>Factual information &amp; news</b>	1.60	Regulatory acts, legislation laws	2.5
		Statistical information and sector indicators	0.5
		Sector news	2.0
<b>Consumer and citizen information</b>	0.90	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	1.0
		Consumer and citizen rights information	1.0
		Complaints process	1.5
		Information about public hearings	1.0
		Statistical information on consumer attention and complaints resolution	-
<b>Business information</b>	1.50	Equipment certification	3.0
		Market entry details (such as licensing)	2.5
		Interconnection information	1.0
		White papers / consultancy papers	0.5
		Scarce resources (e.g. spectrum allocation)	0.5
<b>General information</b>	1.24	Mission statements	1.0
		Local languages	
		Links to local and international sites	1.0
		Contact details of key officials (phone numbers, emails, or on line contact form)	1.0
		Ease of use (navigation tools, website maps, search engine, overall organization)	1.5
		Organization chart (or equivalent)	2.0
<b>Universal service / universal access</b>	1.50	Policy information, reports and plans	1.5
<b>Total (weighted)</b>			1.34

Quantitative evaluation

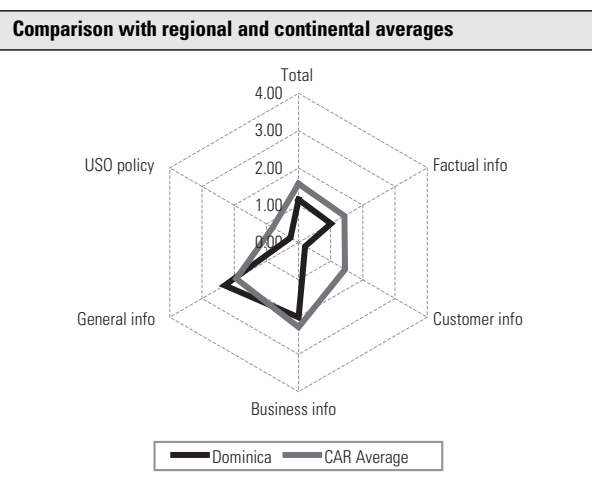
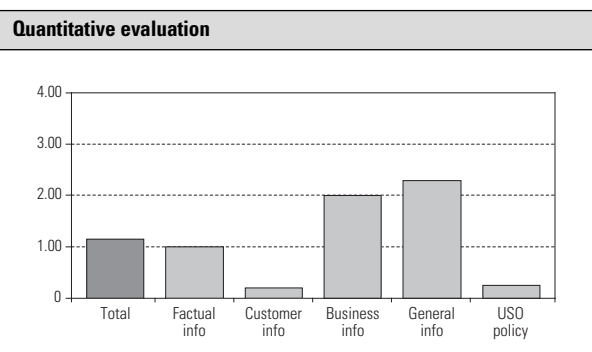


Comparison with regional and continental averages





Category	Sub Category		
<b>Factual information &amp; news</b>	1.00	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	0
		Sector news	1
<b>Consumer and citizen information</b>	0.20	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	1
		Consumer and citizen rights information	0
		Complaints process	0
		Information about public hearings	0
		Statistical information on consumer attention and complaints resolution	0
<b>Business information</b>	2.00	Equipment certification	3
		Market entry details (such as licensing)	3
		Interconnection information	2
		White papers / consultancy papers	0
		Scarce resources (e.g. spectrum allocation)	2
<b>General information</b>	2.29	Mission statements	1
		Local languages	
		Links to local and international sites	3
		Contact details of key officials (phone numbers, emails, or on line contact form)	3
		Ease of use (navigation tools, website maps, search engine, overall organization)	1
		Organization chart (or equivalent)	2
<b>Universal service / universal access</b>	0.25	Policy information, reports and plans	0.25
<b>Total (weighted)</b>			1.15

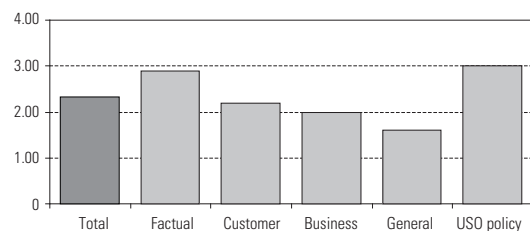


# Dominican Republic

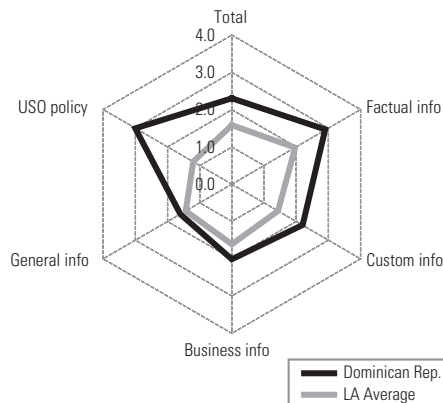


Category	Sub Category	
<b>Factual information &amp; news</b>	2,9	Regulatory acts, legislation laws 3,5
		Statistical information and sector indicators 2
		Sector news 3,5
<b>Consumer and citizen information</b>	2,2	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.) 2,5
		Consumer and citizen rights information 3
		Complaints process 3,5
		Information about public hearings -
		Statistical information on consumer attention and complaints resolution 2
<b>Business information</b>	2	Equipment certification 2
		Market entry details (such as licensing) 2,5
		Interconnection information 2
		White papers / consultancy papers 1,5
		Scarce resources (e.g. spectrum allocation) 2
<b>General information</b>	1,61	Mission statements 1
		Local languages
		Links to local and international sites 2
		Contact details of key officials (phone numbers, emails, or on line contact form) 3
		Ease of use (navigation tools, website maps, search engine, overall organization) 0,5
		Organization chart (or equivalent) 2
<b>Universal service / universal access</b>	3	Policy information, reports and plans 3
<b>Total (weighted)</b>		2,32

## Quantitative evaluation



## Comparison with regional and continental averages





**Consejo Nacional de Telecomunicaciones**

[www.conatel.gov.ec](http://www.conatel.gov.ec)

**CONATEL**  
CONSEJO NACIONAL DE TELECOMUNICACIONES

**ATEL**  
Secretaría Nacional de Telecomunicaciones

**INICIO**  
Secretaría Nacional de Telecomunicaciones

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**Centro de Atención en línea**

**Estudio Exploratorio**  
**Proceso de Negociación**

22

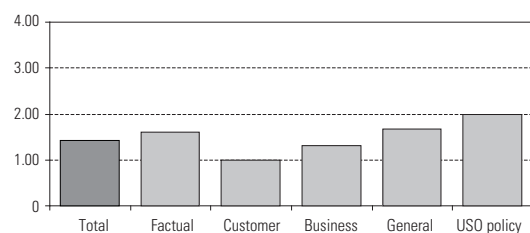
JULIO

Sector de Telecomunicaciones cuenta con nuevo Plan Nacional de Frecuencias

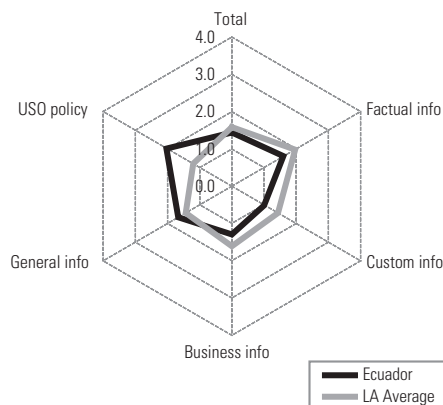
**GOBIERNO NACIONAL DE LA REPUBLICA DEL ECUADOR**  
PRESIDENCIA DEL I.C. RAFAEL CORREIA

Category	Sub Category		
<b>Factual information &amp; news</b>	1,6	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	1
		Sector news	2
<b>Consumer and citizen information</b>	1	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	2
		Consumer and citizen rights information	0,5
		Complaints process	0,5
		Information about public hearings	2
		Statistical information on consumer attention and complaints resolution	-
<b>Business information</b>	1,3	Equipment certification	1
		Market entry details (such as licensing)	1,5
		Interconnection information	1
		White papers / consultancy papers	1
		Scarce resources (e.g. spectrum allocation)	2
<b>General information</b>	1,68	Mission statements	1
		Local languages	
		Links to local and international sites	2
		Contact details of key officials (phone numbers, emails, or on line contact form)	2
		Ease of use (navigation tools, website maps, search engine, overall organization)	2
		Organization chart (or equivalent)	1
<b>Universal service / universal access</b>	2	Policy information, reports and plans	2
<b>Total (weighted)</b>			1,43

## Quantitative evaluation



## Comparison with regional and continental averages

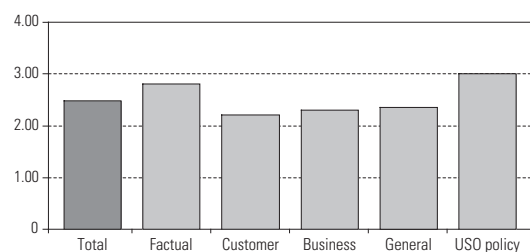


# Egypt

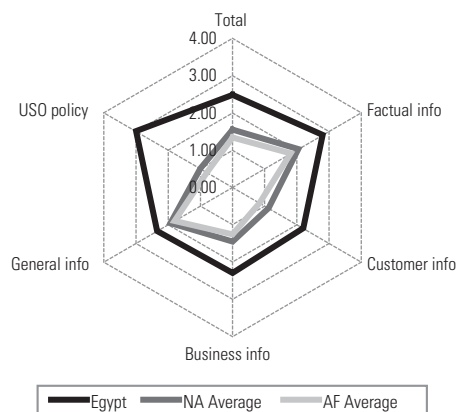


Category	Sub Category	
<b>Factual information &amp; news</b>	2,80	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	2,20	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	2,30	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	2,35	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	3,00	Policy information, reports and plans
<b>Total (weighted)</b>		2,48

## Quantitative evaluation



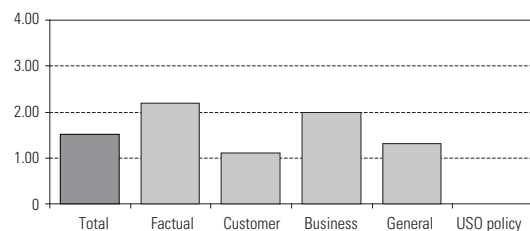
## Comparison with regional and continental averages



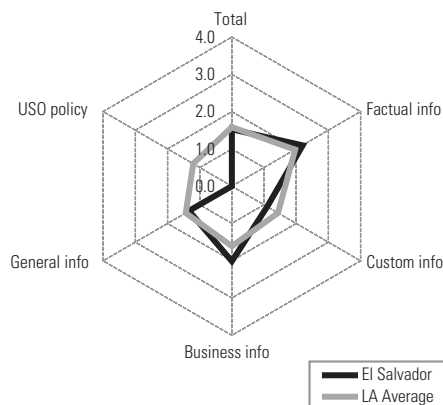


Category	Sub Category		
Factual information & news	2,2	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	2
		Sector news	3
Consumer and citizen information	1,1	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	2
		Consumer and citizen rights information	1
		Complaints process	2,5
		Information about public hearings	-
		Statistical information on consumer attention and complaints resolution	-
Business information	2	Equipment certification	2
		Market entry details (such as licensing)	2,5
		Interconnection information	2
		White papers / consultancy papers	0,5
		Scarce resources (e.g. spectrum allocation)	3
General information	1,32	Mission statements	1
		Local languages	
		Links to local and international sites	1
		Contact details of key officials (phone numbers, emails, or on line contact form)	2
		Ease of use (navigation tools, website maps, search engine, overall organization)	1
		Organization chart (or equivalent)	2
Universal service / universal access	-	Policy information, reports and plans	-
Total (weighted)			1,52

## Quantitative evaluation



## Comparison with regional and continental averages



# Ethiopia

**Ethiopian Telecommunications Corporation (ETC)**
[www.ethionet.et](http://www.ethionet.et)


**Ethiopian Telecommunications Corporation**


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## Welcome to ETC

What is NEW?

June 24, 2008

VENDER FINANCING PROJECT

Installation of one of

**Data & Internet Services**

**Ethio-Internet Services**

- [Dial-up Internet](#)
- [Lease Line](#)
- [Domain Name](#)
- [Web Designing](#)
- [Web Hosting](#)

**Ethio-Stream Services**

- [Digital Data Network](#)
- [ISDN](#)
- [Frame Relay](#)

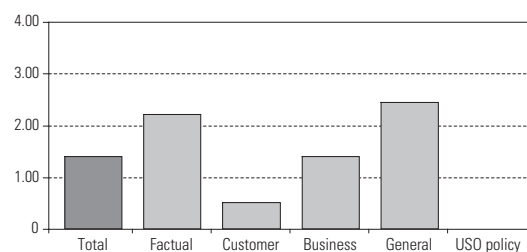
**Ethio-Mobile Services**

**Ethio-Mobile**

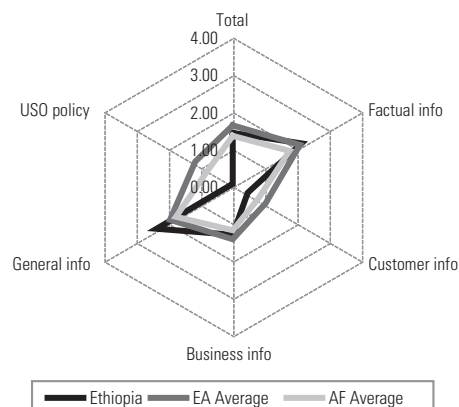
- o Pre-paid mobile
- o Post-paid mobile
- o Satellite Mobile

Category		Sub Category	
<b>Factual information &amp; news</b>	2.20	Regulatory acts, legislation laws	2.00
		Statistical information and sector indicators	3.00
		Sector news	1.00
<b>Consumer and citizen information</b>	0.50	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	2.50
		Consumer and citizen rights information	0.00
		Complaints process	0.00
		Information about public hearings	0.00
		Statistical information on consumer attention and complaints resolution	0.00
<b>Business information</b>	1.40	Equipment certification	3.50
		Market entry details (such as licensing)	0.00
		Interconnection information	0.00
		White papers / consultancy papers	0.00
		Scarce resources (e.g. spectrum allocation)	3.50
<b>General information</b>	2.45	Mission statements	2.00
		Local languages	1.50
		Links to local and international sites	4.00
		Contact details of key officials (phone numbers, emails, or on line contact form)	3.50
		Ease of use (navigation tools, website maps, search engine, overall organization)	1.00
		Organization chart (or equivalent)	2.00
<b>Universal service / universal access</b>	0.00	Policy information, reports and plans	0.00
<b>Total (weighted)</b>			1.39

## Quantitative evaluation



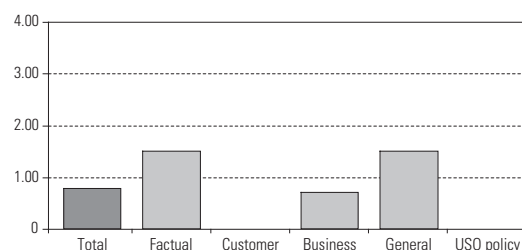
## Comparison with regional and continental averages



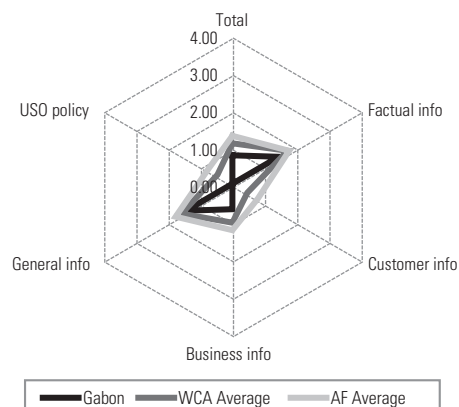


Category	Sub Category	
<b>Factual information &amp; news</b>	1,50	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	-	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	0,70	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	1,50	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	-	Policy information, reports and plans
<b>Total (weighted)</b>		0,78

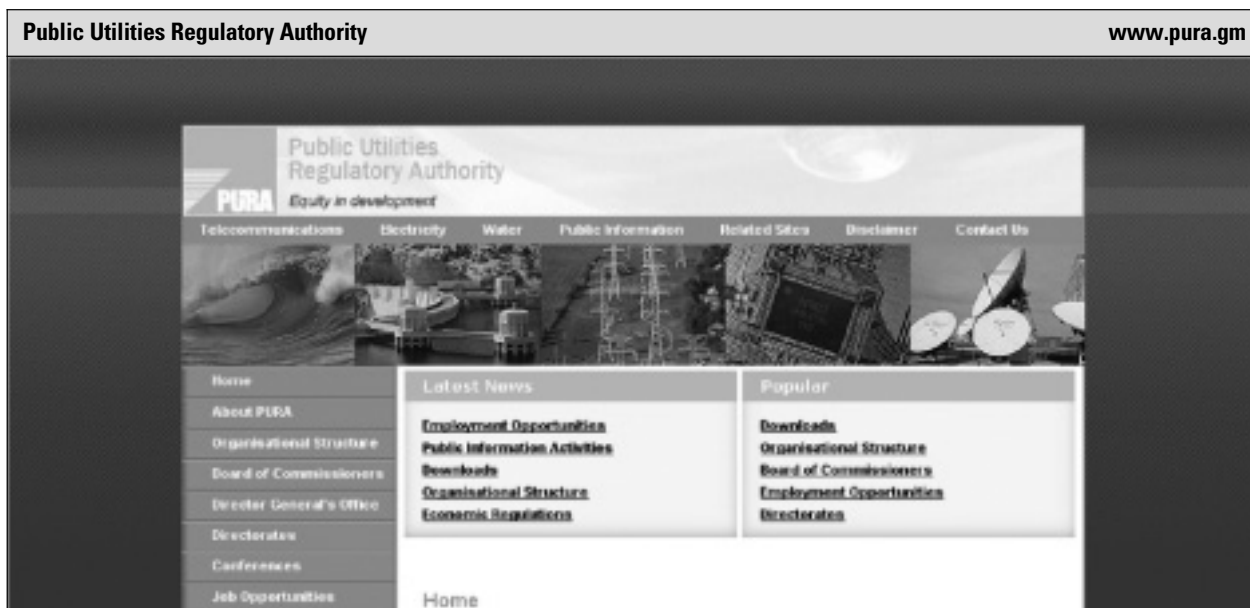
## Quantitative evaluation



## Comparison with regional and continental averages

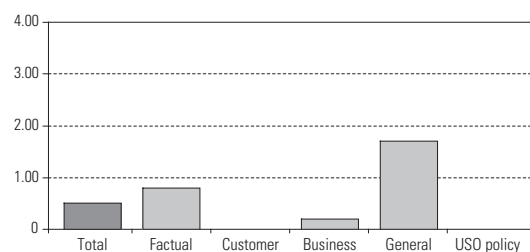


# Gambia

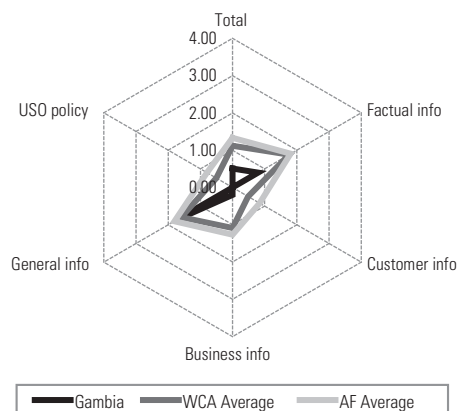


Category	Sub Category	
<b>Factual information &amp; news</b>	0,80	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	-	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	0,20	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	1,71	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	-	Policy information, reports and plans
<b>Total (weighted)</b>		0,51

## Quantitative evaluation



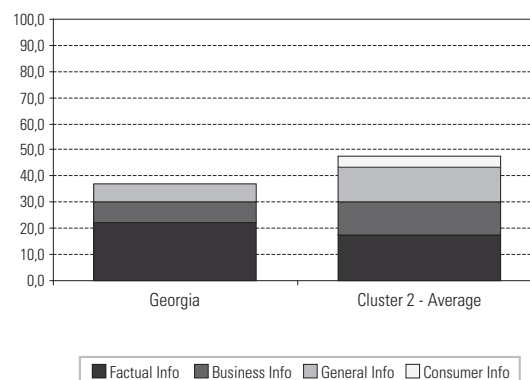
## Comparison with regional and continental averages





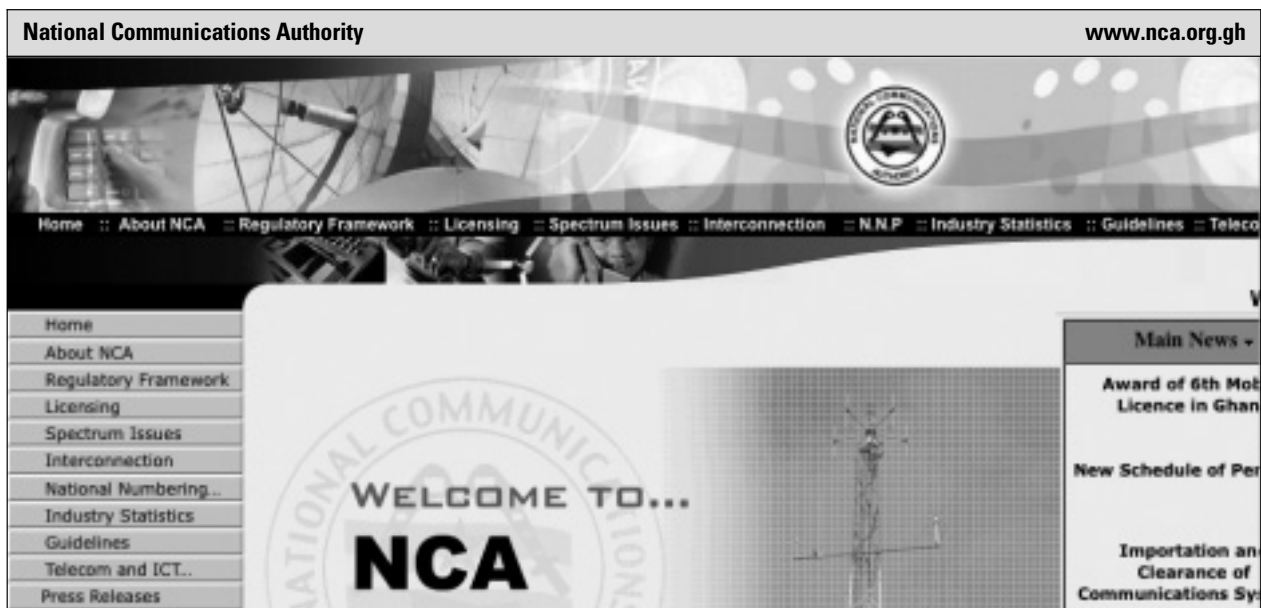
Category	Score	Sub Cat Weight	Sub Category	
Factual information	22	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	4
		6%	Mission / Vision statement and work plan	3
		6%	Annual reports / Budgets	3
		6%	Manuals	0
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	0
		2%	Sector News	2
Business information	8	8%	Market entry	4
		8%	Interconnection	0
		8%	Scarce Resources	4
General information	7	10%	Public consultations / White papers	0
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	0
Consumer information	0	3%	Consumer and citizen rights information	0
		3%	Information about public hearings	0
		3%	Equipment certification	0
		3%	Complaints process	0
Total	37			

Comparison with cluster averages



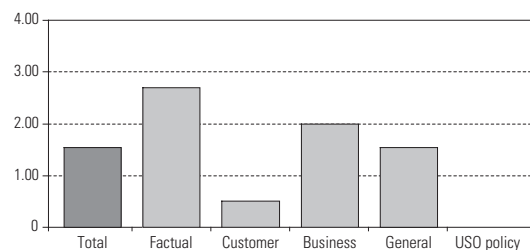


# Ghana

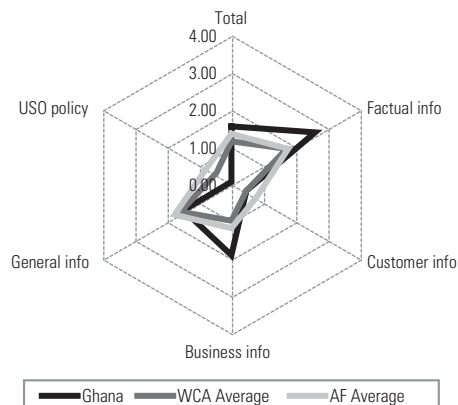


Category	Sub Category	
<b>Factual information &amp; news</b>	2,70	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	0,50	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	2,00	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	1,53	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	-	Policy information, reports and plans
<b>Total (weighted)</b>		1,53

## Quantitative evaluation



## Comparison with regional and continental averages





**National Telecommunications Regulatory Commission**
[www.ectel.int/grd/](http://www.ectel.int/grd/)



## National Telecommunications Regulatory Commission Grenada



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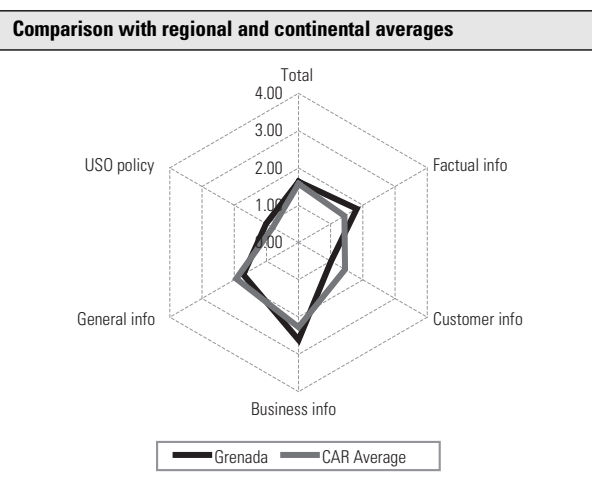
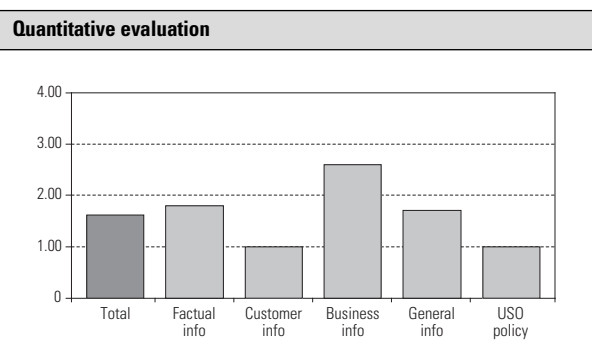
- Application for Licence
- Application/Licence Fees
- Broadcast Licence
- Type Approval
- Amateur Radio
- Licence Register



### What is the NTRC?

The National Telecommunications Regulatory Commission was established pursuant to the Eastern Caribbean Telecommunications Authority Treaty and the Telecommunications Act 31 of 2000 to regulate the newly liberalized Telecommunications market in Grenada in collaboration with the Eastern Caribbean Telecommunications Authority.

Category	Sub Category		
<b>Factual information &amp; news</b>	1.80	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	2
		Sector news	1
<b>Consumer and citizen information</b>	1.00	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	2
		Consumer and citizen rights information	1
		Complaints process	0
		Information about public hearings	2
		Statistical information on consumer attention and complaints resolution	0
<b>Business information</b>	2.60	Equipment certification	3
		Market entry details (such as licensing)	2
		Interconnection information	2
		White papers / consultancy papers	3
		Scarce resources (e.g. spectrum allocation)	3
<b>General information</b>	1.71	Mission statements	2
		Local languages	
		Links to local and international sites	2
		Contact details of key officials (phone numbers, emails, or on line contact form)	1
		Ease of use (navigation tools, website maps, search engine, overall organization)	1
		Organization chart (or equivalent)	3
<b>Universal service / universal access</b>	1.00	Policy information, reports and plans	1
<b>Total (weighted)</b>			1.62



# Guatemala

**Superintendencia de Telecomunicaciones**
**www.sit.gob.gt**



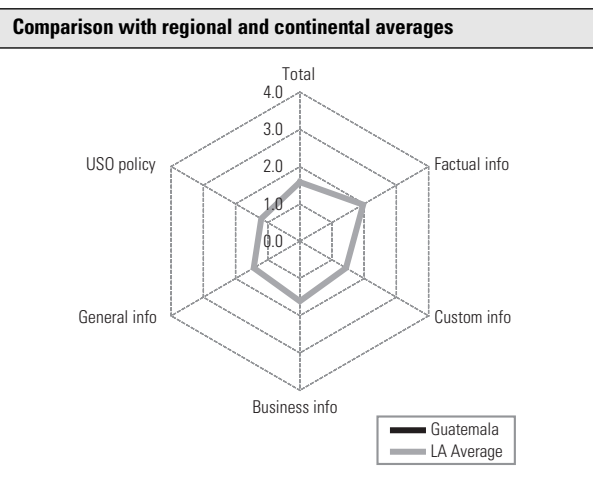
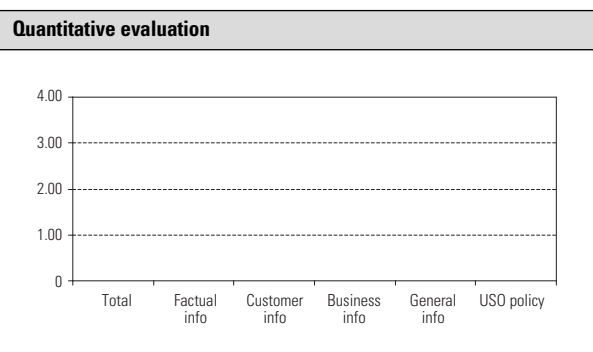
DESCULPE LAS Molestias  
ESTAMOS TRABAJANDO

Para que usted tenga un mejor acceso a la información  
Nuestra página está siendo Re-estructurada.



14 calle 5-51 zona 16  
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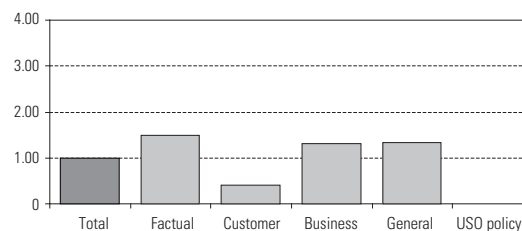
Category	Sub Category
<b>Factual information &amp; news</b>	- Regulatory acts, legislation laws -
	- Statistical information and sector indicators -
	- Sector news -
<b>Consumer and citizen information</b>	- Consumer information (other than rights - e.g. tariff information, new numbering plans etc.) -
	- Consumer and citizen rights information -
	- Complaints process -
	- Information about public hearings -
	- Statistical information on consumer attention and complaints resolution -
<b>Business information</b>	- Equipment certification -
	- Market entry details (such as licensing) -
	- Interconnection information -
	- White papers / consultancy papers -
	- Scarce resources (e.g. spectrum allocation) -
<b>General information</b>	- Mission statements -
	- Local languages -
	- Links to local and international sites -
	- Contact details of key officials (phone numbers, emails, or on line contact form) -
	- Ease of use (navigation tools, website maps, search engine, overall organization) -
	- Organization chart (or equivalent) -
<b>Universal service / universal access</b>	- Policy information, reports and plans -
<b>Total (weighted)</b>	-



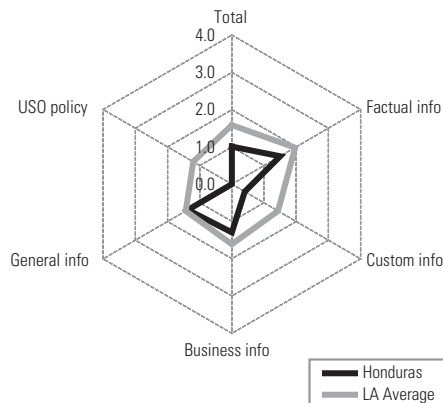


Category	Sub Category		
<b>Factual information &amp; news</b>	1,5	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	1,5
		Sector news	0,5
<b>Consumer and citizen information</b>	0,4	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	1
		Consumer and citizen rights information	-
		Complaints process	1
		Information about public hearings	-
		Statistical information on consumer attention and complaints resolution	-
<b>Business information</b>	1,3	Equipment certification	-
		Market entry details (such as licensing)	2,5
		Interconnection information	1
		White papers / consultancy papers	1
		Scarce resources (e.g. spectrum allocation)	2
<b>General information</b>	1,34	Mission statements	1
		Local languages	
		Links to local and international sites	2
		Contact details of key officials (phone numbers, emails, or on line contact form)	1,5
		Ease of use (navigation tools, website maps, search engine, overall organization)	1
		Organization chart (or equivalent)	1
<b>Universal service / universal access</b>	-	Policy information, reports and plans	-
<b>Total (weighted)</b>			1

## Quantitative evaluation



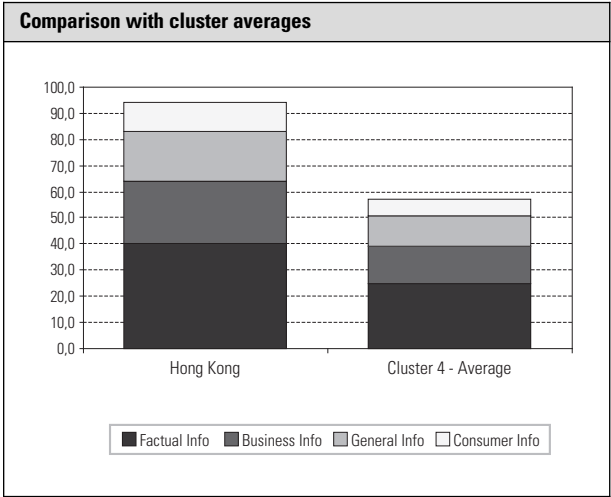
## Comparison with regional and continental averages



# Hong Kong

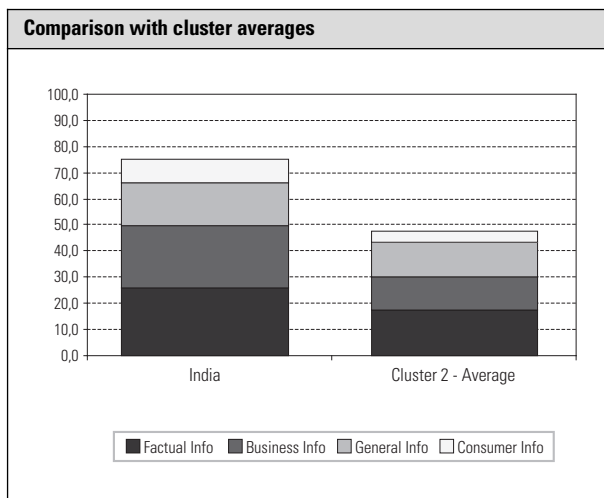


Category	Score	Sub Cat Weight	Sub Category	
Factual information	40	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	6
		6%	Annual reports / Budgets	6
		6%	Manuals	6
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	2
		2%	Sector News	2
Business information	24	8%	Market entry	8
		8%	Interconnection	8
		8%	Scarce Resources	8
General information	19	10%	Public consultations / White papers	10
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
Consumer information	11	3%	Consumer and citizen rights information	3
		3%	Information about public hearings	3
		3%	Equipment certification	2
		3%	Complaints process	3
Total	94			





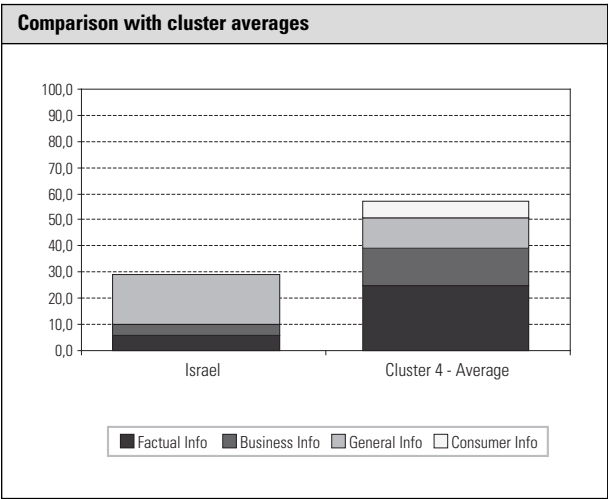
Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	26	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	3
		6%	Annual reports / Budgets	3
		6%	Manuals	0
		2%	Organizational chart	0
		2%	USO policy information, reports and plans	2
		2%	Sector News	2
<b>Business information</b>	24	8%	Market entry	8
		8%	Interconnection	8
		8%	Scarce Resources	8
<b>General information</b>	16	10%	Public consultations / White papers	10
		5%	RFPs	0
		3%	Local language	0
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
<b>Consumer information</b>	9	3%	Consumer and citizen rights information	3
		3%	Information about public hearings	3
		3%	Equipment certification	0
		3%	Complaints process	3
<b>Total</b>	<b>75</b>			



# Israel



Category	Score	Sub Cat Weight	Sub Category	
Factual information	6	8%	Regulatory acts, laws and legislation	4
		8%	Statistical information and sector indicators	0
		6%	Mission / Vision statement and work plan	0
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	0
		2%	USO policy information, reports and plans	0
		2%	Sector News	2
Business information	4	8%	Market entry	4
		8%	Interconnection	0
		8%	Scarce Resources	0
General information	19	10%	Public consultations / White papers	10
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
Consumer information	0	3%	Consumer and citizen rights information	0
		3%	Information about public hearings	0
		3%	Equipment certification	0
		3%	Complaints process	0
Total	29			

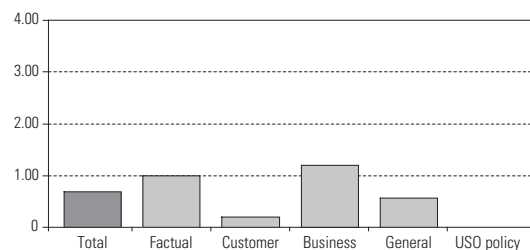


# Ivory Coast

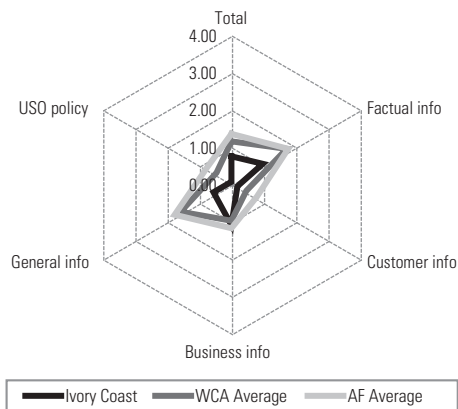


Category		Sub Category	
Factual information & news	1,00	Regulatory acts, legislation laws	2,00
		Statistical information and sector indicators	0,00
		Sector news	1,00
Consumer and citizen information	0,20	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	0,00
		Consumer and citizen rights information	0,00
		Complaints process	0,00
		Information about public hearings	0,00
		Statistical information on consumer attention and complaints resolution	1,00
Business information	1,20	Equipment certification	0,00
		Market entry details (such as licensing)	2,00
		Interconnection information	2,00
		White papers / consultancy papers	0,00
		Scarce resources (e.g. spectrum allocation)	2,00
General information	0,56	Mission statements	2,00
		Local languages	
		Links to local and international sites	0,00
		Contact details of key officials (phone numbers, emails, or on line contact form)	0,00
		Ease of use (navigation tools, website maps, search engine, overall organization)	1,50
		Organization chart (or equivalent)	0,00
Universal service / universal access	-	Policy information, reports and plans	0,00
Total (weighted)			0,68

### Quantitative evaluation



### Comparison with regional and continental averages



# Jamaica

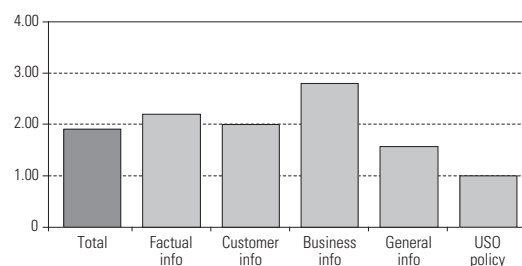
Office of Utilities Regulation (OUR)  
Spectrum Management Authority (SMA)

www.our.org.jm  
www.sma.gov.jm

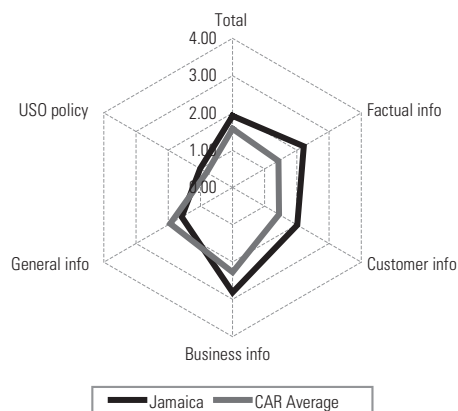


Category	Sub Category		
Factual information & news	2.20	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	2
		Sector news	3
Consumer and citizen information	2.00	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	2
		Consumer and citizen rights information	2
		Complaints process	2
		Information about public hearings	2
		Statistical information on consumer attention and complaints resolution	2
Business information	2.80	Equipment certification	3
		Market entry details (such as licensing)	3
		Interconnection information	2
		White papers / consultancy papers	3
		Scarce resources (e.g. spectrum allocation)	3
General information	1.57	Mission statements	2
		Local languages	
		Links to local and international sites	2
		Contact details of key officials (phone numbers, emails, or on line contact form)	1
		Ease of use (navigation tools, website maps, search engine, overall organization)	2
		Organization chart (or equivalent)	1
Universal service / universal access	1.00	Policy information, reports and plans	1
Total (weighted)			1.91

## Quantitative evaluation



## Comparison with regional and continental averages

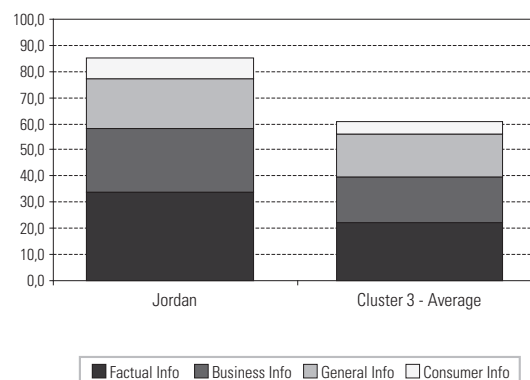






Category	Score	Sub Cat Weight	Sub Category	
Factual information	34	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	3
		6%	Annual reports / Budgets	3
		6%	Manuals	6
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	2
		2%	Sector News	2
Business information	24	8%	Market entry	8
		8%	Interconnection	8
		8%	Scarce Resources	8
General information	19	10%	Public consultations / White papers	10
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
Consumer information	8	3%	Consumer and citizen rights information	2
		3%	Information about public hearings	0
		3%	Equipment certification	3
		3%	Complaints process	3
Total	85			

Comparison with cluster averages



# Kenya

**Communications Commission of Kenya**
[www.cck.go.ke](http://www.cck.go.ke)



Ensuring fair play

Search
  FAQs
  Contact Us

**ABOUT CCK**  
 TELECOMMUNICATIONS  
 RADIOCOMMUNICATION  
 POSTAL AND COURIER  
 STANDARDS & TYPE-APPROVAL  
 PUBLICATIONS AND STATISTICS  
 POLICY AND LEGISLATION  
 LICENSING INFORMATION

**Welcome to our site!**

The Communications Commission of Kenya (CCK) is the independent regulatory authority for the communications industry in Kenya. Its role is to license and regulate telecommunications, radiocommunication and postal/courier services in Kenya.

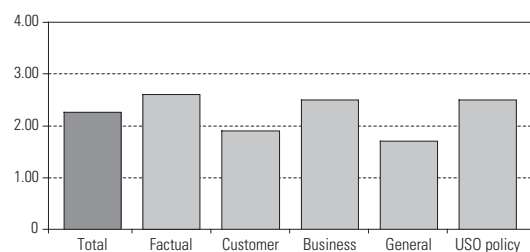


**HEADLINES**

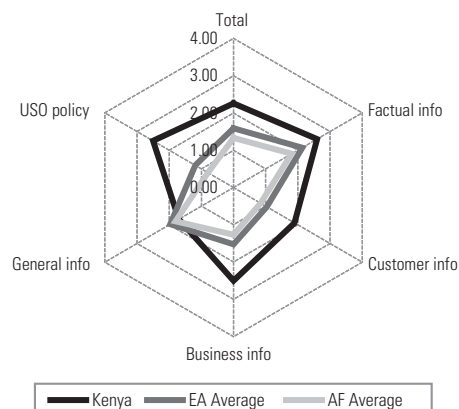
12-June-08  
Government announces incentives for ICT sector in 2008/09 budget

Category	Sub Category	
<b>Factual information &amp; news</b>	2.60	Regulatory acts, legislation laws 2.50
		Statistical information and sector indicators 3.00
		Sector news 2.00
<b>Consumer and citizen information</b>	1.90	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.) 3.50
		Consumer and citizen rights information 1.00
		Complaints process 1.50
		Information about public hearings 3.50
		Statistical information on consumer attention and complaints resolution 0.00
<b>Business information</b>	2.50	Equipment certification 3.50
		Market entry details (such as licensing) 3.50
		Interconnection information 0.00
		White papers / consultancy papers 2.00
		Scarce resources (e.g. spectrum allocation) 3.50
<b>General information</b>	1.70	Mission statements 2.00
		Local languages
		Links to local and international sites 3.00
		Contact details of key officials (phone numbers, emails, or on line contact form) 2.00
		Ease of use (navigation tools, website maps, search engine, overall organization) 3.00
		Organization chart (or equivalent) 2.00
<b>Universal service / universal access</b>	2.50	Policy information, reports and plans 2.50
<b>Total (weighted)</b>		2.26

## Quantitative evaluation



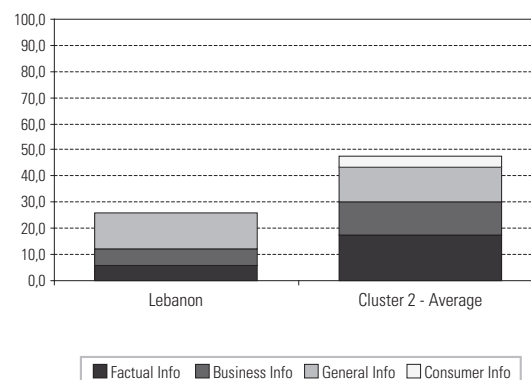
## Comparison with regional and continental averages





Category	Score	Sub Cat Weight	Sub Category	
Factual information	6	8%	Regulatory acts, laws and legislation	4
		8%	Statistical information and sector indicators	0
		6%	Mission / Vision statement and work plan	0
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	0
		2%	Sector News	0
Business information	6	8%	Market entry	6
		8%	Interconnection	0
		8%	Scarce Resources	0
General information	14	10%	Public consultations / White papers	0
		5%	RFPs	5
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
Consumer information	0	3%	Consumer and citizen rights information	0
		3%	Information about public hearings	0
		3%	Equipment certification	0
		3%	Complaints process	0
Total	26			

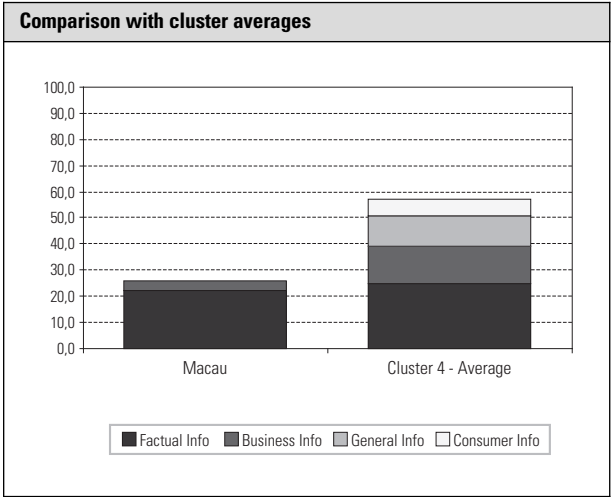
Comparison with cluster averages



# Macau



Category	Score	Sub Cat Weight	Sub Category	
Factual information	22	8%	Regulatory acts, laws and legislation	6
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	6
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	0
		2%	USO policy information, reports and plans	0
		2%	Sector News	2
Business information	4	8%	Market entry	4
		8%	Interconnection	0
		8%	Scarce Resources	0
General information	0	10%	Public consultations / White papers	0
		5%	RFPs	0
		3%	Local language	0
		2%	Contact details	0
		2%	Updated info	0
		2%	Links to local / international sites	0
Consumer information	0	3%	Consumer and citizen rights information	0
		3%	Information about public hearings	0
		3%	Equipment certification	0
		3%	Complaints process	0
Total	26			



# Madagascar

Office Malagasy d'Etudes et de Régulation des Télécommunications
www.omert.mg



Office Malagasy d'Etudes et de Régulation des Télécommunications

## OMERT

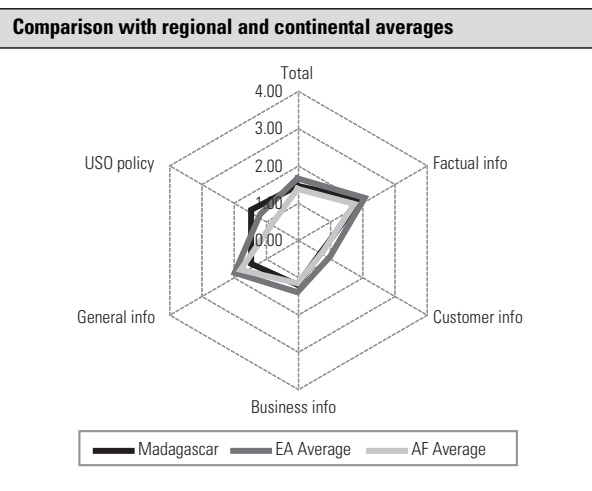
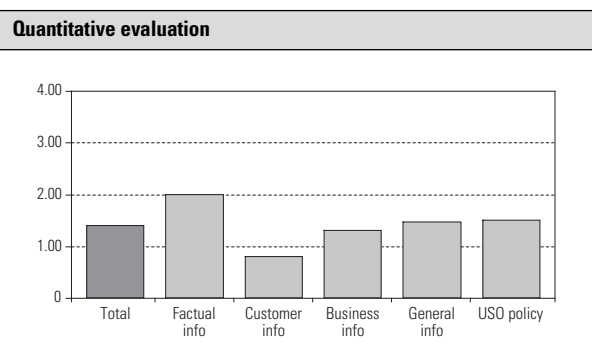
**Qui sommes-nous ?**

L'Office Malagasy d'Etudes et de Régulation des Télécommunications (OMERT) est l'entité de régulation du secteur des

**Actualités 2008**

Consultation Publique sur le projet de décret portant cadrage de la mise en œuvre du réseau national de Télécommunications large

Category	Sub Category		
<b>Factual information &amp; news</b>	2,00	Regulatory acts, legislation laws	1,50
		Statistical information and sector indicators	2,50
		Sector news	2,00
<b>Consumer and citizen information</b>	0,80	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	1,00
		Consumer and citizen rights information	1,00
		Complaints process	1,00
		Information about public hearings	0,00
		Statistical information on consumer attention and complaints resolution	1,00
<b>Business information</b>	1,30	Equipment certification	1,00
		Market entry details (such as licensing)	1,50
		Interconnection information	1,00
		White papers / consultancy papers	1,50
		Scarce resources (e.g. spectrum allocation)	1,50
<b>General information</b>	1,47	Mission statements	1,00
		Local languages	
		Links to local and international sites	2,00
		Contact details of key officials (phone numbers, emails, or on line contact form)	1,50
		Ease of use (navigation tools, website maps, search engine, overall organization)	1,50
		Organization chart (or equivalent)	1,00
<b>Universal service / universal access</b>	1,50	Policy information, reports and plans	1,50
<b>Total (weighted)</b>			1,40



# Malawi

**Malawi Communications Regulatory Authority (MACRA)**

[www.macra.org.mw](http://www.macra.org.mw)

The Malawi

## Communications

Regulatory Authority

*Malawi's Communications Regulator (MACRA)*

- About MACRA
- License Application Forms
- Broadcasters
- Departments
- Legislation
- Telecom Operators
- Publications
- Links
- FAQs
- Contact us
- List of ISPs
- News & Events

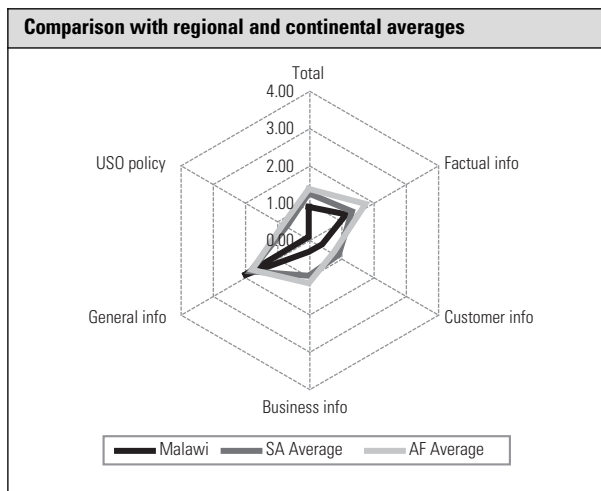
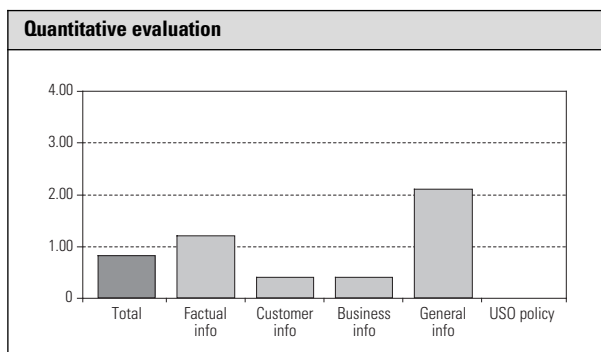
Search this site:

The Malawi Communications Regulatory Authority (MACRA) was established pursuant to Section 3 of the Communications Act, 1998 of the Laws of Malawi to assume the regulatory functions of the communications sector which had been performed by the Malawi Telecommunications Corporation Limited. MACRA is among the three institutions established following the dissolution of the former Malawi Posts and Telecommunications Corporation (MPTC) with responsibilities for licensing telecommunications, postal and broadcasting operators, settling disputes among operators, approving tariffs, promoting and monitoring free and fair competition, allocating and managing the radio frequency spectrum, managing the numbering plan, type approving terminal equipment and protecting the consumers.

**MACRA's Mission Statement**

To be a catalyst model regulator that facilitates the rapid development of the communications sector; that enables accessibility of a full range of modern services by the whole population in Malawi at affordable prices and sees that the historically disadvantaged groups or individuals have the opportunities of being communications service providers.

Category	Sub Category	
<b>Factual information &amp; news</b>	1,20	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	0,40	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	0,40	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	2,10	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	-	Policy information, reports and plans
<b>Total (weighted)</b>		0,82



**Malaysian Communications and Multimedia Commission (MCMC)**
[www.skmm.gov.my](http://www.skmm.gov.my)

[HOME](#) | [TENDERS & NOTICES](#) | [CAREER@MCMC](#) | [MAILING LIST](#) | [LINKS](#) | [FEEDBACK](#) | [CONTACT US](#) | [SITEMAP](#) | [my SearchHub](#)

» ABOUT US

» THE LAW

» WHAT WE DO

» FOR THE CONSUMER

» CLIENTS' CHARTER

» FACTS & FIGURES

» NEWSDESK

» REGISTERS

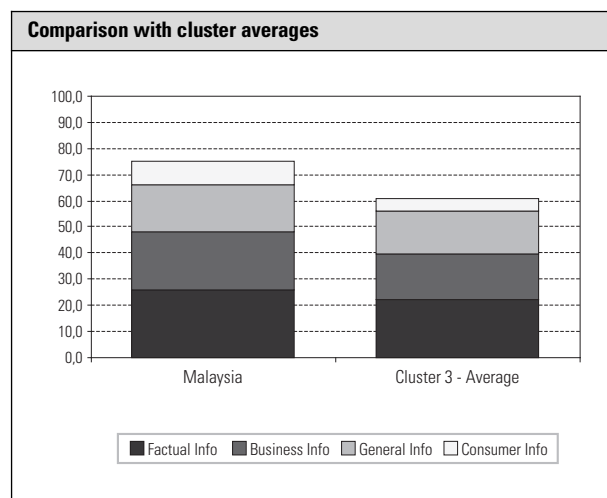
## WELCOME TO THE MALAYSIAN COMMUNICATIONS AND MULTIMEDIA COMMISSION

The Malaysian Communications and Multimedia Commission (SKMM) is entrusted with the role of promoting and regulating the communications and multimedia industry and to enforce the communications and multimedia laws in Malaysia. SKMM was established on 1 November 1998 pursuant to the provisions of the Malaysian Communications and Multimedia Commission Act 1998 (MCMCA).

**QUICK LINKS**

- [Prepaid Registration](#)
- [How to make a complaint](#)
- [Access Forum](#)
- [Content Forum](#)
- [Consumer Forum](#)
- [Technical Standards Forum](#)
- [Codes & Guidelines](#)
- [Press Releases](#)
- [Public Inquiry Reports](#)
- [Discussion & Consultation](#)

Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	26	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	3
		6%	Annual reports / Budgets	1
		6%	Manuals	0
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	2
		2%	Sector News	2
<b>Business information</b>	22	8%	Market entry	8
		8%	Interconnection	6
		8%	Scarce Resources	8
<b>General information</b>	18	10%	Public consultations / White papers	10
		5%	RFPs	2
		3%	Local language	0
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
<b>Consumer information</b>	9	3%	Consumer and citizen rights information	3
		3%	Information about public hearings	3
		3%	Equipment certification	0
		3%	Complaints process	3
<b>Total</b>	<b>75</b>			



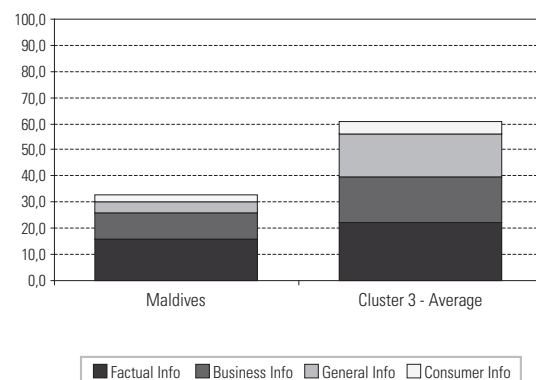


# Maldives



Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	16	8%	Regulatory acts, laws and legislation	6
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	0
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	0
		2%	USO policy information, reports and plans	0
		2%	Sector News	2
<b>Business information</b>	10	8%	Market entry	4
		8%	Interconnection	0
		8%	Scarce Resources	6
<b>General information</b>	4	10%	Public consultations / White papers	0
		5%	RFPs	0
		3%	Local language	0
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	0
<b>Consumer information</b>	3	3%	Consumer and citizen rights information	0
		3%	Information about public hearings	0
		3%	Equipment certification	3
		3%	Complaints process	0
<b>Total</b>	<b>33</b>			

Comparison with cluster averages





Autorité de Régulation

www.are.mr

- l'Autorité de Régulation publie les catalogues d'interconnexion des opérateurs de télécommunications pour la période du 1er juillet 2008 au 30 juin 2009.
- Avis de report de la date limite de dépôt des offres pour la délégation du service public d'eau potable
- Avis d'appel d'offres pour la délégation du service public d'eau potable
- Communiqué relatif à la mise à jour des tarifs des opérateurs de télécommunications.
- Communiqué portant sur les concours d'entrée à l'ESMT pour l'année académique 2008/2009
- Communiqué du 26 février 2008 relatif à la délégation du service public d'électricité dans les localités de MEDERDRA, R'KIZ, KEUR MACENE, OUADANE, AOUEFT et AIN EHIL TAYA.

○ Accueil

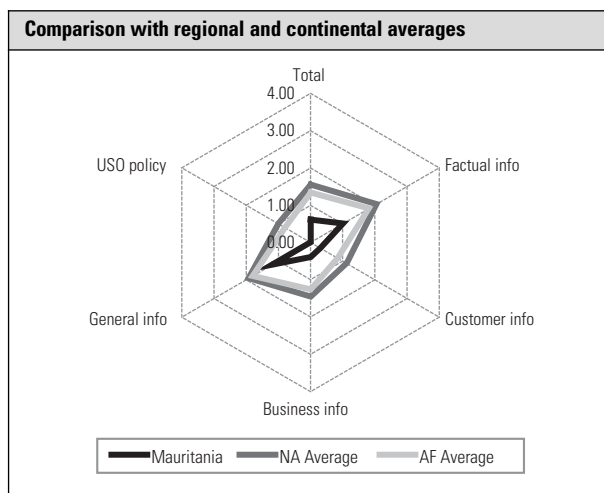
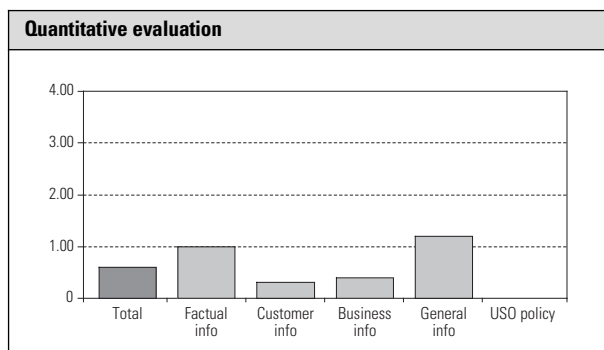
○ Textes

○ Avis

○ Publications

○ Contact

Category	Sub Category	
<b>Factual information &amp; news</b>	1,00	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	0,30	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	0,40	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	1,20	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	-	Policy information, reports and plans
<b>Total (weighted)</b>		0,61



# Mauritius

**Information and Communications Technology Authority (ICTA)**
**www.icta.mu**



Home
Telecommunications
Radiocommunications
Information Security
Legislation
Consumer
Publications

**Home**

- Welcome Page
- About ICT Authority
- Organisation Structure
- Board Members
- Job Opportunities
- Contact Information

**Quick Links**

- Corporate Plan
- Application Forms
- Quarterly Information Forms

Welcome to the website of the Information and Communication Technologies Authority (ICT Authority). The Authority is the national regulator for the ICT sector and Postal Services in Mauritius.

**OUR VISION**  
To play a leading role in the future of ICT in Mauritius contributing to an efficient, competitive and optimally regulated ICT sector.

**OUR MISSION**  
To promote affordable and adequate access to quality ICT services through functional market-driven competition and regulatory principles in a trouble-free Networked Information and Knowledge Society.

[Read More...](#)

**News & Events**

- News Release: ICTA issues determination to mobile operators...
- News Release: New Interconnection Usage Charges
- The Telecommunication Directive 1 of 2008

**Search this site**

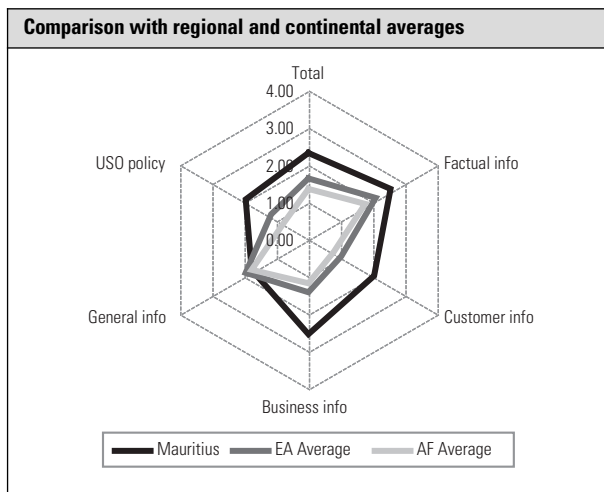
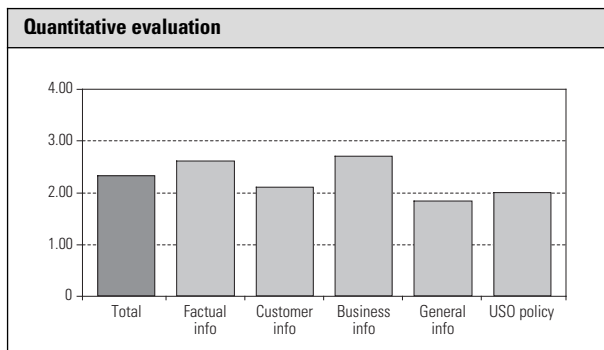
**Telecommunications**

[Overview](#)

**Radiocommunications**

[Overview](#)

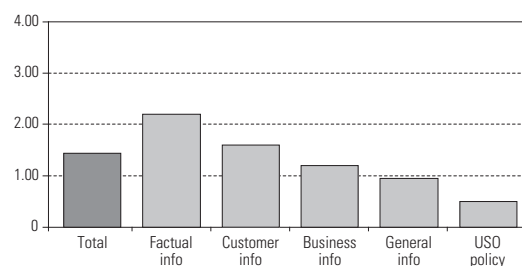
Category	Sub Category	
<b>Factual information &amp; news</b>	2,60	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	2,10	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	2,70	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	1,82	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	2,00	Policy information, reports and plans
<b>Total (weighted)</b>		2,32



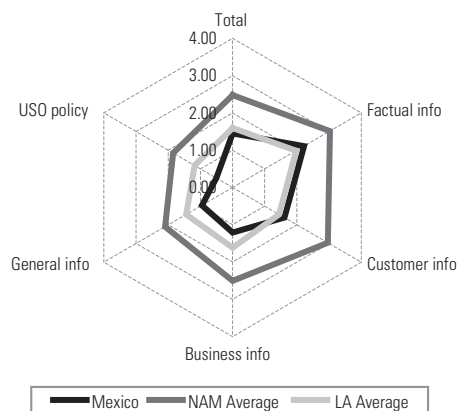


Category	Sub Category	
<b>Factual information &amp; news</b>	2.20	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	1.60	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	1.20	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	0.95	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	0.50	Policy information, reports and plans
<b>Total (weighted)</b>		1.44

## Quantitative evaluation



## Comparison with regional and continental averages



# Morocco

**Agence Nationale de Réglementation des Télécommunications**
[www.anrt.net.ma](http://www.anrt.net.ma)

Royaume du Maroc | Premier Ministre
المملكة المغربية



**ANRT**  
 الوكالة الوطنية لتنظيم المواصلات  
 Agence Nationale de Réglementation des Télécommunications

RÈGLEMENTATION | LICENCES | ARBITRAGE | PUBLICATIONS | CONCURRENCE | DOMAINE J.A.

**A PROPOS DE L'ANRT**

- L'ANRT en bref
- Missions
- Statut et Organigramme

**Marché en chiffres**

- Observatoires
- Etudes et enquêtes
- Paysage télécoms

**A LA UNE**

- L'Institut National des Postes et Télécommunications (INPT) a fêté le 16 juillet 2008 la remise des diplômes de sa 14ème promotion ([lire le communiqué de presse](#))
- Rapport annuel 2007 : année du lancement de la concurrence dans le segment fixe, de l'introduction de la mobilité restreinte et de la portabilité des numéros... ([télécharger le rapport](#))
- Journée de réflexion sur le thème 10 ans de régulation des Télécommunications organisée à Skhirat le 23 juin ([télécharger les documents](#))

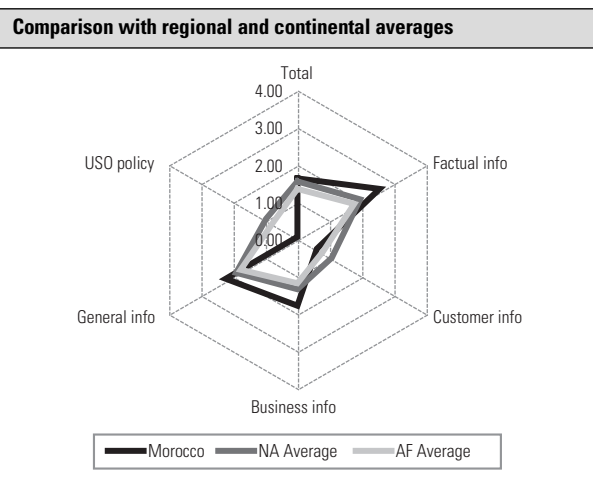
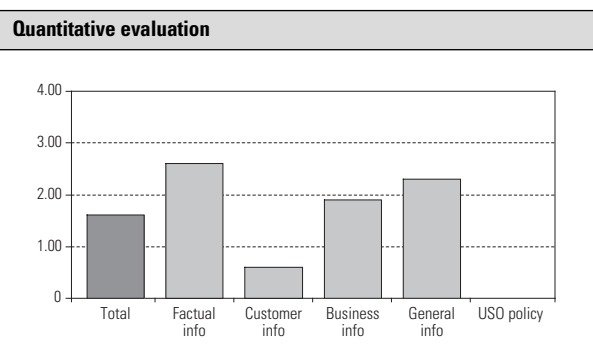
**L'ACTUALITE**

- Publication de l'Arrêté du Ministre de l'Industrie, du Commerce et des Nouvelles Technologies, du 26 mars 2008, fixant les redevances pour assignation de fréquences radioélectriques ([En savoir plus](#))

**SERVICES AU PUBLIC**

- Ouverture d'un Cyber, Centre d'appel...
- Liste des déclarations des services à valeur ajoutée validés auprès de l'ANRT
- Agrément des équipements de télécommunications
- Blocs de numéros par opérateur
- Radiocommunication
- Examens de certification radio

Category	Sub Category	
<b>Factual information &amp; news</b>	2,60	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	0,60	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	1,90	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	2,29	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	-	Policy information, reports and plans
<b>Total (weighted)</b>		1,62



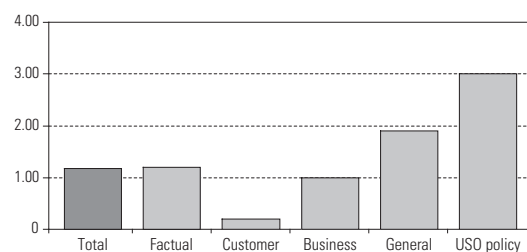
# Mozambique

**Instituto Nacional das Comunicações de Moçambique (INCM)**
[www.incm.gov.mz](http://www.incm.gov.mz)

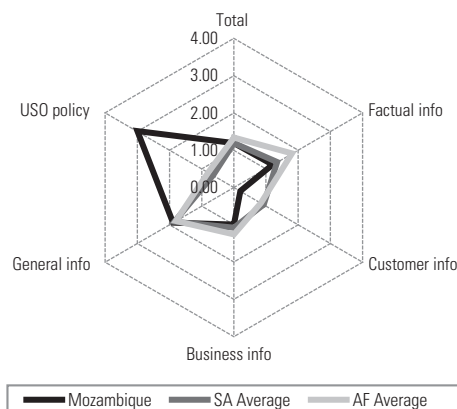
The screenshot shows the official website of the Instituto Nacional das Comunicações de Moçambique (INCM). The header features the INCM logo and the text 'INSTITUTO NACIONAL DAS COMUNICAÇÕES DE MOÇAMBIQUE' and 'Autoridade Reguladora dos Sectores Postal e de Telecomunicações'. Below this is a navigation menu with links: Home, Sala de Imprensa, Legislação, Telecomunicações, Sector Postal, Serviço de Acesso Universal, Plano de Numeração Nacional, and Homologação. A secondary menu includes 'Licenciamento', 'Radiocomunicações', and 'Comprovação Técnica de Emissões'. A welcome message reads 'Bem-vindo ao Site do Instituto Nacional das Comunicações de Moçambique'. The main content area is titled 'Actualidade' and features a news article: 'INCM assinala Dia Africano da Função Pública (24.06.2008)'. The article mentions that the INCM celebrated the African Day of Public Function on June 23rd. To the left is a sidebar with links like 'O INCM', 'Missão', 'Estrutura', 'Organograma', 'Relatório e Contas', 'Galeria de Fotos', and 'Acesso Universal'. To the right is a 'NOVIDADES' section with the headline 'PARLAMENTARES VISITAM INCM'.

Category	Sub Category	
<b>Factual information &amp; news</b>	1,20	Regulatory acts, legislation laws
		2,00
		Statistical information and sector indicators
		0,00
		Sector news
		2,00
<b>Consumer and citizen information</b>	0,20	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		1,00
		Consumer and citizen rights information
		0,00
		Complaints process
		0,00
		Information about public hearings
		0,00
		Statistical information on consumer attention and complaints resolution
		0,00
<b>Business information</b>	1,00	Equipment certification
		1,00
		Market entry details (such as licensing)
		0,00
		Interconnection information
		1,00
		White papers / consultancy papers
		2,00
		Scarce resources (e.g. spectrum allocation)
		1,00
<b>General information</b>	1,90	Mission statements
		2,00
		Local languages
		Links to local and international sites
		3,00
		Contact details of key officials (phone numbers, emails, or on line contact form)
		2,50
		Ease of use (navigation tools, website maps, search engine, overall organization)
		2,00
		Organization chart (or equivalent)
		1,00
<b>Universal service / universal access</b>	3,00	Policy information, reports and plans
		3,00
<b>Total (weighted)</b>		1,19

## Quantitative evaluation



## Comparison with regional and continental averages




# Myanmar

**Ministry of Communications, Posts and Telegraphs**

<http://www.mcpt.gov.mm>

[www.mcpt.gov.mm](http://www.mcpt.gov.mm)



သက်တန်းစွာ ၊ စာပို့ဝန် ၊ ရင်းနှီးမြှုပ်နှံမှု

MINISTRY OF  
COMMUNICATIONS, POSTS AND TELEGRAPHS


Ministry of Communications, Posts and Telegraphs was formed as follows:

(a) Office of the Minister

(b) Department and Enterprise

(i) Post and Telecommunications Department

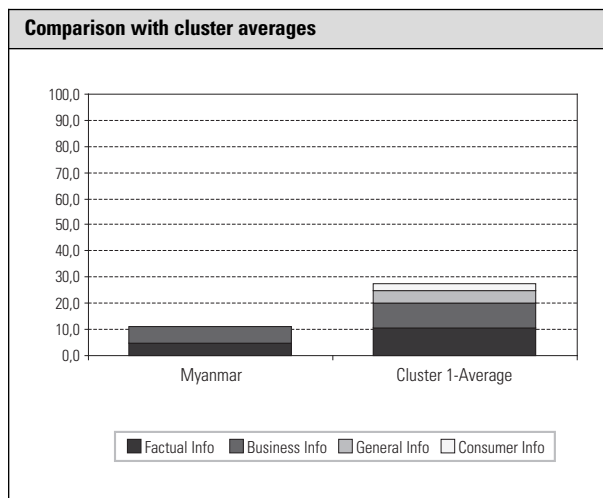
(ii) Myanmar Posts and Telecommunications



Main Responsibilities of Communications, Posts and Telegraphs Ministry

★ To arrange communication services for smooth and easy usage by the general public.

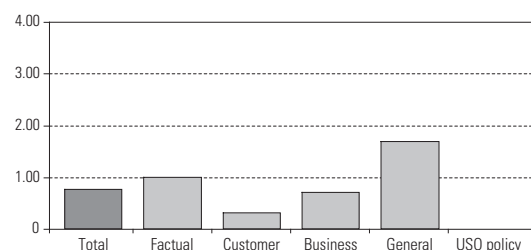
Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	5	8%	Regulatory acts, laws and legislation	0
		8%	Statistical information and sector indicators	0
		6%	Mission / Vision statement and work plan	3
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	0
		2%	Sector News	0
<b>Business information</b>	6	8%	Market entry	6
		8%	Interconnection	0
		8%	Scarce Resources	0
<b>General information</b>	0	10%	Public consultations / White papers	0
		5%	RFPs	0
		3%	Local language	0
		2%	Contact details	0
		2%	Updated info	0
		2%	Links to local / international sites	0
<b>Consumer information</b>	0	3%	Consumer and citizen rights information	0
		3%	Information about public hearings	0
		3%	Equipment certification	0
		3%	Complaints process	0
<b>Total</b>	<b>11</b>			



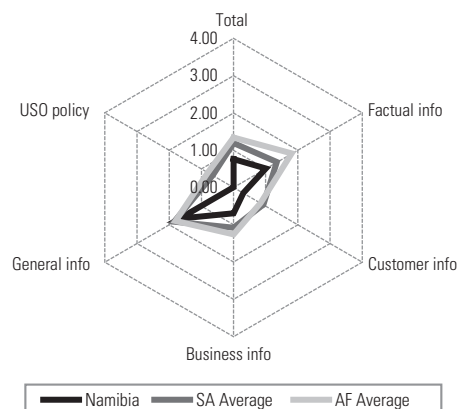


Category	Sub Category	
<b>Factual information &amp; news</b>	1,00	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	0,30	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	0,70	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	1,68	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	-	Policy information, reports and plans
<b>Total (weighted)</b>		0,75

## Quantitative evaluation



## Comparison with regional and continental averages





# Nepal

Nepal Telecommunications Authority (NTA)
www.nta.gov.np



## Nepal Telecommunications Authority (NTA)



You Are Here | Home>>
Monday, July 28, 2008

[Home](#)
[About NTA](#)
[Legislation](#)
[MIS Report \(19th Issue\)](#)
[Public Notice \(New!!!\)](#)
[Links](#)
[Miscellaneous](#)
[Feedback](#)
[Contact Us](#)
[Site Map](#)



Welcome to NTA Website

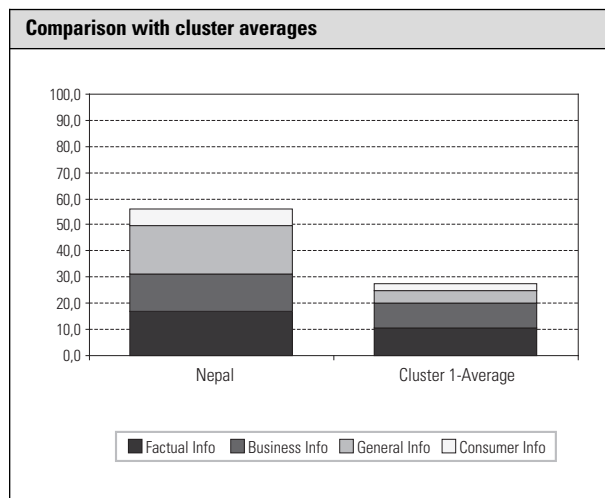


[Guidelines](#)
[Services](#)
[Licensing](#)
[Legislation](#)
[Miscellaneous](#)

of destructive and provocative nature hampering the national interest - Ne  
His Majesty's Government" shall be termed "Government of Nepal" under sub-section (2) of  
section 2 of the House of Representatives Proclamation, 2063.  

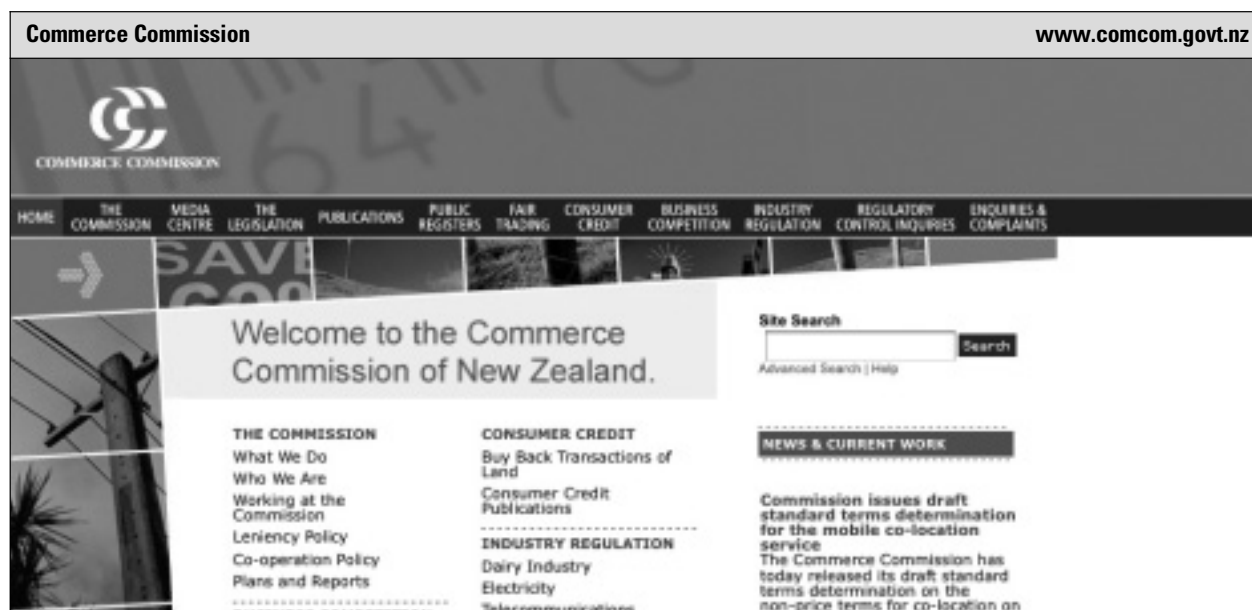
### Background

Category	Score	Sub Cat Weight	Sub Category	
Factual information	17	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	6
		6%	Mission / Vision statement and work plan	3
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	0
		2%	USO policy information, reports and plans	0
		2%	Sector News	0
Business information	14	8%	Market entry	8
		8%	Interconnection	6
		8%	Scarce Resources	0
General information	19	10%	Public consultations / White papers	10
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
Consumer information	6	3%	Consumer and citizen rights information	3
		3%	Information about public hearings	0
		3%	Equipment certification	0
		3%	Complaints process	3
Total	56			

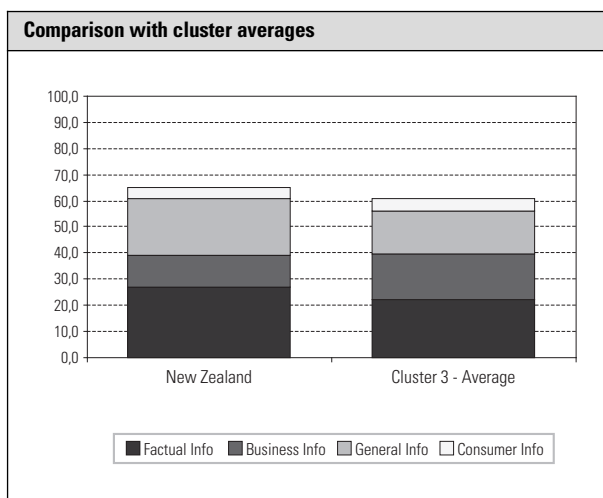




# New Zealand



Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	27	8%	Regulatory acts, laws and legislation	6
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	6
		6%	Annual reports / Budgets	2
		6%	Manuals	0
		2%	Organizational chart	1
		2%	USO policy information, reports and plans	2
		2%	Sector News	2
<b>Business information</b>	12	8%	Market entry	4
		8%	Interconnection	8
		8%	Scarce Resources	0
<b>General information</b>	22	10%	Public consultations / White papers	10
		5%	RFPs	5
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	0
<b>Consumer information</b>	4	3%	Consumer and citizen rights information	1
		3%	Information about public hearings	0
		3%	Equipment certification	1
		3%	Complaints process	2
<b>Total</b>	65			

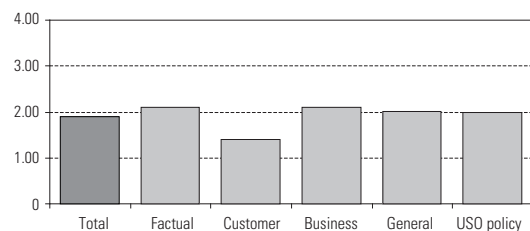


# Nicaragua

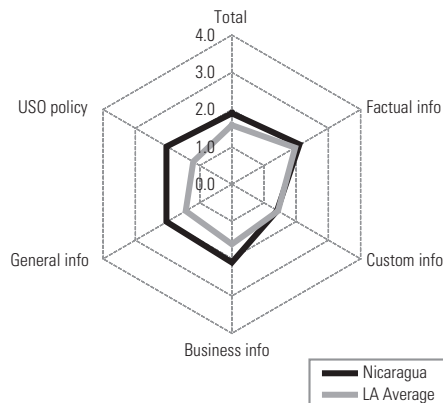


Category	Sub Category		
Factual information & news	2,1	Regulatory acts, legislation laws	2,5
		Statistical information and sector indicators	1,5
		Sector news	2,5
Consumer and citizen information	1,4	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	2
		Consumer and citizen rights information	2
		Complaints process	3
		Information about public hearings	-
		Statistical information on consumer attention and complaints resolution	-
Business information	2,1	Equipment certification	2
		Market entry details (such as licensing)	2,5
		Interconnection information	1
		White papers / consultancy papers	2,5
		Scarce resources (e.g. spectrum allocation)	2,5
General information	2,02	Mission statements	1
		Local languages	
		Links to local and international sites	2,5
		Contact details of key officials (phone numbers, emails, or on line contact form)	2,5
		Ease of use (navigation tools, website maps, search engine, overall organization)	2,5
		Organization chart (or equivalent)	1
Universal service / universal access	2	Policy information, reports and plans	2
Total (weighted)			1,9

## Quantitative evaluation



## Comparison with regional and continental averages



**Autorité de Régulation Multisectorielle**
[www.arm-niger.org](http://www.arm-niger.org)

AUTORITE DE REGULATION MULTISECTORIELLE
TRANSPORTS
ENERGIE
EAU
TELECOMMUNICATIONS

[ A PROPOS DE L'ARM | LES TEXTES | LES DECISIONS | LES PUBLICATIONS | LES FORMULAIRES | NOUS CONTACTER | LIENS UTILES ]

**A PROPOS DE L'ARM**

**LA LIBERALISATION**

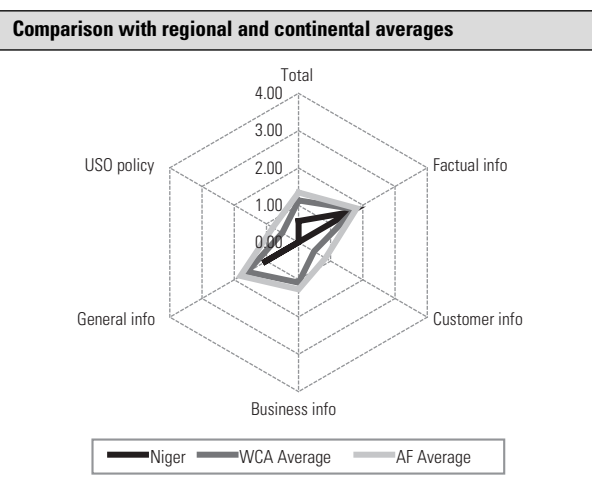
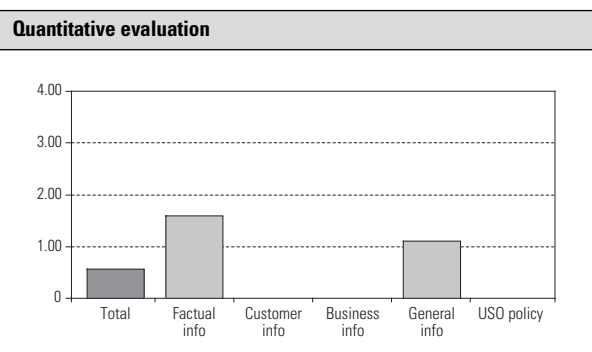
**L'AUTORITE DE REGULATION MULTISECTORIELLE**

- Bien gérer la libéralisation
- L'ordonnance
- L'ordonnance modifiée
- L'Organigramme

**République du Niger**

**Autorité de Régulation Multisectorielle**

Category	Sub Category	
<b>Factual information &amp; news</b>	1,60	Regulatory acts, legislation laws
		2,50
		Statistical information and sector indicators
		1,00
<b>Consumer and citizen information</b>	-	Sector news
		1,00
	-	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		0,00
	-	Consumer and citizen rights information
		0,00
<b>Business information</b>	-	Complaints process
		0,00
	-	Information about public hearings
		0,00
	-	Statistical information on consumer attention and complaints resolution
		0,00
<b>General information</b>	1,11	Equipment certification
		0,00
		Market entry details (such as licensing)
		0,00
		Interconnection information
<b>Universal service / universal access</b>	-	White papers / consultancy papers
		0,00
	-	Scarce resources (e.g. spectrum allocation)
		0,00
	1,11	Mission statements
		2,00
<b>Total (weighted)</b>		Local languages
		0,00
		Links to local and international sites
		0,00
		Contact details of key officials (phone numbers, emails, or on line contact form)
		1,50
<b>Total (weighted)</b>		Ease of use (navigation tools, website maps, search engine, overall organization)
		1,00
		Organization chart (or equivalent)
		1,50
		Policy information, reports and plans
		0,00
<b>Total (weighted)</b>		0,57

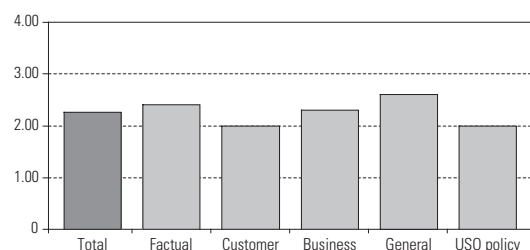


# Nigeria

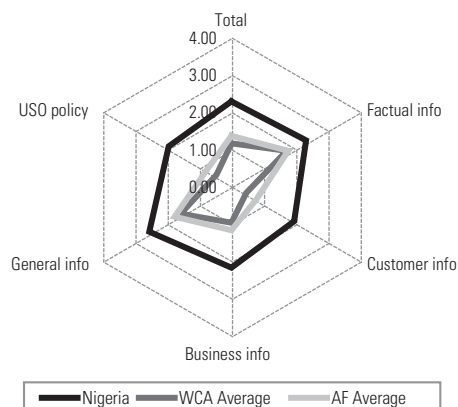


Category	Sub Category	
<b>Factual information &amp; news</b>	2,40	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	2,00	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	2,30	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	2,60	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	2,00	Policy information, reports and plans
<b>Total (weighted)</b>		2,27

## Quantitative evaluation



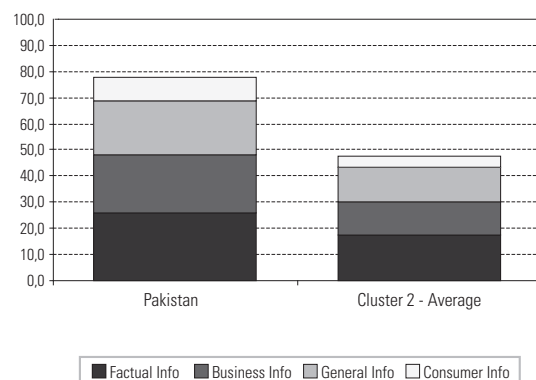
## Comparison with regional and continental averages





Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	26	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	3
		6%	Annual reports / Budgets	3
		6%	Manuals	0
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	0
		2%	Sector News	2
<b>Business information</b>	22	8%	Market entry	6
		8%	Interconnection	8
		8%	Scarce Resources	8
<b>General information</b>	21	10%	Public consultations / White papers	10
		5%	RFPs	5
		3%	Local language	0
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
<b>Consumer information</b>	9	3%	Consumer and citizen rights information	3
		3%	Information about public hearings	0
		3%	Equipment certification	3
		3%	Complaints process	3
<b>Total</b>	<b>78</b>			

Comparison with cluster averages




# Panama

**Autoridad Nacional de Servicio Públicos**


[www.asep.gob.pa](http://www.asep.gob.pa)

28 de julio de 2008
Agua y Alcantarillado
Electricidad
Radio y Televisión
Telecomunicaciones
Atención al Usuario


**Autoridad Nacional de los Servicios Públicos**

**BUSQUEDA RAPIDA**

Mapa del sitio  
Marco Legal  
Transparencia  
Resoluciones  
Anuncios  
Sanciones y Otras  
Calendario  
Contactenos  
Enlaces  
Sitios de Interés  
Comunicados


**Telecomunicaciones**  

▶ ACTA- Comentarios recibidos a la Consulta Pública para la modificación del Artículo 4.15 de la Resolución No. JD-4408 de 18 de diciembre de 2003. [\[Ver...\]](#)

▶ CONTRATACIÓN DE LOS SERVICIOS DE CONSULTORÍA PARA EL DESARROLLO DE UN ESTUDIO SOBRE LOS MERCADOS DE LOS SERVICIOS DE RADIO Y TELEVISIÓN EN LA REPUBLICA DE PANAMÁ. [\[Ver...\]](#)

▶ ACTA- estatus de las solicitudes mensuales correspondientes al mes de julio de 2008. [\[Ver...\]](#)

**COMUNICADOS DE PRENSA**  



▶ Más de 5 mil reclamos atiende la ASEP

▶ Explican método de cálculo para tarifas eléctricas

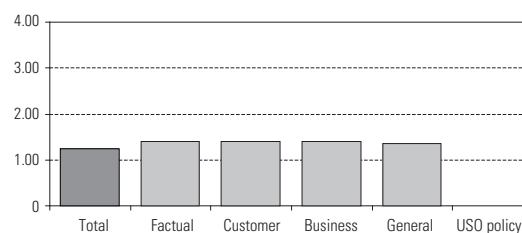
▶ En 18 meses podría estar lista la Portabilidad Numérica

▶ Arranca taller sobre Portabilidad Numérica

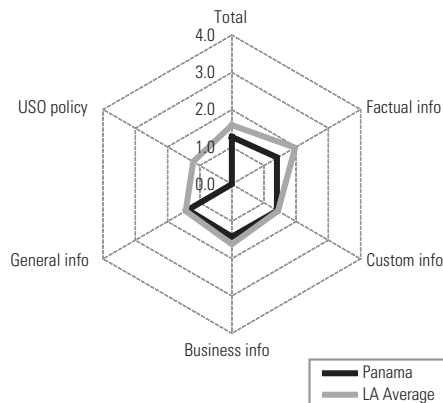
▶ Más de 748 MW entrarán al sistema

Category	Sub Category		
<b>Factual information &amp; news</b>	1,4	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	1
		Sector news	1
<b>Consumer and citizen information</b>	1,4	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	2
		Consumer and citizen rights information	2
		Complaints process	2
		Information about public hearings	-
		Statistical information on consumer attention and complaints resolution	1
<b>Business information</b>	1,4	Equipment certification	-
		Market entry details (such as licensing)	3
		Interconnection information	1
		White papers / consultancy papers	0,5
		Scarce resources (e.g. spectrum allocation)	2,5
<b>General information</b>	1,36	Mission statements	-
		Local languages	-
		Links to local and international sites	1,5
		Contact details of key officials (phone numbers, emails, or on line contact form)	2
		Ease of use (navigation tools, website maps, search engine, overall organization)	2,5
		Organization chart (or equivalent)	-
<b>Universal service / universal access</b>	-	Policy information, reports and plans	-
<b>Total (weighted)</b>			1,25

## Quantitative evaluation



## Comparison with regional and continental averages



# Papua New Guinea

**Independence Consumer and Competition Commission**
**www.iccc.gov.pg**



**Independent Consumer & Competition Commission**  
 "PNG's Consumer Watchdog & Economic Regulator"

**ICCC CORPORATE PLAN 2008 - 2010**

**National ICT Policy Released**

On 20 February 2008 the Government notified the Commission of a revised Government

**Hot Topics**

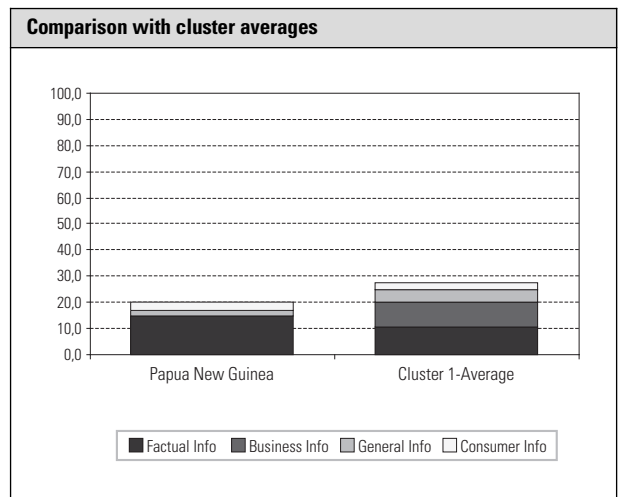
- Final Determination of NBPOL Clearance Application
- Review of Current Pricing Arrangement for PMV Fares Draft Report
- NBPOL Share Aquisition of Ramu Agri-Industries
- Stevedoring and Handling Services Prices Review Final Report
- Tugue Tugue Appeal

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- Commissioner's Message
- Commissioners & Management
- Corporate Plan
- Public Register
- Consumer Protection
- The Legislation
- Competitive Market & Fair Trade
- Regulatory

Consumer Complaint Toll Free 180 3333

Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	15	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	0
		6%	Mission / Vision statement and work plan	3
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	0
		2%	Sector News	2
<b>Business information</b>	0	8%	Market entry	0
		8%	Interconnection	0
		8%	Scarce Resources	0
<b>General information</b>	2	10%	Public consultations / White papers	0
		5%	RFPs	0
		3%	Local language	0
		2%	Contact details	0
		2%	Updated info	2
		2%	Links to local / international sites	0
<b>Consumer information</b>	3	3%	Consumer and citizen rights information	3
		3%	Information about public hearings	0
		3%	Equipment certification	0
		3%	Complaints process	0
<b>Total</b>	20			





# Paraguay

Comisión Nacional de Telecomunicaciones
www.conatel.gov.py

## Comisión Nacional de Telecomunicaciones

Yegros N° 437 esq. 25 de Mayo Asunción - Paraguay

CONOZCANOS

Informaciones de la Institución

MARCO LEGAL

Leyes, Decretos, Resoluciones y Reglamentos

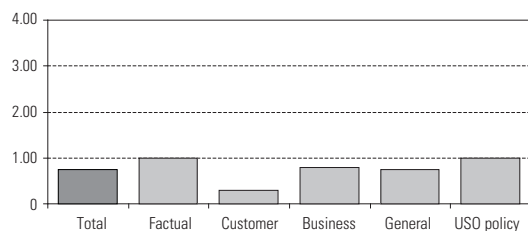
LICENCIAS

### LEY N° 642/95

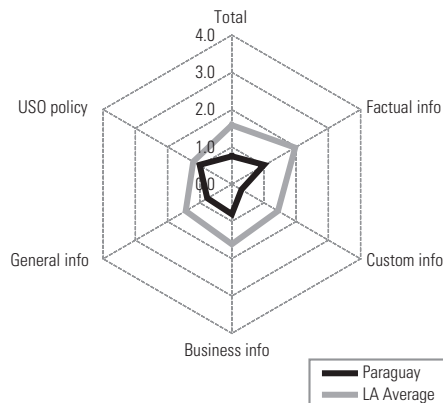
La Ley N° 642/95 de Telecomunicaciones, crea la Comisión Nacional de Telecomunicaciones (CONATEL), entidad autárquica con personería jurídica, encargada del fomento, control y reglamentación de las Telecomunicaciones Nacionales, en el marco de una política

Category	Sub Category		
<b>Factual information &amp; news</b>	1	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	0,5
		Sector news	-
<b>Consumer and citizen information</b>	0,3	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	0,5
		Consumer and citizen rights information	1
		Complaints process	-
		Information about public hearings	-
		Statistical information on consumer attention and complaints resolution	-
			-
<b>Business information</b>	0,8	Equipment certification	1
		Market entry details (such as licensing)	1
		Interconnection information	1
		White papers / consultancy papers	-
		Scarce resources (e.g. spectrum allocation)	1
<b>General information</b>	0,74	Mission statements	1
		Local languages	
		Links to local and international sites	1
		Contact details of key officials (phone numbers, emails, or on line contact form)	1
		Ease of use (navigation tools, website maps, search engine, overall organization)	-
		Organization chart (or equivalent)	1
<b>Universal service / universal access</b>	1	Policy information, reports and plans	1
<b>Total (weighted)</b>			0,74

## Quantitative evaluation



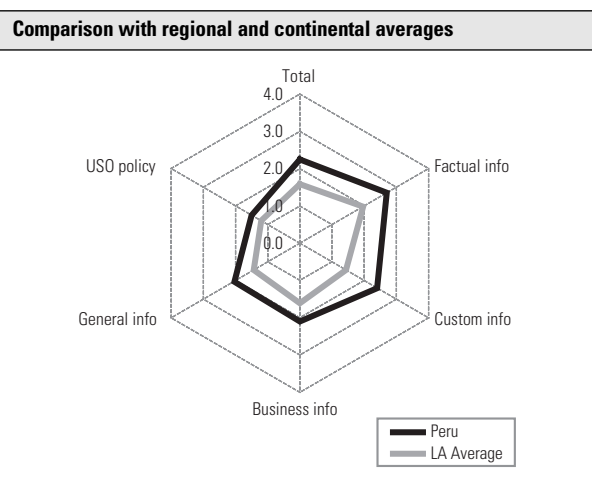
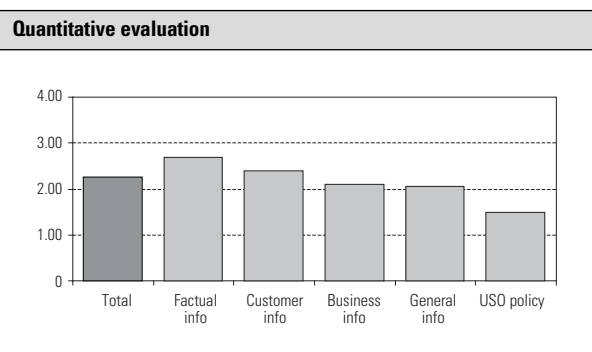
## Comparison with regional and continental averages







Category	Sub Category	
<b>Factual information &amp; news</b>	2,7	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	2,4	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	2,1	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	2,05	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	1,5	Policy information, reports and plans
<b>Total (weighted)</b>		2,26

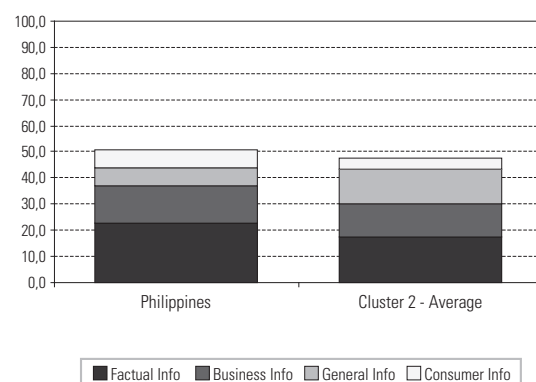


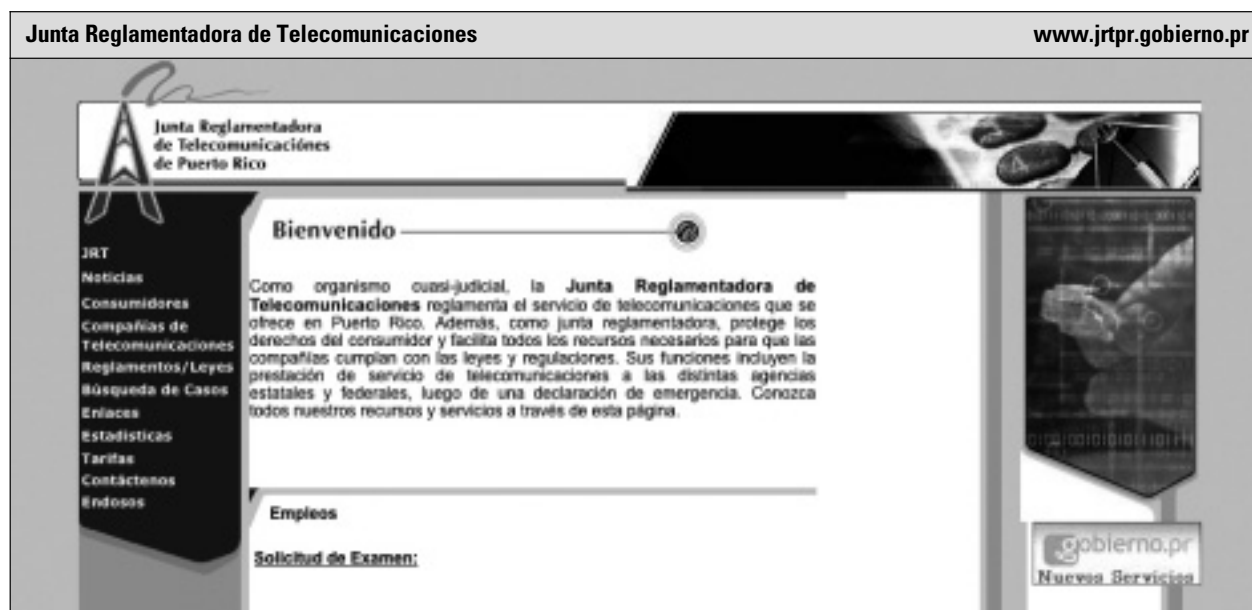
# Philippines



Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	23	8%	Regulatory acts, laws and legislation	4
		8%	Statistical information and sector indicators	6
		6%	Mission / Vision statement and work plan	6
		6%	Annual reports / Budgets	3
		6%	Manuals	0
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	0
		2%	Sector News	2
<b>Business information</b>	14	8%	Market entry	6
		8%	Interconnection	0
		8%	Scarce Resources	8
<b>General information</b>	7	10%	Public consultations / White papers	0
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	0
<b>Consumer information</b>	7	3%	Consumer and citizen rights information	1
		3%	Information about public hearings	0
		3%	Equipment certification	3
		3%	Complaints process	3
<b>Total</b>	<b>51</b>			

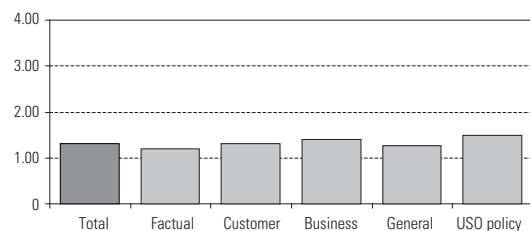
Comparison with cluster averages



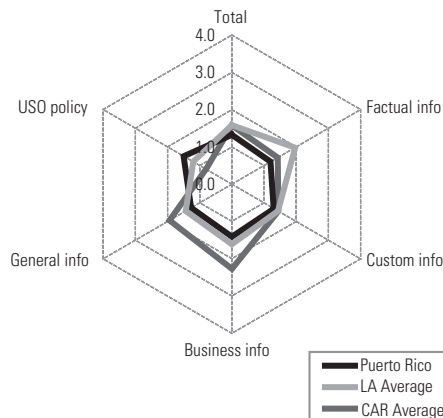


Category	Sub Category		
<b>Factual information &amp; news</b>	1,2	Regulatory acts, legislation laws	2,5
		Statistical information and sector indicators	-
		Sector news	1
<b>Consumer and citizen information</b>	1,3	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	2
		Consumer and citizen rights information	2
		Complaints process	2,5
		Information about public hearings	-
		Statistical information on consumer attention and complaints resolution	-
<b>Business information</b>	1,4	Equipment certification	-
		Market entry details (such as licensing)	2,5
		Interconnection information	1,5
		White papers / consultancy papers	1,5
		Scarce resources (e.g. spectrum allocation)	1,5
<b>General information</b>	1,26	Mission statements	1
		Local languages	
		Links to local and international sites	2
		Contact details of key officials (phone numbers, emails, or on line contact form)	1,5
		Ease of use (navigation tools, website maps, search engine, overall organization)	1
		Organization chart (or equivalent)	0,5
<b>Universal service / universal access</b>	1,5	Policy information, reports and plans	1,5
<b>Total (weighted)</b>			1,31

## Quantitative evaluation



## Comparison with regional and continental averages

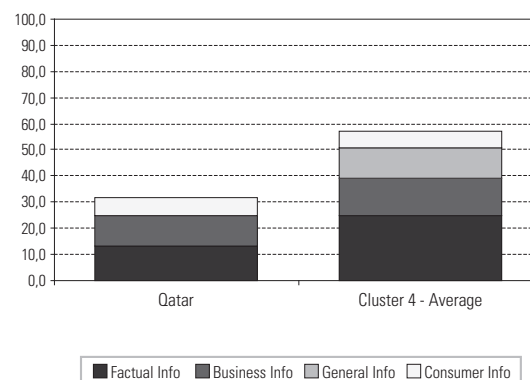


# Qatar



Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	13	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	0
		6%	Mission / Vision statement and work plan	3
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	0
		2%	USO policy information, reports and plans	0
		2%	Sector News	2
<b>Business information</b>	12	8%	Market entry	8
		8%	Interconnection	0
		8%	Scarce Resources	4
<b>General information</b>	0	10%	Public consultations / White papers	0
		5%	RFPs	0
		3%	Local language	0
		2%	Contact details	0
		2%	Updated info	0
		2%	Links to local / international sites	0
<b>Consumer information</b>	7	3%	Consumer and citizen rights information	3
		3%	Information about public hearings	0
		3%	Equipment certification	1
		3%	Complaints process	3
<b>Total</b>	<b>32</b>			

Comparison with cluster averages



**Rwanda Utilities Regulatory Agency**
[www.rura.gov.rw](http://www.rura.gov.rw)



## Rwanda Utilities Regulatory Agency

Ensuring a Fair and Transparent Competition in Public Utilities

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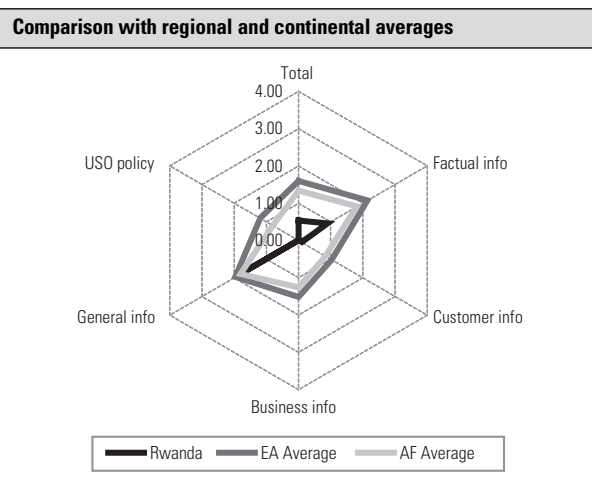
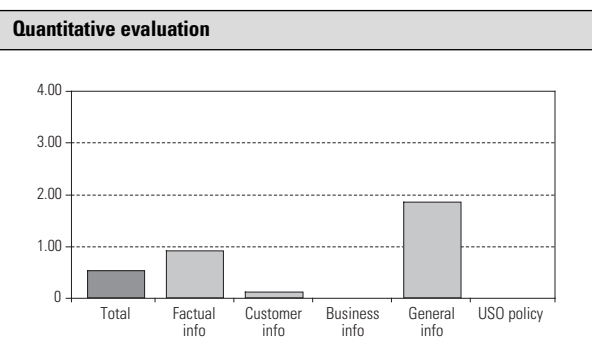
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Rwanda Utilities Regulator Agency was created by law n° 39\*2001 of 13th September 2001 and was published in the Government Gazette n° 20 of 15th October 2001 with the mission to regulate certain public utilities, namely:

1. Telecommunications network and/or Telecommunications services;
2. Electricity
3. Water;
4. Removal of waste products from residential or business premises;
5. Extraction and distribution of Gas;
6. Transport of goods and persons


Regulatory Board and the Managing Director of the Agency were appointed on 30th October 2002. The Regulatory Agency is defined by law as a national institution with legal powers, autonomous administrative and financial management, as well as its own official stamp.

Category	Sub Category		
<b>Factual information &amp; news</b>	0.90	Regulatory acts, legislation laws	2.00
		Statistical information and sector indicators	0.00
		Sector news	0.50
<b>Consumer and citizen information</b>	0.10	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	0.00
		Consumer and citizen rights information	0.50
		Complaints process	0.00
		Information about public hearings	0.00
		Statistical information on consumer attention and complaints resolution	0.00
<b>Business information</b>	0.00	Equipment certification	0.00
		Market entry details (such as licensing)	0.00
		Interconnection information	0.00
		White papers / consultancy papers	0.00
		Scarce resources (e.g. spectrum allocation)	0.00
<b>General information</b>	1.85	Mission statements	0.00
		Local languages	1.50
		Links to local and international sites	3.00
		Contact details of key officials (phone numbers, emails, or on line contact form)	3.50
		Ease of use (navigation tools, website maps, search engine, overall organization)	1.00
		Organization chart (or equivalent)	0.00
<b>Universal service / universal access</b>	0.00	Policy information, reports and plans	0.00
<b>Total (weighted)</b>			<b>0.53</b>



# Saudi Arabia

**Communications and Information Technology Commission (CITC)**
[www.citc.gov.sa](http://www.citc.gov.sa)



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**SaudiNIC**  
SaudiNIC is a non-profit entity that is in charge of registering and administering the domain name space under (.sa)

**Licensing**  
Licensing means a document issued by the Communication and Information Technology Commission to the licensee, including the criteria and conditions to operate a public communications network or to provide communication and information technology services.

**Interconnect**  
Link between telecommunication networks owned by a service provider, or between networks owned by different service providers, with the purpose of enabling the end users of the telecommunication networks to communicate with each other.

**Spectrum Management**  
coordination of technical and administrative procedures necessary to ensure efficient

**Announcements**

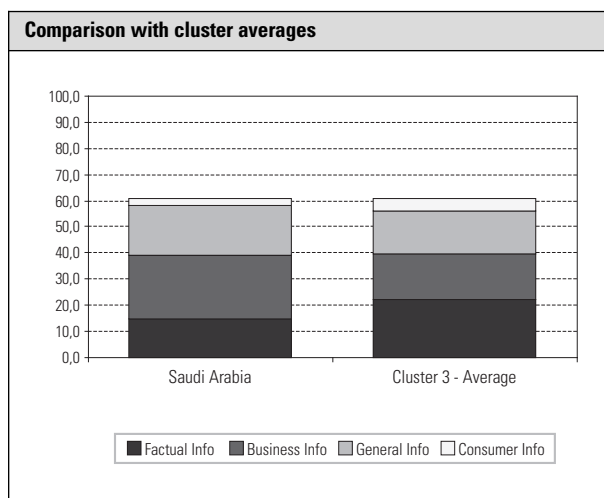
- Public Notice on the Quality of Service Scheme
- approving and publishing STC's Reference Interconnection Offer (RIO 2008)
- Announcement of Telecommunications Market Definition and Dominance

[more](#)

Announcements News Public Consultations

**ANNUAL REPORT**  
2007

Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	15	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	0
		6%	Mission / Vision statement and work plan	3
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	0
		2%	USO policy information, reports and plans	2
		2%	Sector News	2
<b>Business information</b>	24	8%	Market entry	8
		8%	Interconnection	8
		8%	Scarce Resources	8
<b>General information</b>	19	10%	Public consultations / White papers	10
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
<b>Consumer information</b>	3	3%	Consumer and citizen rights information	0
		3%	Information about public hearings	0
		3%	Equipment certification	3
		3%	Complaints process	0
<b>Total</b>	<b>61</b>			



**Agence de Régulation des Télécommunications et des Postes**
[www.artp-senegal.org](http://www.artp-senegal.org)



AGENCE DE RÉGULATION  
DES TÉLÉCOMMUNICATIONS  
ET DES POSTES

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## Toute l'actualité

les textes publiés dans le Journal officiel de la république

- 2008-07-22 **Calendrier de la régulation 2008** NOUVEAU
- 2008-07-17 **Appel à candidature pour le poste d'assistant de Direction**
- 2008-07-08 **Forum des Régulateurs des Télécommunications de l'Afrique (PTRA) - communiqué final**
- 2008-07-03 **Avis d'attribution définitive de marché fournitures BUREAU-22-06-2008**
- 2008-06-18 **Avis de modification Tarifaire d'usage Service ARTP SEN**

**Informations pratiques**

- > Liste des associations de consommateurs
- > Projet pilote de Matam

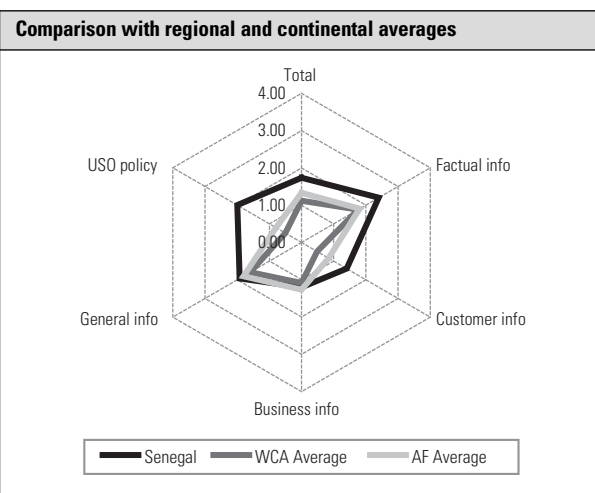
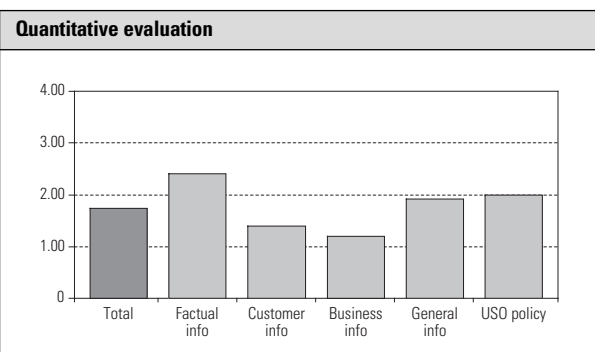
**L'ARTP Senegal**

- > Le Mot du DG
- > Missions de l'ARTP
- > Les différents organes de l'ARTP
- > Organigramme de l'ARTP

**Formulaire**

- > Télécommunications
- > Postes

Category	Sub Category	
<b>Factual information &amp; news</b>	2,40	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	1,40	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	1,20	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	1,92	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	2,00	Policy information, reports and plans
<b>Total (weighted)</b>		1,74





# Singapore

Infocomm Development Authority of Singapore (IDA)
www.ida.gov.sg


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### Highlights

**IDA Launches New Speaker Series - Leading, Innovating, Visioning, Engaging - Infocomm LIVE!**  
Infocomm LIVE!, a new speaker series launched by the Infocomm Development Authority of Singapore (IDA) aims to engage entrepreneurs, industry professionals, researchers and students and inspire them to explore the potential of emerging technologies. The platform will explore development areas such as innovation, entrepreneurship and emerging infocomm trends and technologies like Web 2.0.

**Singapore Hosts 3DX Festival**  
Singapore will host 3DX: 3D Film & Entertainment Technology Festival (3DX) - the first-ever festival of its kind dedicated to stereoscopic 3D content and technologies. The five-day festival will comprise conferences with leading international speakers as well as screening of 3D movies for the public.

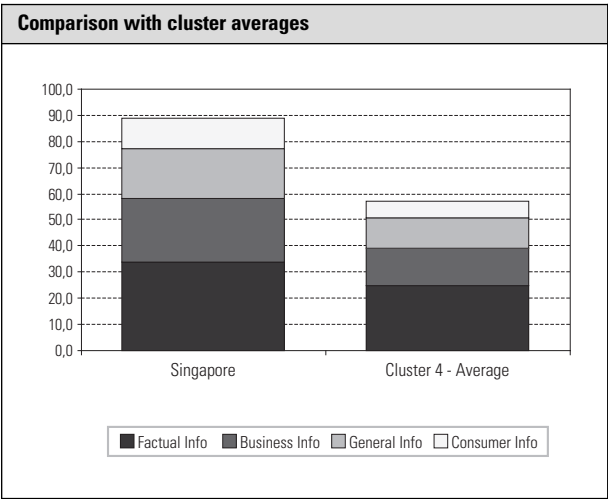
**The ASEAN e-Government and Telecoms Fellowship Programme**  
The Infocomm Development Authority of Singapore (IDA) has launched a fellowship programme for

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Category	Score	Sub Cat Weight	Sub Category	
Factual information	34	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	6
		6%	Annual reports / Budgets	3
		6%	Manuals	3
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	2
		2%	Sector News	2
Business information	24	8%	Market entry	8
		8%	Interconnection	8
		8%	Scarce Resources	8
General information	19	10%	Public consultations / White papers	10
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
Consumer information	12	3%	Consumer and citizen rights information	3
		3%	Information about public hearings	3
		3%	Equipment certification	3
		3%	Complaints process	3
Total	89			





# South Africa

**Independent Communication Authority of South Africa (ICASA)**
[www.icasa.org.za](http://www.icasa.org.za)

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**what's new** [last updated: Thursday, 26 June 2007]

**Title:** Media Release - Draft Regulations on Party Elections Broadcasts Political Advertisements the Equitable Treatment by Political Parties

**Type:** Notice

**Date:** 2006/07/16

**Size:** 26.00 kb

**Description:** ICASA invites members of the public to submit comments on the Draft Regulations on Party Elections Broadcasts, Political Advertisements, the Equitable Treatment by Political Parties by Broadcasting Licensees and Related Matters.

**Related documents:** Draft Regulations on Party Elections Broadcasts, Political Advertisements, the Equitable Treatment by Political Parties by Broad (1.90 Mb)

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**Title:** Media Release - Regulations in Terms of the ECA in Respect of 112 Emergency Centres

**Date:** 2006/07/16

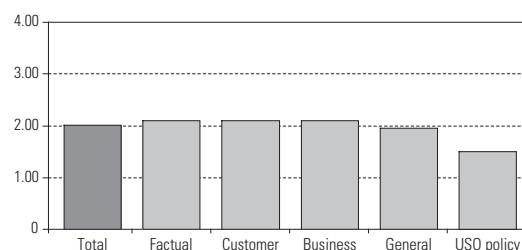
**activities**

July 2006

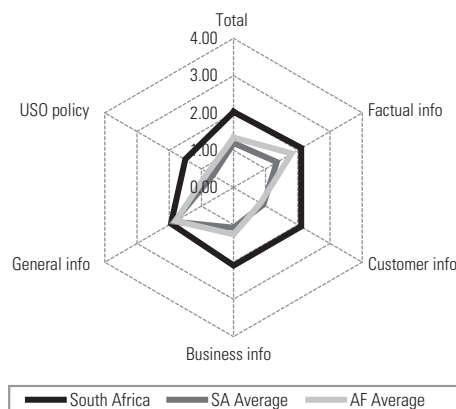
Mo	Tu	We	Th	Fr	Sa	Su
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Category	Sub Category	
<b>Factual information &amp; news</b>	2,10	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	2,10	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	2,10	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	1,95	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	1,50	Policy information, reports and plans
<b>Total (weighted)</b>		2,02

## Quantitative evaluation



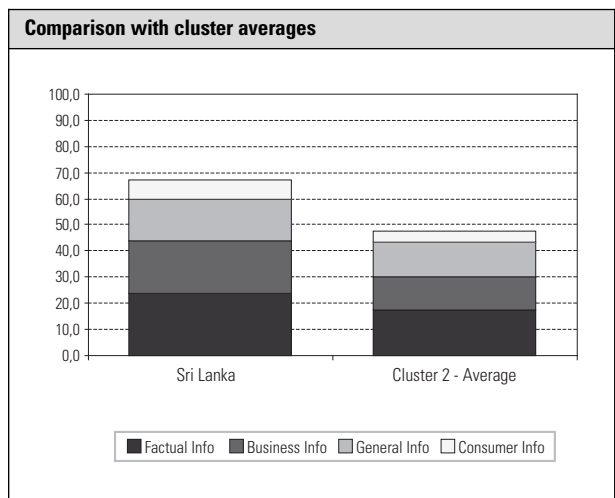
## Comparison with regional and continental averages

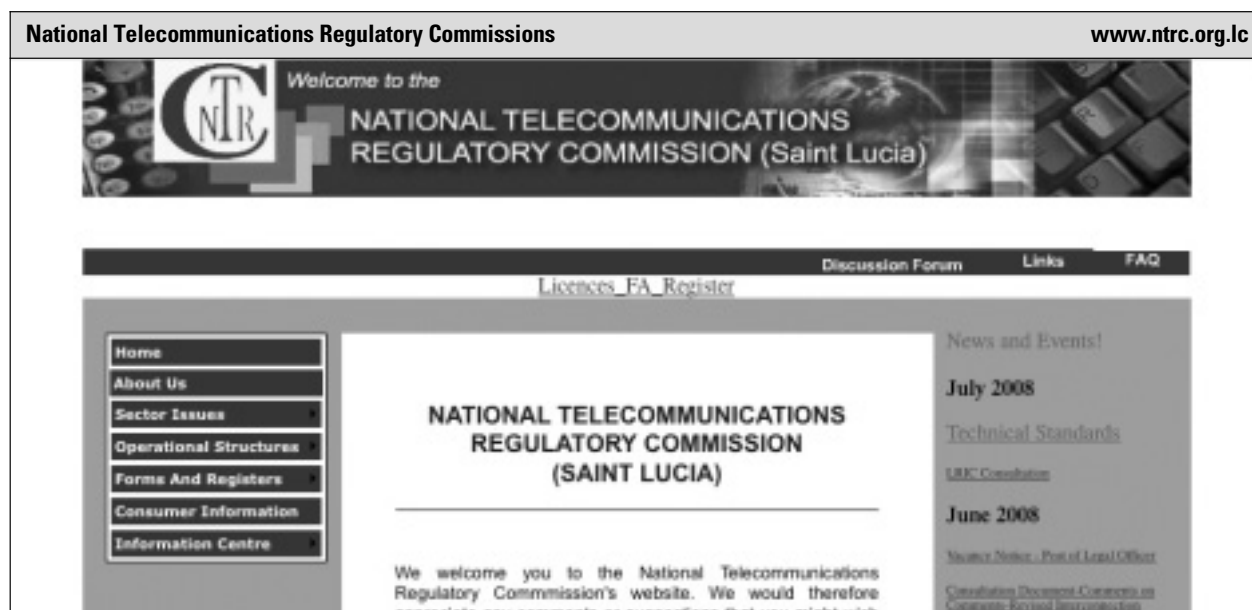


# Sri Lanka



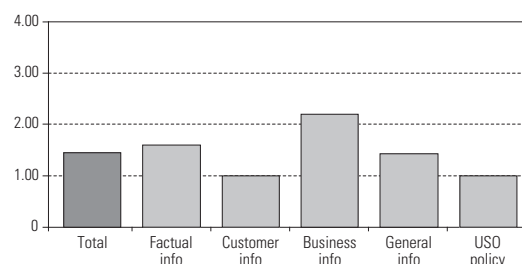
Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	24	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	6
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	0
		2%	USO policy information, reports and plans	0
		2%	Sector News	2
<b>Business information</b>	20	8%	Market entry	8
		8%	Interconnection	4
		8%	Scarce Resources	8
<b>General information</b>	16	10%	Public consultations / White papers	10
		5%	RFPs	0
		3%	Local language	0
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
<b>Consumer information</b>	7	3%	Consumer and citizen rights information	1
		3%	Information about public hearings	0
		3%	Equipment certification	3
		3%	Complaints process	3
<b>Total</b>	<b>67</b>			



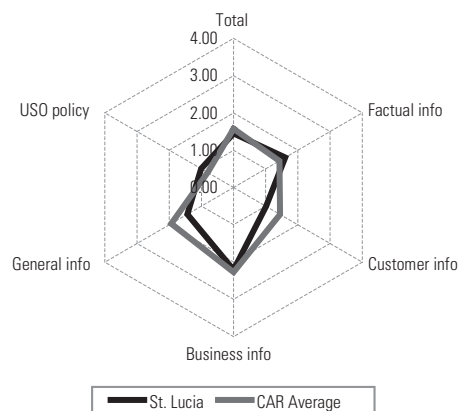


Category	Sub Category		
<b>Factual information &amp; news</b>	1.60	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	1
		Sector news	2
<b>Consumer and citizen information</b>	1.00	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	2
		Consumer and citizen rights information	1
		Complaints process	0
		Information about public hearings	2
		Statistical information on consumer attention and complaints resolution	0
<b>Business information</b>	2.20	Equipment certification	2
		Market entry details (such as licensing)	2
		Interconnection information	2
		White papers / consultancy papers	3
		Scarce resources (e.g. spectrum allocation)	2
<b>General information</b>	1.43	Mission statements	2
		Local languages	
		Links to local and international sites	2
		Contact details of key officials (phone numbers, emails, or on line contact form)	0.5
		Ease of use (navigation tools, website maps, search engine, overall organization)	2
		Organization chart (or equivalent)	1
<b>Universal service / universal access</b>	1.00	Policy information, reports and plans	1
<b>Total (weighted)</b>			1.45

## Quantitative evaluation




## Comparison with regional and continental averages



# St. Vincent and Grenadines

**National Telecommunications Regulatory Commission**

**www.ntrc.vc**




## NTRC SVG

### National Telecommunications Regulatory Commission

NTRC :: KCCU Financial Centre :: Granby Street :: Kingstown :: St. Vincent  
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Last Updated: June 27th, 2005.

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Telecommunications Commission (NTRC)

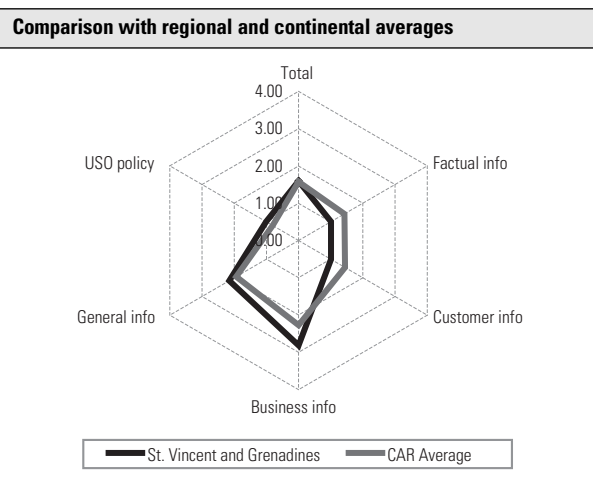
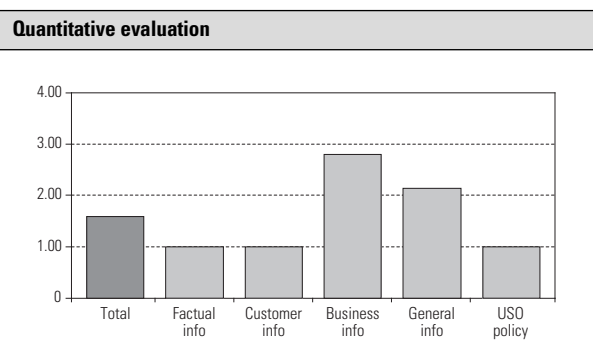
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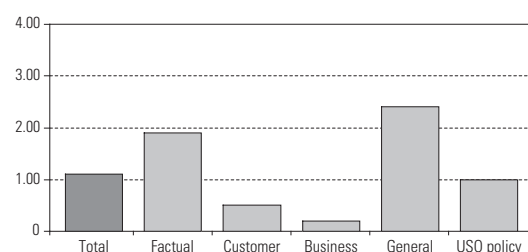
Category	Sub Category		
<b>Factual information &amp; news</b>	1.00	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	0
		Sector news	1
<b>Consumer and citizen information</b>	1.00	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	2
		Consumer and citizen rights information	1
		Complaints process	0
		Information about public hearings	2
		Statistical information on consumer attention and complaints resolution	0
<b>Business information</b>	2.80	Equipment certification	3
		Market entry details (such as licensing)	3
		Interconnection information	2
		White papers / consultancy papers	3
		Scarce resources (e.g. spectrum allocation)	3
<b>General information</b>	2.14	Mission statements	2
		Local languages	
		Links to local and international sites	2
		Contact details of key officials (phone numbers, emails, or on line contact form)	3
		Ease of use (navigation tools, website maps, search engine, overall organization)	2
		Organization chart (or equivalent)	1
<b>Universal service / universal access</b>	1.00	Policy information, reports and plans	1
<b>Total (weighted)</b>			1,59



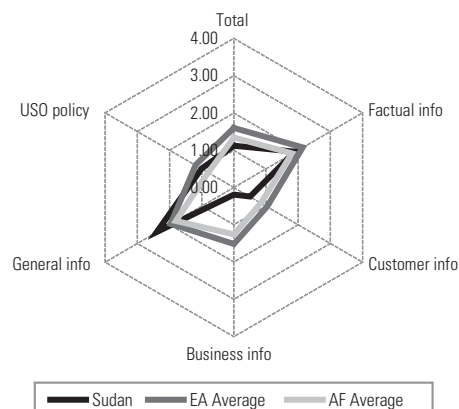


Category	Sub Category	
<b>Factual information &amp; news</b>	1.90 Regulatory acts, legislation laws	2.00
	Statistical information and sector indicators	1.00
	Sector news	3.50
<b>Consumer and citizen information</b>	0.50 Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	0.50
	Consumer and citizen rights information	1.00
	Complaints process	1.00
	Information about public hearings	0.00
	Statistical information on consumer attention and complaints resolution	0.00
<b>Business information</b>	0.20 Equipment certification	1.00
	Market entry details (such as licensing)	0.00
	Interconnection information	0.00
	White papers / consultancy papers	0.00
	Scarce resources (e.g. spectrum allocation)	0.00
<b>General information</b>	2.40 Mission statements	2.00
	Local languages	2.00
	Links to local and international sites	4.00
	Contact details of key officials (phone numbers, emails, or on line contact form)	1.50
	Ease of use (navigation tools, website maps, search engine, overall organization)	2.00
	Organization chart (or equivalent)	3.00
<b>Universal service / universal access</b>	1.00 Policy information, reports and plans	1.00
<b>Total (weighted)</b>		1.11

## Quantitative evaluation



## Comparison with regional and continental averages

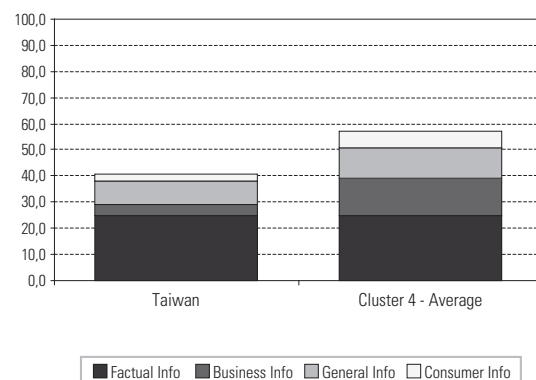


# Taiwan



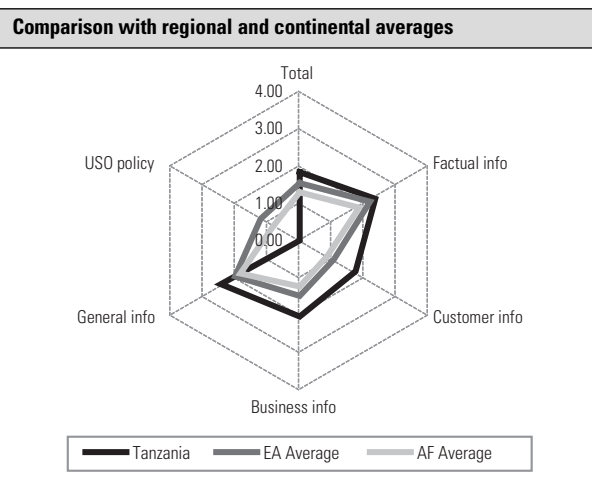
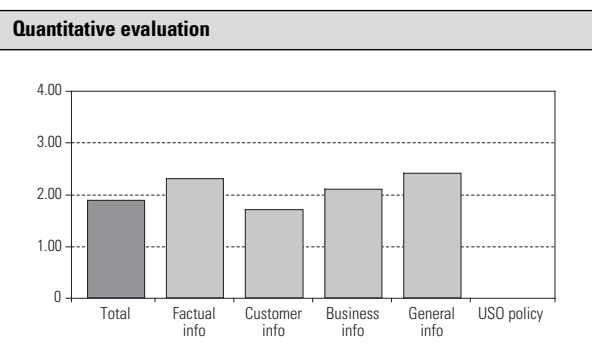
Category	Score	Sub Cat Weight	Sub Category	
Factual information	25	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	3
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	2
		2%	Sector News	2
Business information	4	8%	Market entry	0
		8%	Interconnection	0
		8%	Scarce Resources	4
General information	9	10%	Public consultations / White papers	0
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
Consumer information	3	3%	Consumer and citizen rights information	0
		3%	Information about public hearings	0
		3%	Equipment certification	3
		3%	Complaints process	0
Total	41			

Comparison with cluster averages



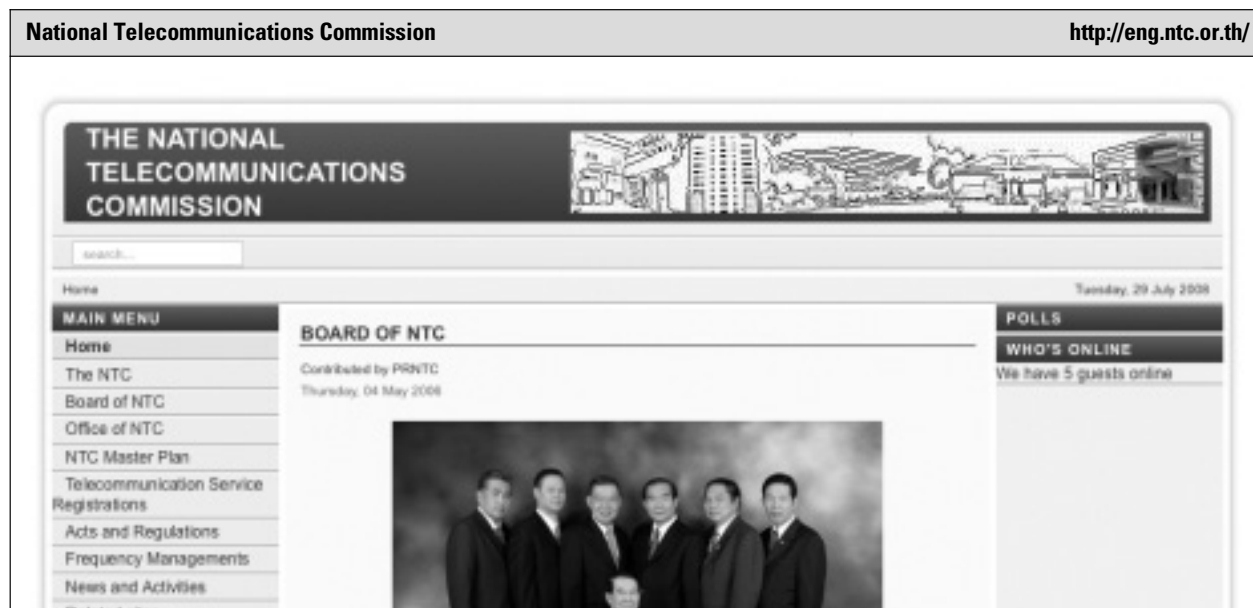


Category	Sub Category	
<b>Factual information &amp; news</b>	2.30	Regulatory acts, legislation laws 2.50
		Statistical information and sector indicators 1.50
		Sector news 3.50
<b>Consumer and citizen information</b>	1.70	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.) 2.50
		Consumer and citizen rights information 2.50
		Complaints process 3.50
		Information about public hearings 0.00
		Statistical information on consumer attention and complaints resolution 0.00
<b>Business information</b>	2.10	Equipment certification 3.50
		Market entry details (such as licensing) 3.50
		Interconnection information 1.00
		White papers / consultancy papers 1.50
		Scarce resources (e.g. spectrum allocation) 1.00
<b>General information</b>	2.40	Mission statements 1.00
		Local languages 1.50
		Links to local and international sites 4.00
		Contact details of key officials (phone numbers, emails, or on line contact form) 3.00
		Ease of use (navigation tools, website maps, search engine, overall organization) 2.50
		Organization chart (or equivalent) 2.00
<b>Universal service / universal access</b>	0.00	Policy information, reports and plans 0.00
<b>Total (weighted)</b>		1.89



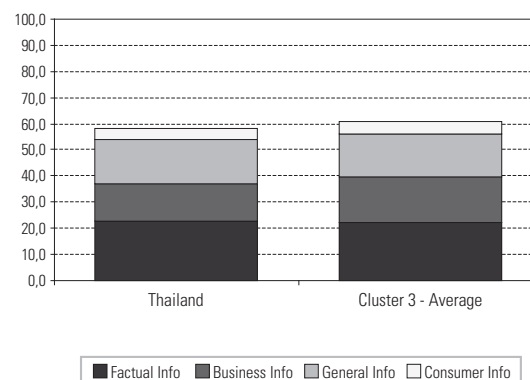


# Thailand

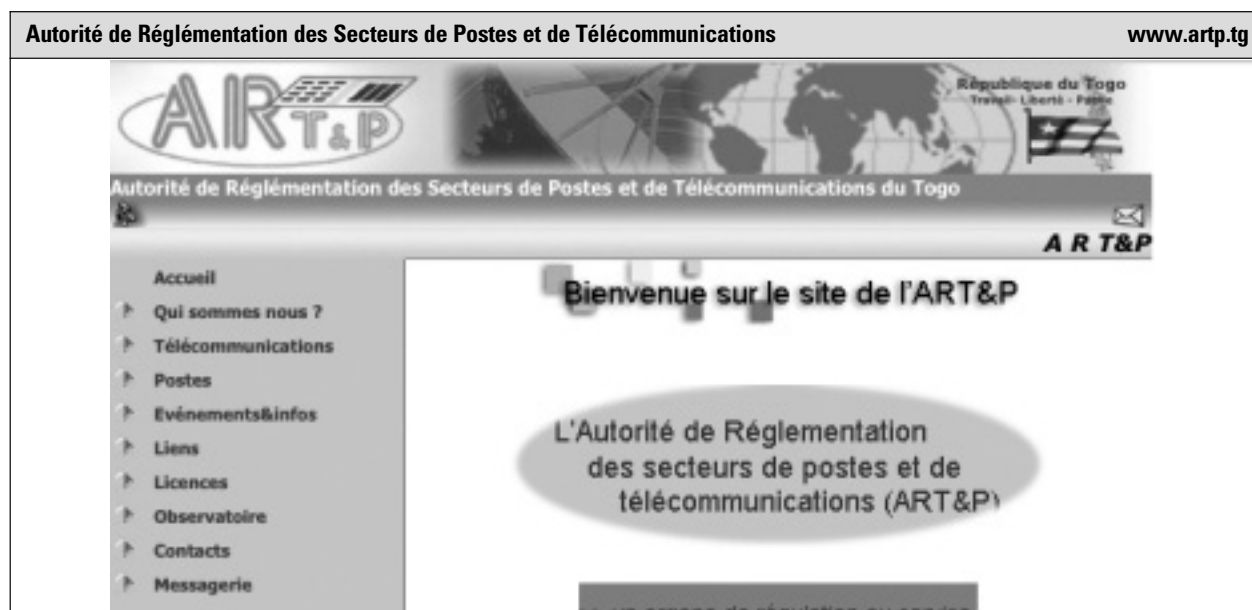


Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	23	8%	Regulatory acts, laws and legislation	6
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	6
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	0
		2%	USO policy information, reports and plans	1
		2%	Sector News	2
<b>Business information</b>	14	8%	Market entry	6
		8%	Interconnection	0
		8%	Scarce Resources	8
<b>General information</b>	17	10%	Public consultations / White papers	8
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
<b>Consumer information</b>	4	3%	Consumer and citizen rights information	2
		3%	Information about public hearings	0
		3%	Equipment certification	2
		3%	Complaints process	0
<b>Total</b>	<b>58</b>			

Comparison with cluster averages

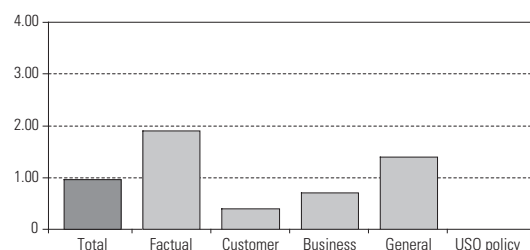




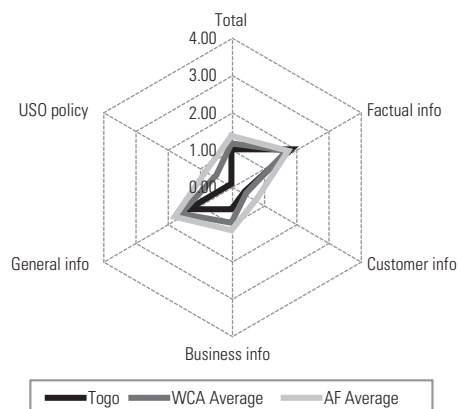


Category	Sub Category	
<b>Factual information &amp; news</b>	1,90	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	0,40	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	0,70	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	1,39	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	-	Policy information, reports and plans
<b>Total (weighted)</b>		0,96

## Quantitative evaluation



## Comparison with regional and continental averages



# Trinidad and Tobago

Telecommunications Authority of Trinidad and Tobago
www.tatt.org.tt

**Telecommunications Authority of Trinidad and Tobago**

Home About Us Publications News Authorization Forms F.A.Q. Links Member Login

Fri, May 30, 2008

### Headlines

**May 23rd 2008**  
The Authority has issued a Request For Proposals for a Broadcast Content Monitoring System  
[Read more](#)

**April 26th 2008**  
The Authority has issued a Request For Proposals for the re-design and re-organization of its website.  
[Read more](#)

**April 06th 2008**  
The Authority hosted an International Seminar entitled "Balance on the airwaves: free speech and responsibility" on April

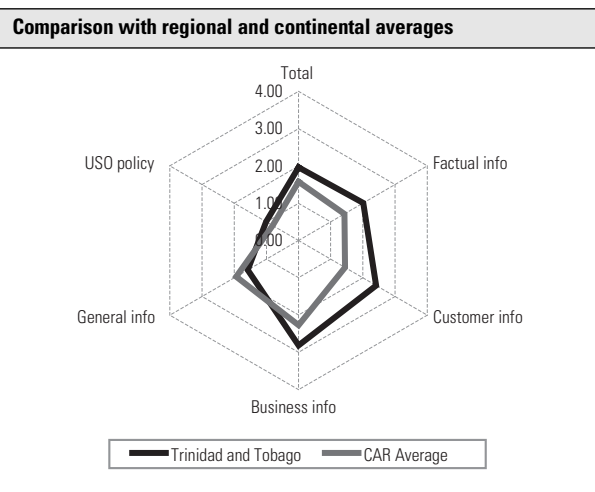
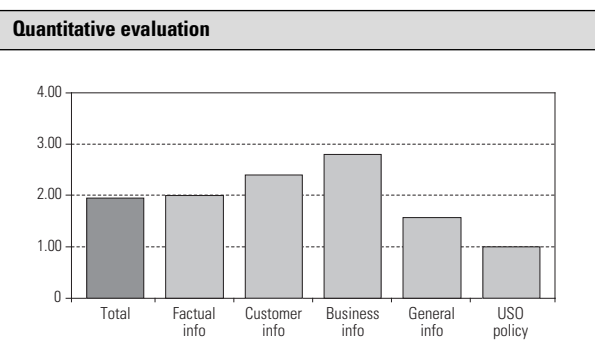
### Latest Documents

**May 20th 2008**  
Subsequent to two rounds of consultation, the Authority has published the final version of the Framework for the Authorization of Amateur Radio Services.  
[Read more](#)

**April 18th 2008**  
The Authority has published the following document for public comment: *Reforming Plan for Broadband Wireless Access Services in the 2.3 GHz, 2.5 GHz and 3.5 GHz Bands*.  
[Read more](#)

**February 20th 2008**  
The Authority has published the document *Equipment Standardization and Certification Framework for the Telecommunications and Broadcasting Sectors of Trinidad and Tobago*.  
[Read more](#)

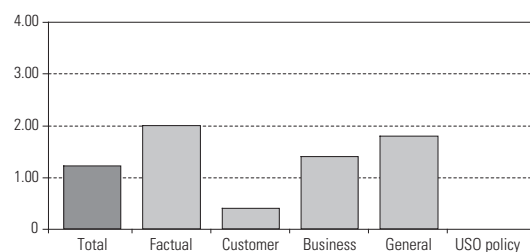
Category	Sub Category		
<b>Factual information &amp; news</b>	2.00	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	2
		Sector news	2
<b>Consumer and citizen information</b>	2.40	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	2
		Consumer and citizen rights information	2
		Complaints process	3
		Information about public hearings	3
		Statistical information on consumer attention and complaints resolution	2
<b>Business information</b>	2.80	Equipment certification	3
		Market entry details (such as licensing)	3
		Interconnection information	2
		White papers / consultancy papers	3
		Scarce resources (e.g. spectrum allocation)	3
<b>General information</b>	1.57	Mission statements	2
		Local languages	
		Links to local and international sites	2
		Contact details of key officials (phone numbers, emails, or on line contact form)	0.5
		Ease of use (navigation tools, website maps, search engine, overall organization)	2
		Organization chart (or equivalent)	2
<b>Universal service / universal access</b>	1.00	Policy information, reports and plans	1
<b>Total (weighted)</b>			1.95



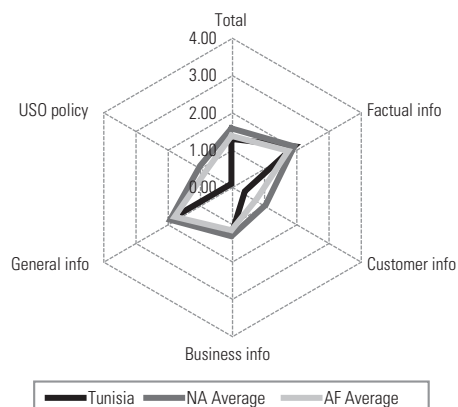


Category	Sub Category	
<b>Factual information &amp; news</b>	2,00	Regulatory acts, legislation laws
		Statistical information and sector indicators
		Sector news
<b>Consumer and citizen information</b>	0,40	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)
		Consumer and citizen rights information
		Complaints process
		Information about public hearings
		Statistical information on consumer attention and complaints resolution
<b>Business information</b>	1,40	Equipment certification
		Market entry details (such as licensing)
		Interconnection information
		White papers / consultancy papers
		Scarce resources (e.g. spectrum allocation)
<b>General information</b>	1,80	Mission statements
		Local languages
		Links to local and international sites
		Contact details of key officials (phone numbers, emails, or on line contact form)
		Ease of use (navigation tools, website maps, search engine, overall organization)
		Organization chart (or equivalent)
<b>Universal service / universal access</b>	-	Policy information, reports and plans
<b>Total (weighted)</b>		1,22

## Quantitative evaluation



## Comparison with regional and continental averages



# Uganda

**Uganda Communications Commission**
[www.ucc.co.ug](http://www.ucc.co.ug)



**UGANDA COMMUNICATIONS COMMISSION**



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[Licensed Operators](#)  
[Spectrum Management](#)  
[Rural Communications](#)  
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## Welcome to UCC

Uganda Communications Commission (UCC) is the regulator of the communications industry in Uganda. UCC regulates and promotes the developments in the communications industry.

**Vision**

A Uganda in which sustainable national development is facilitated through availability, and access to reliable, cost effective, and affordable communications services largely delivered through an enabled private sector.

**Mission**

To facilitate sustainable development of communication services that are universally accessible through effective regulation.

**Our Commitment to Stakeholders**

☒ only search UCC Web site

**Frequently Asked Questions (FAQs)**

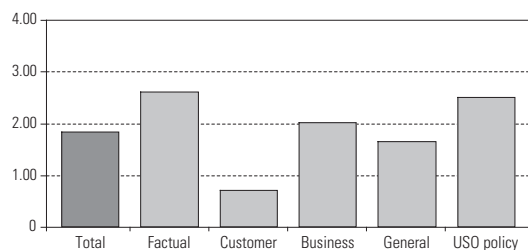
- [Licensing FAQ](#)
- [Postal FAQ](#)
- [Spectrum Management FAQ](#)
- [Type Approval FAQ](#)
- [Lodging a complaint](#)

**Just Updated**

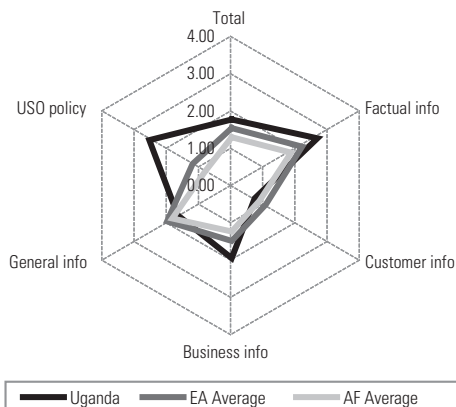
- [Regulatory Reporting Guideline](#)

Category	Sub Category	
<b>Factual information &amp; news</b>	2.60	Regulatory acts, legislation laws 2.50
		Statistical information and sector indicators 3.50
		Sector news 1.00
<b>Consumer and citizen information</b>	0.70	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.) 1.00
		Consumer and citizen rights information 1.50
		Complaints process 1.00
		Information about public hearings 0.00
		Statistical information on consumer attention and complaints resolution 0.00
<b>Business information</b>	2.00	Equipment certification 2.00
		Market entry details (such as licensing) 1.00
		Interconnection information 3.50
		White papers / consultancy papers 0.00
		Scarce resources (e.g. spectrum allocation) 3.50
<b>General information</b>	1.64	Mission statements 2.00
		Local languages 0.00
		Links to local and international sites 0.00
		Contact details of key officials (phone numbers, emails, or on line contact form) 2.00
		Ease of use (navigation tools, website maps, search engine, overall organization) 3.00
		Organization chart (or equivalent) 2.00
<b>Universal service / universal access</b>	2.50	Policy information, reports and plans 2.50
<b>Total (weighted)</b>		1.82

## Quantitative evaluation




## Comparison with regional and continental averages



# United Arab Emirates

**Telecommunications Regulatory Authority**
**www.tra.ae**



هيئة تنظيم الاتصالات  
TRA  
TELECOMMUNICATIONS REGULATORY AUTHORITY  
الإدارة العامة لتنظيم الاتصالات





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**Events & Activities**

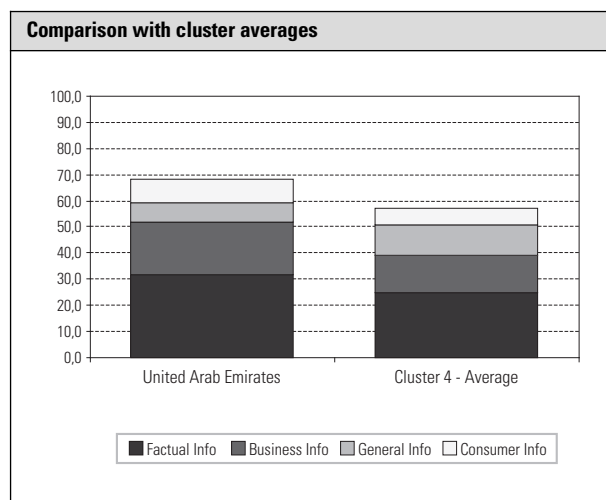
The TRA is Hosting the Working Party 5D (WP 5D) Meeting of the ITU Radio-communication Sector Study Group 5

Committed to international reach and seeking continuously to contribute in events that work on developing the UAE Telecom Sector...More

**Latest News**

➤ Memorandum of Understanding (MoU) between the ICT Development Fund Khalifa Fund to Support and Develop Small & Medium Enterprises

Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	32	8%	Regulatory acts, laws and legislation	8
		8%	Statistical information and sector indicators	8
		6%	Mission / Vision statement and work plan	3
		6%	Annual reports / Budgets	3
		6%	Manuals	6
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	0
		2%	Sector News	2
<b>Business information</b>	20	8%	Market entry	4
		8%	Interconnection	8
		8%	Scarce Resources	8
<b>General information</b>	7	10%	Public consultations / White papers	0
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	0
<b>Consumer information</b>	9	3%	Consumer and citizen rights information	3
		3%	Information about public hearings	0
		3%	Equipment certification	3
		3%	Complaints process	3
<b>Total</b>	<b>68</b>			



# United States of America

**Federal Communications Commission**
[www.fcc.gov](http://www.fcc.gov)


Federal Communications Commission

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**Headlines**
[Daily Digest](#) | [Daily Business](#)

7/22/08  
**FCC Announces July Open Meeting on Overcoming Barriers to Communications Financing at Barnard College.**  
Public Notice: [Word](#) | [Acrobat](#)

7/22/08  
**Remarks Of Commissioner Tate at Cox Communications' 3rd Annual Internet Safety Summit.**  
[Word](#) | [Acrobat](#)

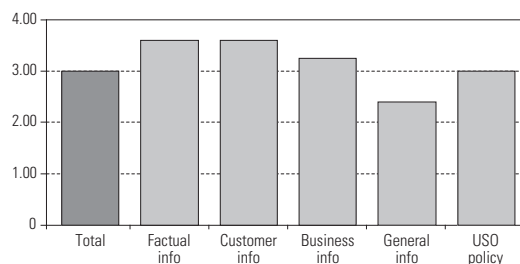
7/21/08  
**Statements of FCC Commissioners, En Banc Hearing on Broadband and the Digital Future, Carnegie Mellon University, Pittsburgh, Pennsylvania.**

**Digital Television (DTV)**  
 **THE DIGITAL TV TRANSITION**  
What You Need To Know About DTV  
**DTV Transition Deadline: February 17, 2009**

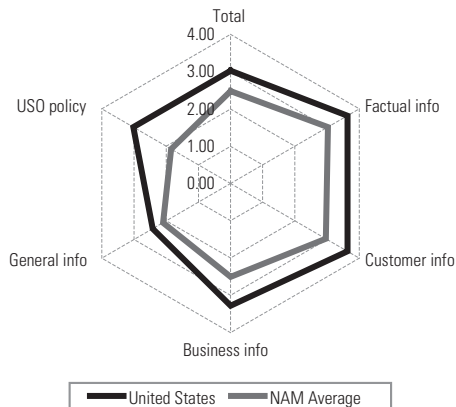
**Commissioners**  
**Kevin J. Martin**  
Chairman  
**Michael J. Copps**  
Commissioner  
**Jonathan S. Adelstein**

Category	Sub Category	
<b>Factual information &amp; news</b>	3.60	Regulatory acts, legislation laws 4
		Statistical information and sector indicators 3
		Sector news 4
<b>Consumer and citizen information</b>	3.60	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.) 4
		Consumer and citizen rights information 4
		Complaints process 4
		Information about public hearings 4
		Statistical information on consumer attention and complaints resolution 2
<b>Business information</b>	3.25	Equipment certification
		Market entry details (such as licensing) 4
		Interconnection information 2
		White papers / consultancy papers 4
		Scarce resources (e.g. spectrum allocation) 3
<b>General information</b>	2.40	Mission statements 3
		Local languages 2
		Links to local and international sites 0.5
		Contact details of key officials (phone numbers, emails, or on line contact form) 4
		Ease of use (navigation tools, website maps, search engine, overall organization) 4
		Organization chart (or equivalent) 2
<b>Universal service / universal access</b>	3.00	Policy information, reports and plans 3
<b>Total (weighted)</b>		3.17

## Quantitative evaluation



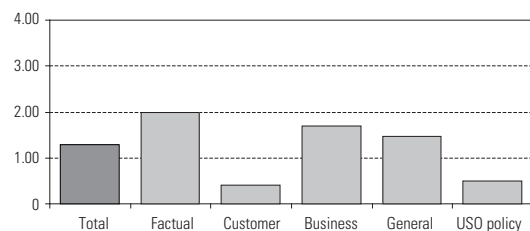
## Comparison with regional and continental averages



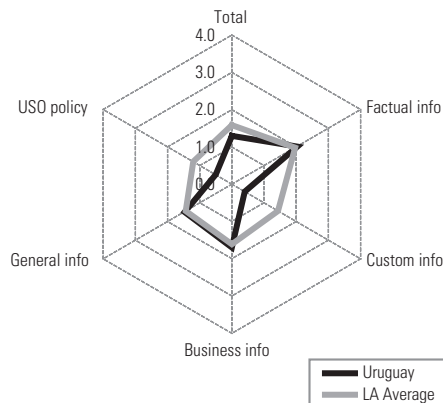


Category	Sub Category		
<b>Factual information &amp; news</b>	2	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	2,5
		Sector news	1
<b>Consumer and citizen information</b>	0,4	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	1
		Consumer and citizen rights information	0,5
		Complaints process	0,5
		Information about public hearings	-
		Statistical information on consumer attention and complaints resolution	-
<b>Business information</b>	1,7	Equipment certification	1
		Market entry details (such as licensing)	2
		Interconnection information	2
		White papers / consultancy papers	1,5
		Scarce resources (e.g. spectrum allocation)	2
<b>General information</b>	1,47	Mission statements	1
		Local languages	
		Links to local and international sites	2
		Contact details of key officials (phone numbers, emails, or on line contact form)	1,5
		Ease of use (navigation tools, website maps, search engine, overall organization)	1,5
		Organization chart (or equivalent)	1
<b>Universal service / universal access</b>	0,5	Policy information, reports and plans	0,5
<b>Total (weighted)</b>			1,3

## Quantitative evaluation



## Comparison with regional and continental averages





# Uzbekistan

**Communications and Information Agency**
[www.aci.uz/en](http://www.aci.uz/en)




**COMMUNICATIONS AND INFORMATION AGENCY OF UZBEKISTAN**

**Main page**

- News
- About us
- Events
- Structure
- Licensing
- Standardization, Metrology and Certification
- Normative base
- International relations
- Commissions, Boards and Committees
- Virtual reception
- On-line services

**News of the Agency**

News of the Agency

News of Uzbekistan

**News of Uzbekistan**

National Capacity-building Seminar on Information and Communication Technology Policy opened in Tashkent



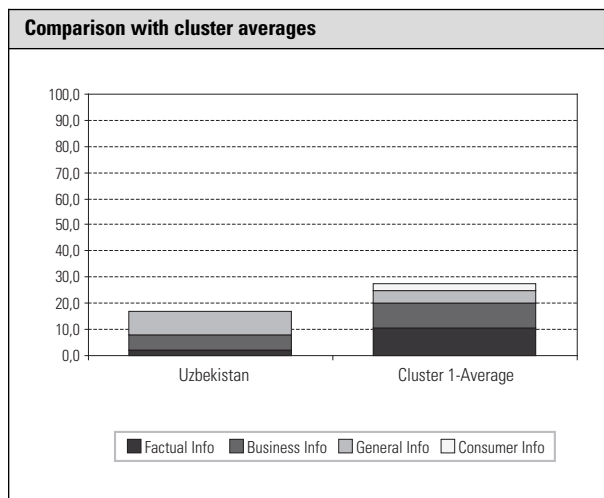
Today a national capacity-building seminar on information and communication technology (ICT) policy and legal issues is opened in Tashkent. The leading experts in the field of information and communication technologies (ICT), legal specialists, representatives of the

Emir of Kuwait arrives in Uzbekistan



The Emir of Kuwait Sheikh Sabah Al-Ahmad Al-Jaber As-Sabah arrived to Tashkent with an official visit on 21 July. President of Uzbekistan Islam Karimov welcomed the high-ranking official at the Tashkent airport. During the visit, issues of expansion of cooperation between Uzbekistan and Kuwait, as well as important problems of regional and international character will be considered.

Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	2	8%	Regulatory acts, laws and legislation	0
		8%	Statistical information and sector indicators	0
		6%	Mission / Vision statement and work plan	0
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	0
		2%	USO policy information, reports and plans	0
		2%	Sector News	2
<b>Business information</b>	6	8%	Market entry	6
		8%	Interconnection	0
		8%	Scarce Resources	0
<b>General information</b>	9	10%	Public consultations / White papers	0
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	2
		2%	Links to local / international sites	2
<b>Consumer information</b>	0	3%	Consumer and citizen rights information	0
		3%	Information about public hearings	0
		3%	Equipment certification	0
		3%	Complaints process	0
<b>Total</b>	<b>17</b>			





**Comisión Nacional de Telecomunicaciones**
[www.conatel.gov.ve](http://www.conatel.gov.ve)


**Gobierno Bolivariano de Venezuela**

Ministerio del Poder Popular  
para las Telecomunicaciones y la Informática



<http://www.conatel.gov.ve>

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- Operadores
- Educación / CEDITEL
- Indicadores
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- Homologación
- Espectro Radioeléctrico
- Internacional
- Consulta Pública


**CONATEL**  
COMISION NACIONAL DE TELECOMUNICACIONES  
REPÚBLICA BOLIVARIANA DE VENEZUELA

**Noticias CONATEL**

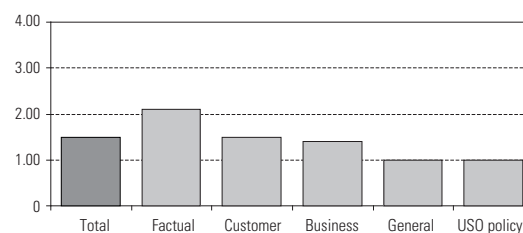
[Consultar Noticias Anteriores](#)

**CONATEL realizó tercer encuentro para impulsar medios comunitarios en el estado Trujillo ...** Siguiendo el lineamiento estratégico institucional de impulso al modelo de comunicación inclusivo, CONATEL realizó el tercer encuentro con colectivos de medios comunitarios del estado Trujillo. **25/7/2008**

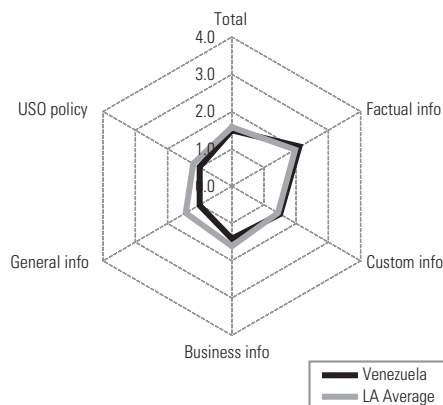
**100 días de Gestión**  
26 de Abril de 2008  
Ing°. Edo Rodríguez Fernández  
Quedoso General de CONATEL

Category	Sub Category		
<b>Factual information &amp; news</b>	2,1	Regulatory acts, legislation laws	2
		Statistical information and sector indicators	2,5
		Sector news	1,5
<b>Consumer and citizen information</b>	1,5	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.)	1
		Consumer and citizen rights information	2
		Complaints process	3
		Information about public hearings	1,5
		Statistical information on consumer attention and complaints resolution	-
<b>Business information</b>	1,4	Equipment certification	2
		Market entry details (such as licensing)	1,5
		Interconnection information	1,5
		White papers / consultancy papers	0,5
		Scarce resources (e.g. spectrum allocation)	1,5
<b>General information</b>	1	Mission statements	1
		Local languages	
		Links to local and international sites	1,5
		Contact details of key officials (phone numbers, emails, or on line contact form)	1,5
		Ease of use (navigation tools, website maps, search engine, overall organization)	0,5
		Organization chart (or equivalent)	0,5
<b>Universal service / universal access</b>	1	Policy information, reports and plans	1
<b>Total (weighted)</b>			1,5

## Quantitative evaluation



## Comparison with regional and continental averages

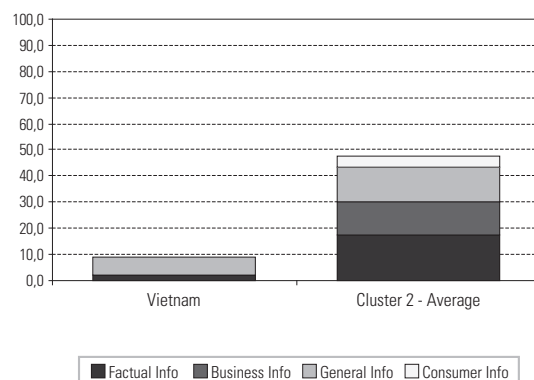


# Vietnam



Category	Score	Sub Cat Weight	Sub Category	
<b>Factual information</b>	2	8%	Regulatory acts, laws and legislation	0
		8%	Statistical information and sector indicators	0
		6%	Mission / Vision statement and work plan	0
		6%	Annual reports / Budgets	0
		6%	Manuals	0
		2%	Organizational chart	2
		2%	USO policy information, reports and plans	0
		2%	Sector News	0
<b>Business information</b>	0	8%	Market entry	0
		8%	Interconnection	0
		8%	Scarce Resources	0
<b>General information</b>	7	10%	Public consultations / White papers	0
		5%	RFPs	0
		3%	Local language	3
		2%	Contact details	2
		2%	Updated info	0
		2%	Links to local / international sites	2
<b>Consumer information</b>	0	3%	Consumer and citizen rights information	0
		3%	Information about public hearings	0
		3%	Equipment certification	0
		3%	Complaints process	0
<b>Total</b>	<b>9</b>			

Comparison with cluster averages



**Communications Authority Regulator**

[www.caz.zm](http://www.caz.zm)


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[Economic Regulation](#)  
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[Legal and Enforcement](#)  
[Documents](#)  
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You are here: Home  
 Welcome to Communications Authority Website!

**About Us**  
 The Communications Authority is a statutory body established by an Act of Parliament, Telecommunications Act No. 23 of 1994. This Act mandated the Communications Authority to supervise and regulate the provisions of Telecommunication services and products in the Country and to promote competition and to ensure that the benefits of this sector accrue to the Citizens of Zambia and its economy.

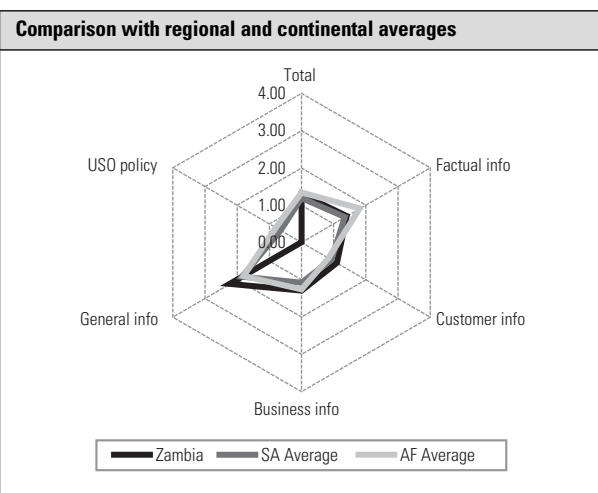
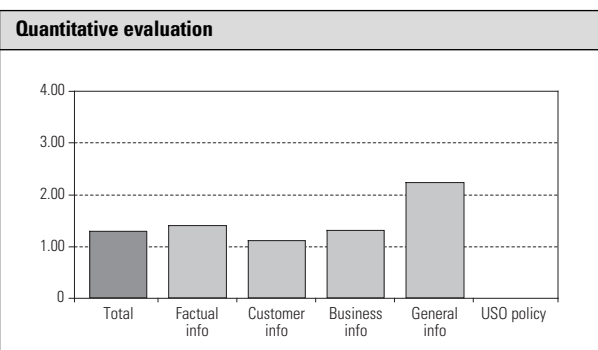
**Vision Statement**  
 An efficient and competitive ICT sector that provides quality, reliable and affordable goods and services that are universally accessible to and meet the needs of the Zambian community.

**Mission Statement**  
 To facilitate sustainable and accelerated growth of a cost-effective and efficient ICT industry providing affordable goods (products) and services which are accessible to and meet the needs of the Zambian people, through effective regulation.

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**Latest Events**  
 There are no upcoming events currently scheduled.

Category	Sub Category	
<b>Factual information &amp; news</b>	1,40	Regulatory acts, legislation laws 2,00
		Statistical information and sector indicators 1,00
		Sector news 1,00
<b>Consumer and citizen information</b>	1,10	Consumer information (other than rights - e.g. tariff information, new numbering plans etc.) 1,50
		Consumer and citizen rights information 2,00
		Complaints process 2,00
		Information about public hearings 0,00
		Statistical information on consumer attention and complaints resolution 0,00
<b>Business information</b>	1,30	Equipment certification 3,50
		Market entry details (such as licensing) 1,00
		Interconnection information 0,00
		White papers / consultancy papers 0,00
		Scarce resources (e.g. spectrum allocation) 2,00
<b>General information</b>	2,23	Mission statements 2,00
		Local languages
		Links to local and international sites 4,00
		Contact details of key officials (phone numbers, emails, or on line contact form) 1,50
		Ease of use (navigation tools, website maps, search engine, overall organization) 2,00
		Organization chart (or equivalent) 1,00
<b>Universal service / universal access</b>	-	Policy information, reports and plans 0,00
<b>Total (weighted)</b>		1,28





## Foundation Partners



**International Development Research Centre**  
<[www.idrc.ca](http://www.idrc.ca)>

Canada's International Development Research Centre (IDRC) is one of the world's leading institutions in the generation and application of new knowledge to meet the challenges facing developing countries.

IDRC funds applied research by researchers from developing countries on the problems they identify as crucial to their communities. It also provides technical support to those researchers. IDRC builds local capacity in developing countries to undertake research and create innovations, believing that people from developing countries must take the lead in producing and applying

knowledge for the benefit of their own communities. IDRC also fosters alliances and knowledge sharing between scientific, academic, and development communities in Canada and developing countries.

The mission of IDRC remains "Empowerment through Knowledge," i.e. to promote interaction, and foster a spirit of cooperation and mutual learning within and among social groups, nations and societies through the creation, and adaptation of the knowledge that the people of developing countries judge to be of greatest relevance to their own prosperity, security and equity.



<[www.lirne.net](http://www.lirne.net)>

LIRNE.NET is a Strategic Collaboration between researchers and faculty from: the **Center for Communication, Media and Information Technologies (CMI)** at Aalborg University, Denmark; **DIRSI** (Regional Dialogue on the Information Society / Diálogo Regional sobre la Sociedad de la Información), Lima, Peru; **Economics of Infrastructures Section**, Delft University of Technology, The Netherlands; **LIRNEasia**, Colombo, Sri Lanka; **Media@LSE Programme** at the London School of Economics; and **Research ICT Africa!**, Johannesburg, South Africa.

The LIRNE.NET mission is twofold:

- To facilitate ICT-related institutional reform throughout the world – through research, training, dialogue, policy and regulatory advice; and to build human capital in this new area as the foundation for effective policy, regulation, governance, management and development in new 'network' or 'knowledge' economies.

LIRNE.NET activities include:

- External Training Initiatives (for government, industry and NGOs); Research Activities and Reports; World Dialogue on Regulation for Network Economies <[regulateonline.org](http://regulateonline.org)> and Expert Analysis & Commentary on Current Issues.



## About the Project contributors

**LARA ALAWATTEGAMA** is responsible for the compilation of LIRNEasia's Broadband Benchmark report under the guidance of Professor Rohan Samarajiva and Helani Galpaya. She is also involved in research on Korea and the Information Society and the way in which it can be replicated in the South Asian region. Lara has also worked on compiling the Telecom Regulatory Environment (TRE) manual, for use as a benchmark in undertaking future TRE studies. Before joining LIRNEasia, Lara was attached to a United Nations Development Project dealing with poverty alleviation where she worked as an intern; she also completed internship programs with Outokumpu, Australia. She holds a Bachelor's degree from the University of Sydney, with majors in Government and International relations and International Business and a minor in Political Economy.

**HUGO CARRIÓN GORDÓN** is an Electrical Engineer, with a specialty in telecommunications from the Escuela Politécnica Nacional, Ecuador. His graduate studies focused on ICT Management, education and training. He has also undertaken professional development at the Arkansas University, the Instituto de Teletécnicas (USA), the Escuela de Organización Industrial (Spain), and the Public Administration Institute in Kuala Lumpur, Malaysia. His main areas of interest are ICT and knowledge management. He has conducted research and conducted training courses on these topics. He worked at the Secretaría Nacional de Telecomunicaciones, in the Business School of the Universidad del Pacífico, at the Superintendencia de Telecomunicaciones and the Centro de Estudios para la Comunidad of the Escuela Politécnica Nacional. He has an extensive work experience as a consultant and specialist in engineering studies, technology plan development and technical auditing. Currently, he is an ICT and business consultant for several international organisms. He is also the director of IMAGINAR (Research Center for the Information Society, Knowledge and Innovation), and professor at the university.

**ALEJANDRA DAVIDZIUK** worked at LIRNE.NET and the Universidad San Andrés (UDESA, Buenos Aires). She holds an MA in International Affairs with a concentration in socioeconomic development from The New School and is a PhD candidate at the Instituto de Desarrollo Económico y Social (IDES), Universidad Nacional de General Sarmiento (UNGS). Her main area of interest is Communication for Development, focusing on the role of ICT in processes of development and innovation from an inclusive and participating point of view.

**MONICA KERRETT-MAKAU** is a consultant and international researcher based in Africa. Her background includes a PhD in Public Policy with emphasis on the communications sector. Monica has worked with both telecom operators and regulatory authorities on various consultancies in Africa and is a member of Research ICT Africa (RIA!), a research think tank in Africa, seeking to inform and improve public policy in the ICT field through rigorous research. She can be contacted on [mkmakau@yahoo.co.uk](mailto:mkmakau@yahoo.co.uk)

**OPAL K. LAWTON** Lawton is an independent consultant in ICT policy and costing. She has over 16 years experience in the telecommunications industry. She spent 13 years at Cable & Wireless Jamaica (1992-2005) where she worked in various roles, including, Senior Pricing Analyst and Regulatory Finance Manager. During and after the process of market liberalization she worked on a range of policy issues including interconnection, retail price control, accounting separation and universal service. She managed the team that developed and implemented a system of financial reporting to address commercial as well as regulatory requirements for several Cable & Wireless businesses in the Caribbean. She extended her reach regionally, when she was seconded to work with Telecommunications Services of Trinidad and Tobago (TSTT) in April of 2005. In her role as Costing Specialist she did analytical and advocacy work on the cost the model used to support the costing of interconnection and other services. She also worked on a range of reg-

ulatory issues. Since May of 2007 she has been working as an independent consultant in ICT policy & costing. She has done work for CANTO on Connect the Caribbean Initiative, which is a project related to the ITU's Connect the World Initiative. Opal has a BA Mathematics & Social Sciences and MBA (Finance) from The University of the West Indies.

**STEVE ESSELAAR** is a researcher at the LINK Centre University of the Witwatersrand. In 2003, Esselaar worked on a set of case studies on VSAT in Algeria, Tanzania and Nigeria. In 2004 he oversaw several of the e-Index country studies' data capture and graphic presentation, including that of South Africa. Arising from the African e-Index he produced a paper with Research ICT Africa! colleague Christoph Stork on ICT Diffusion in Sub-Saharan Africa. He has a joint honours degree in Politics and Philosophy from Rhodes University and an MBA from the Gordon Institute of Business Science University of Pretoria where his dissertation was on the strategic impact of Voice over Internet Protocol on South African Telecommunication Operators.

**HERNAN GALPERIN** (Ph.D., Stanford University) is Associate Professor at the Annenberg School for Communication at the University of Southern California (USA) and Visiting Professor at the Universidad de San Andrés (Argentina). He is also Steering Committee member for DIRSI, an ICT policy research consortium for Latin America and the Caribbean. An expert on telecommunications policy and development, Dr. Galperin leads a number of research projects related to the regulation and development impact of new information and communication technologies in Latin America, funded by a variety of foundations and international donors such as IDRC, ECLAC, USAID and UNDP. He has published extensively in major journals such as *Telecommunications Policy*, *The Information Society* and *Information Technologies and International Development*. His most recent book, *Digital Poverty: Latin American and Caribbean Perspectives*, was published by Practical Action Publishing and IDRC in 2007.

**BRUCE GIRARD** is executive director of the Comunica Foundation. Based in Uruguay, Comunica coordinates a network of researchers and activists specialised in ICTs and media and telecommunications policy and regulation. Girard is active in policy areas related to media, information and communication technologies and communication rights. He regularly consults to UNDP on a pro-poor ICT networks, applications and services project and some conclusions of this ongoing work were published in *Community-based Networks and Innovative Technologies: New models to serve and empower the poor*. While at Delft University of Technology in the Netherlands from 1998-2002, Girard researched trends in international governance of media and communication, co-authoring the book *Global Media Governance*. Girard was a founder of the Communication Rights in the Information Society (CRIS) and co-edited the book *Communicating in the Information Society* (2003).

**GUSTAVO GÓMEZ** is a communicator and researcher and has been the director of the Communication Rights and Legislation Programme at AMARC-LAC (World Association of Community Radio Broadcasters-Latin America and the Caribbean) since November 2001. An expert on public policy and regulatory frameworks in broadcasting, ICTs, freedom of expression and communication rights, he has conducted research, provided advisory services and/or drafted recommendations in a number of countries in the region, at the invitation of governments, Congresses, social organizations and international agencies (UNESCO, FAO, World Bank, among others).

He was a member of the promotion committee for the "La Onda Rural" a Latin American Initiative on Communication for Development (United Nations Food and Agriculture Organisation 2004-2007), the AMARC Action Committee on Digital Technologies before the International Telecommunication Union (ITU), and recently formed part of the National Commission on Open Digital Terrestrial Television in Uruguay established to advise the government. He served on the advisory committee for the Association for Progressive Communications (APC) ICT Policy Monitor project (2002-2003) and was the coordinator of the Latin American Broadcasting Legislation Database project (UNESCO-AMARC-ALER, 2002-2003).

He actively participated in the first and second phases of the World Summit on the Information Society, as well as in regional events related to the WSIS process, and is a member of the AMARC permanent delegation to international agencies such as the OAS Inter-American Commission on Human Rights.

**MALATHY KNIGHT-JOHN** is the lead researcher on LIRNEasia's project to investigate the replicability of GrameenPhone's approach to extending rural connectivity through the use of micro-finance in Bangladesh. She was one of the co-authors of the National Early Warning System (NEWS:SL) concept paper produced by LIRNEasia. She is a Research Fellow and Head of Public Enterprise Reform, Competition Policy and Regulation research at the Institute of Policy Studies (Colombo). Knight-John has written extensively in these areas both locally and internationally and has also contributed directly to national economic policy by producing policy briefs and serving on various committees appointed by the government. She is currently reading for a PhD at the Institute of Development Policy and Management (IDPM), University of Manchester, focusing on The Political Economy of Telecommunications Reform and Regulation in Developing Countries: The Case of Sri Lanka.

**AMY MAHAN** was senior researcher and coordinator for LIRNE.NET. Recent research focused on ICT for development, public access to ICTs, regulatory information practices, and civil society participation in policy and regulatory processes. Mahan worked in the field of regulation and policy research during the past 15 years, including in Australia at the Centre for International Research on Communication and Information Technologies (CIRCIT); in Canada at the Centre for Policy Research on Science and Technology (CPROST), Simon Fraser



University; and in the Netherlands in the Economics of Infrastructures programme, Delft University of Technology. Mahan developed training materials and presentation materials including multi-media training kits for the Association of Progressive Communications (APC) and handbooks for UNDP on e-government and telecentre management. Recent books include *Diversifying Participation in Network Development* (2007 with W.H. Melody), *Stimulating Investment in Network Development: Roles for Regulators* (2005 with W.H. Melody); and *How to Build Open Information Societies: A Collection of Best Practices and Know-How* (2005 with Yuri Misnikov). She was guest editor, along with William Melody, of a special issue of *info on Network development: wireless applications for the next billion users* (Vol. 11, Issue 2, 2009). As a founding member of LIRNE.NET, she ensured wide dissemination of the network's research products and worked with the other project leaders to coordinate research practices across the regional centres.

**ALVARO MAILHOS** has a strong scientific background with post-graduate studies in Uruguay and Germany and extensive research experience. He has recently developed a deep interest in ICTs and their impact on social development. Alvaro works part time at Fundación Comunica, providing research and administrative support, including maintaining the website of the International Association for Media and Communication Research (IAMCR). He also holds a part time teaching position at the Departamento de Ciencias Cognitivas y de la Salud, Facultad de Psicología, Universidad Católica del Uruguay.

**WILLIAM MELODY** was the founder of LIRNE.NET and continues to advise the initiative. He is Visiting Professor at the Center for Communication, Media and Information Technologies (CMI), Aalborg University, Denmark; Media@LSE, London School of Economics; LINK Centre, University of Witwatersrand, South Africa; Distinguished Visiting Professor (2004), Law School, University of Toronto; and Emeritus Professor, Delft University of Technology, the Netherlands.

Former Chief Economist, US FCC, and adviser and expert witness for the US Department of Justice in *US v. AT&T*, Melody has a PhD in Economics (Nebraska, 1966), and has held academic appointments leading new multidisciplinary programme development in seven countries: University of Pennsylvania 1971-76; Simon Fraser University 1976-85; Economic and Social Research Council and Oxford University 1985-89; Centre for International Research on Communication and Information Technologies, Melbourne 1989-94; Technical University of Denmark 1995-97; Delft University of Technology 1997-02.

Melody is a contributor to the research and policy literature with more than 150 publications, and former editor, *Telecommunications Policy*. His edited volume, *Telecom Reform: Principles, Policies and Regulatory Practices* (1997), is used in training programs in more than 100 countries. He is a periodic consultant and advisor to universities and research centres around the world, for UN and other international organisations, government and corporate organisations.

**CHANUKA WATTEGAMA** is the LIRNEasia Organizational Development Director and leads the Mobile 2.0@BOP project that focuses on the non voice mobile usage at the grassroots level. In addition, he is also the lead researcher for the projects Broadband Quality of Service Benchmarking, NRA Website Survey and the country study of the Telecom Regulatory Environment analysis in Indonesia. For the 2005 research cycle Chanuka led the Virtual Organisation and NRA website survey projects. Before undertaking his current position, he worked as Programme Specialist ICT4D at the UNDP-APDIP out-posted to Colombo Regional Center's MDG Initiative. His focus was ICT for poverty reduction and achievement of the MDGs. In this capacity he has worked on various projects on different areas covering poverty reduction, Telecom Regulation, Gender and ICTs, Disaster Management and e-Government. He has over 14 years experience at specialist and management level in for Development. As a researcher, he has co-authored the Sri Lankan chapters for the books *Cyber Communities of Asia* (AMIC, Singapore), *Media in Asia* (Sage Publishers, New Delhi), *Internet in Asia* (AMIC, Singapore) and *Digital Review of Asia Pacific* (APDIP, Orbicom and IDRC). He was also the lead researcher for Sri Lanka in a nine-country study on ICT for Human Development in Asia, by UNDP. He is a regular writer and commentator on ICT issues in the Sri Lankan media. He was the founder consultant editor of *Pariganaka*, the largest selling ICT magazine in Sri Lanka with a circulation of more than 40,000 copies. He has won the Science Writer of the Year Award, presented annually by the Sri Lanka Association for the Advancement of Science, twice.