Benchmarking Asia Pacific National Telecom Regulatory Authority Websites

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Abstract:

A National Regulatory Authority (NRA) in telecommunication, like any other government organization, uses its website not only to deliver citizen services but also to improve the transparency and effectiveness of its functions. This study benchmarks the way NRAs use their websites to improve their overarching regulatory objectives. The Survey evaluates how well NRAs achieve this objective in the eyes of telecom operators, investors, consumers, researchers and the general public. Each website is awarded marks for the availability of information and features that are useful to the regulator's stakeholders. A total of 32 websites were evaluated from the 62 Asia Pacific economies. The results are presented individually as well as under different country clusters. The objective of the Survey was to provide a benchmark methodology that can be used to assess NRA websites across a region. It does not attempt to create positive or negative images of the respective NRA websites but rather reports the quality of the website in comparison with its regional partners. LIRNE*asia* hopes this will be a tool to encourage NRAs to improve their websites so as to serve their stakeholders better. The results of the Survey will be a useful tool for regulators to improve their websites.

1 Methodology

1.1 Previous initiatives:

The methodology has been largely guided by previous studies given below:

- A study jointly done by the United Nations and the American Society for Public Administration (Ronaghan, 2001) where the goal of the study was to objectively present facts and conclusions that define 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, which can be/ is a useful tool for policy-planners.

- LIRNE.NET (Mahan, 2004) conducted a study that focused on the African region. This study benchmarked the websites of independent NRAs of 22 African states. It has grown out of a collection of preliminary regional surveys examining the extent to which NRAs were using websites to inform and communicate with the public – including citizens, businesses and other governmental and non-governmental organizations.

- A study by LIRNE*asia* (Wattegama, 2005) 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 methodology this study focused more on the regulatory functions of an NRA without looking from 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 providing its stakeholders, including consumers, with relevant information.

1.2 Selection of economies[1] and websites

The selection of economies 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, level of economic nor human development achievements.

The key criteria are as follows:

1.2.1   All economies must belong to the Asia and Pacific regions as defined below:

Asia –   The group of economies that are in the region bordered by Russia, Turkey and Egypt and the Indian and Pacific Oceans (Wattegama, 2005). This includes the island nations within the Indian Ocean
Pacific – The island nations situated in the Pacific Ocean.

1.2.2   All the International Telecommunication Union (ITU) member states within this region were selected as the scope. This is because not all economies are recognized as sovereign nations with independent NRAs.

1.2.3   Efforts were made to determine which authority was conducting telecom regulatory functions. In some economies the regulatory body was the Ministry of Telecommunications and Posts. Then the website for this authority was assessed.

1.2.4   The authority then chosen for every country needed to have a functional website. The study excluded regulatory websites which were under construction such as that of Afghanistan.

1.2.5   The website should have an English version.[2]

A total of 32 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 the table below. Further details are shown in Annex 1.

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[1] The term 'economy' is used in the place of 'country' as some of them were not independent countries.
[2] This research does not suggest that every NRA should have a website in English. If not for the practical difficulty faced with sites having non-English versions, the number would have been higher. In future attempts the researchers will try to evaluate the non-English sites probably with the assistance of local research partners.

Table 1.1: Country exclusion based on different criteria

Criteria	Number of economies excluded for not meeting the criteria
NRA does not have a website	20
English language version not available	4
Website under construction	4
English version not conclusive	2
Total excluded	**30**

1.3 Clustering of sites

Clustering sites is a useful concept for comparative purposes.

LIRNE*asia*'s previous study (Wattegama, 2005) clustered sites based on the e-readiness levels. However, this year with the change of focus e-readiness was no longer an appropriate measure. Therefore the clustering was done based on the total number of access paths (mobile and fixed telephone connections per 100 inhabitants), as it was a good indicator of the advancement of the telecom sector in a given country.

Table 1.2: 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	Jordon	90.4
17	Thailand	91.4
18	Brunei	99.9
19	Kazakhstan	102.6
20	Malaysia	104.2
21	Maldives	114.9
22	Saudi Arabia	130.9
23	New Zealand	142.4
24	Bahrain	149.2
25	Australia	149.5
26	Israel	166.6
27	Singapore	168.9
28	Taiwan	168.6
29	Qatar	178.6
30	Hong Kong	200.2
31	Macau	202.1
32	United Arab Emirates	205.0

Source: ITU (2007)

Four clusters were made as quartiles, each with eight economies each.

Table 1.3

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

2. Methodology

Four aspects of the NRA sites were studied.

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. Apart from the mentioned, the section comprises of 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 deals with issues relevant 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, organizational charts, contact details and local language availability. The general section is important because it covers areas that are related to all the sections and therefore need to be easily to access. 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, there are sub-categories. As the chart below shows each of the sub-categories were allocated a percent of the total score.

Table 2.1

	Category	Category weight	Sub-category	Sub-category weight
1	Factual information	40%	Regulatory acts, Laws, Legislation	8%
			Statistical information and sector indicators	8%
			Mission/ Vision Statement and work plan	6%
			Annual reports/ Budgets	6%
			Regulatory manuals	6%
			Organizational chart	2%
			USO Policy information, reports and plans	2%
			Sector news	2%
2	Business information	24%	Market entry details	8%
			Interconnection information	8%
			Scarce resources	8%
3	General	24%	Public consultation/ white papers	10%
			RFPs	5%
			Local language	3%
			Contact details	2%

			Updated information	2%
			Links to local/ international sites	2%
4	Consumer- related information	12%	Consumer and citizen right's information	3%
			Information about public hearings	3%
			Equipment certification	3%
			Complaints process	3 %

2. Results

Figure 2.1: Overall Score
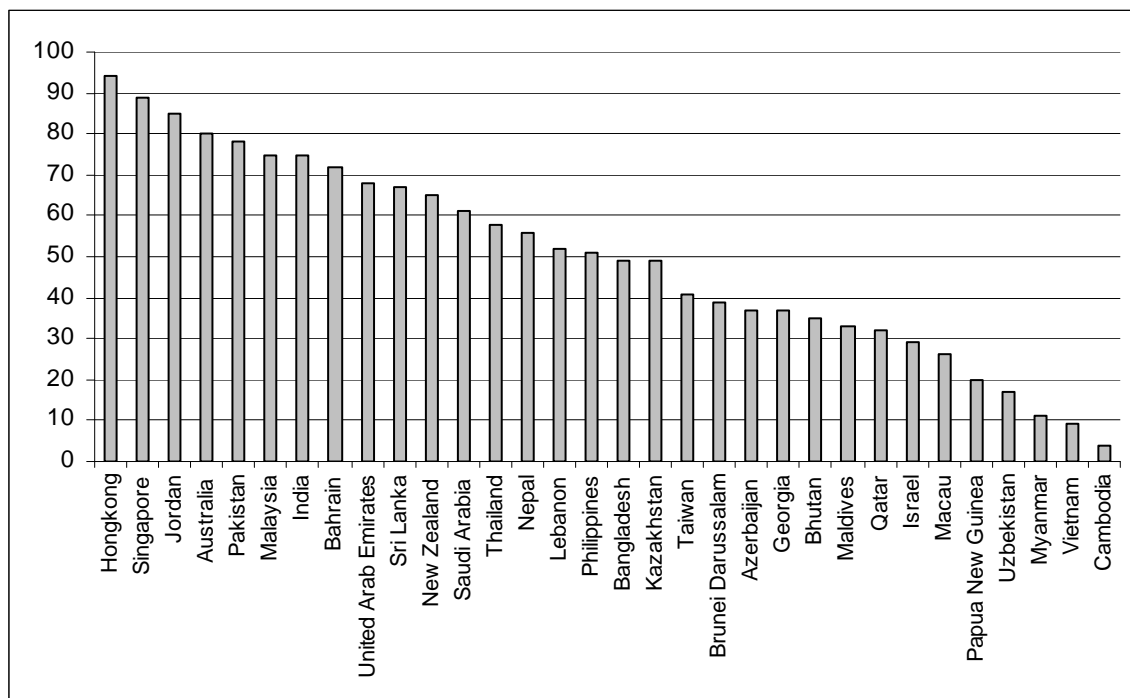
The economies are ranked in descending order according to the total score that the respective NRA website received.

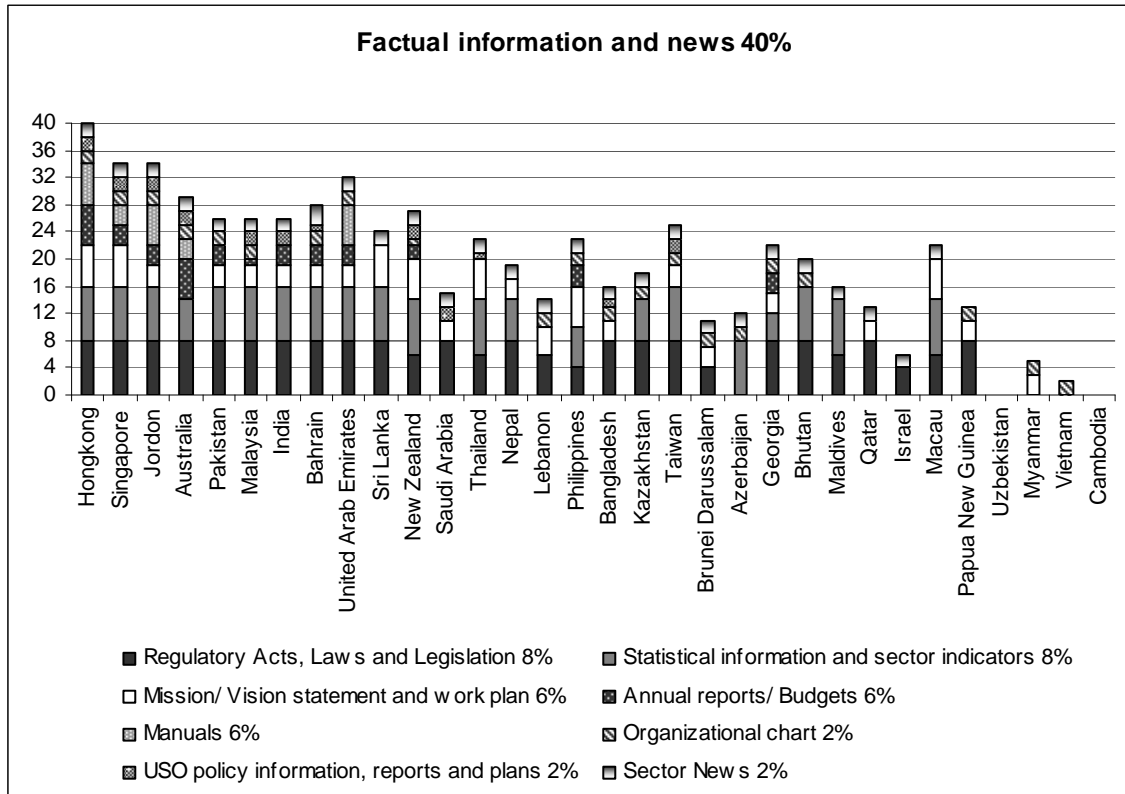**Figure 2.2: Scores for Factual information and news**

Factual information and news 40%
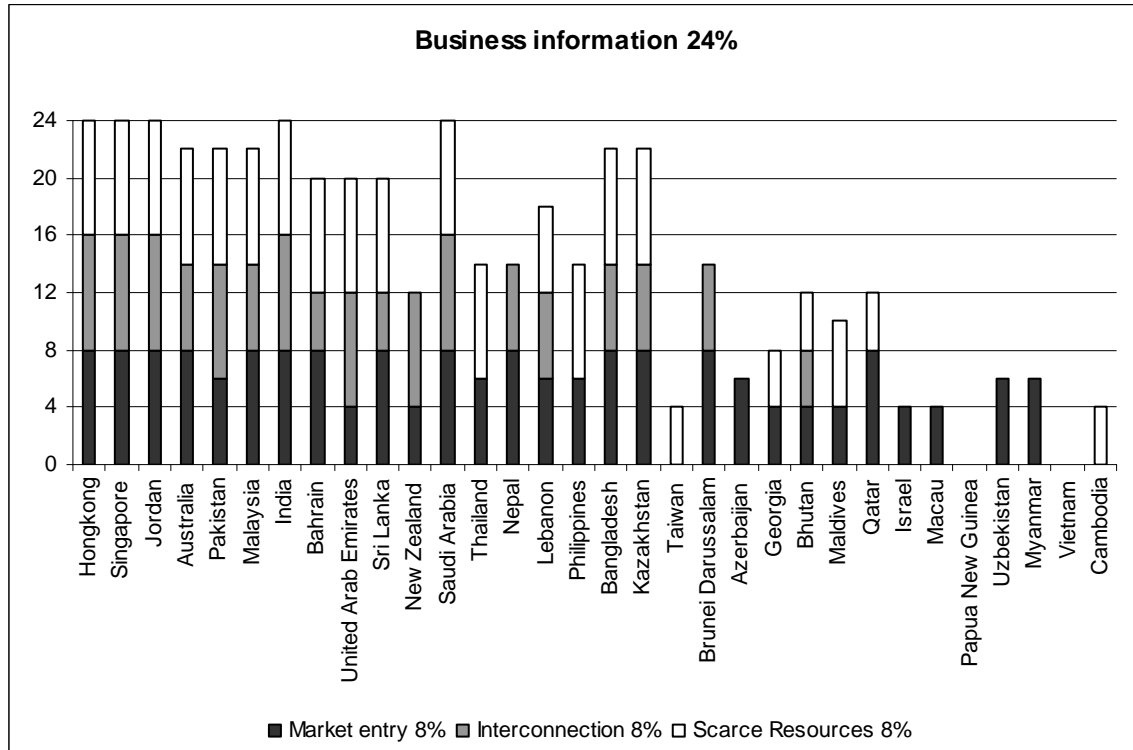
Legend:
- Regulatory Acts, Laws and Legislation 8%
- Statistical information and sector indicators 8%
- Mission/ Vision statement and work plan 6%
- Annual reports/ Budgets 6%
- Manuals 6%
- Organizational chart 2%
- USO policy information, reports and plans 2%
- Sector News 2%

Countries (x-axis): Hongkong, Singapore, Jordon, Australia, Pakistan, Malaysia, India, Bahrain, United Arab Emirates, Sri Lanka, New Zealand, Saudi Arabia, Thailand, Nepal, Lebanon, Philippines, Bangladesh, Kazakhstan, Taiwan, Brunei Darussalam, Azerbaijan, Georgia, Bhutan, Maldives, Qatar, Israel, Macau, Papua New Guinea, Uzbekistan, Myanmar, Vietnam, Cambodia

Figure 2.3: Scores for Business information

Business information 24%

■ Market entry 8% ■ Interconnection 8% □ Scarce Resources 8%

Figure 2.4: Scores for General information

General information 24%

Legend:
- Public consultations/ White papers 10%
- Local language 3%
- Contact details 2%
- RFPs 5%
- Updated info 2%
- Links to local/ intl sites 2%
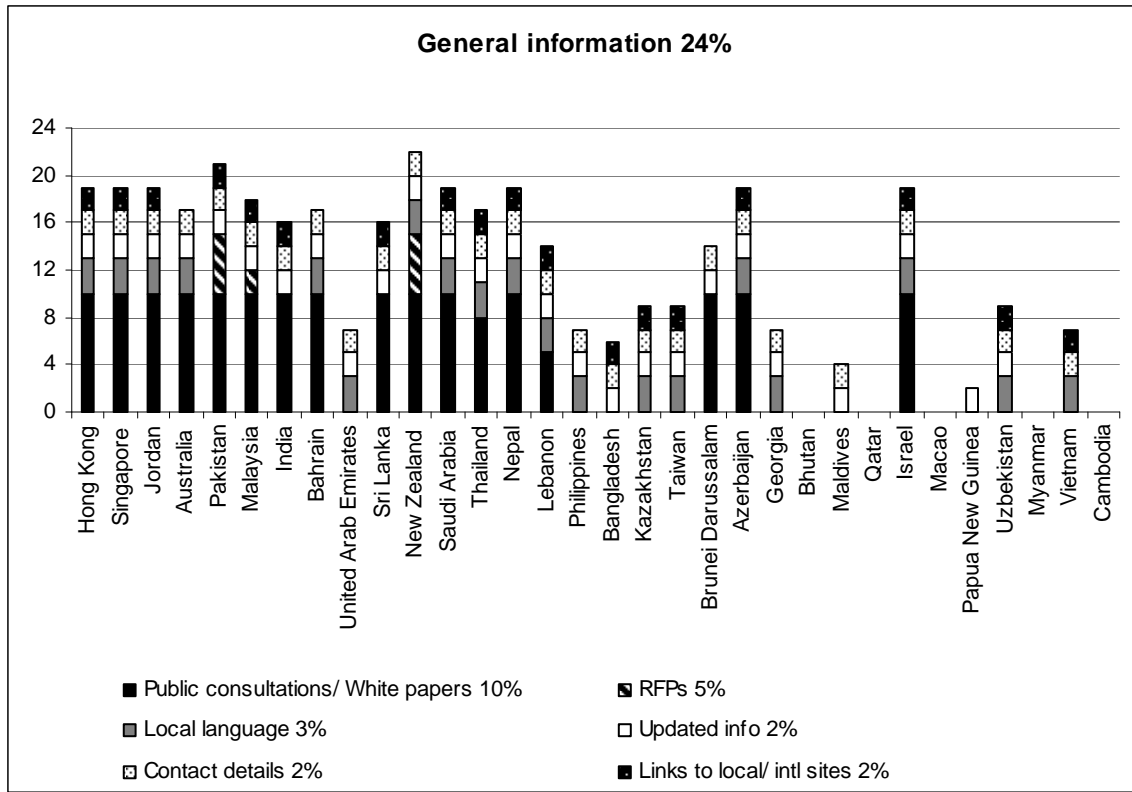
Figure 2.5: Scores for Consumer related information

Consumer- related information 12%

Legend:
- □ Consumer and citizen rights information 3%
- ■ Complaints process 3%
- ■ Information about public hearings 3%
- ▨ Equipment certification 3%
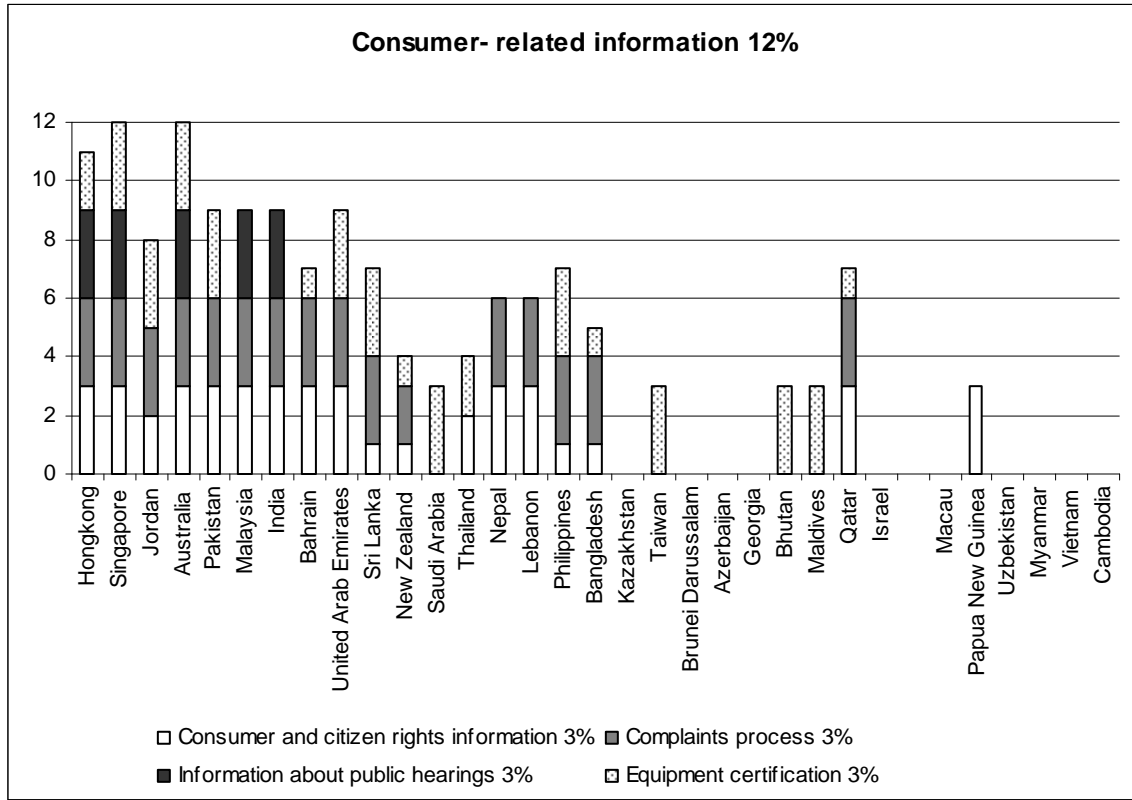
Figure 2.7: Cluster performances (overall)

Factual information and news ■ Business information ■ General □ Consumer information ■
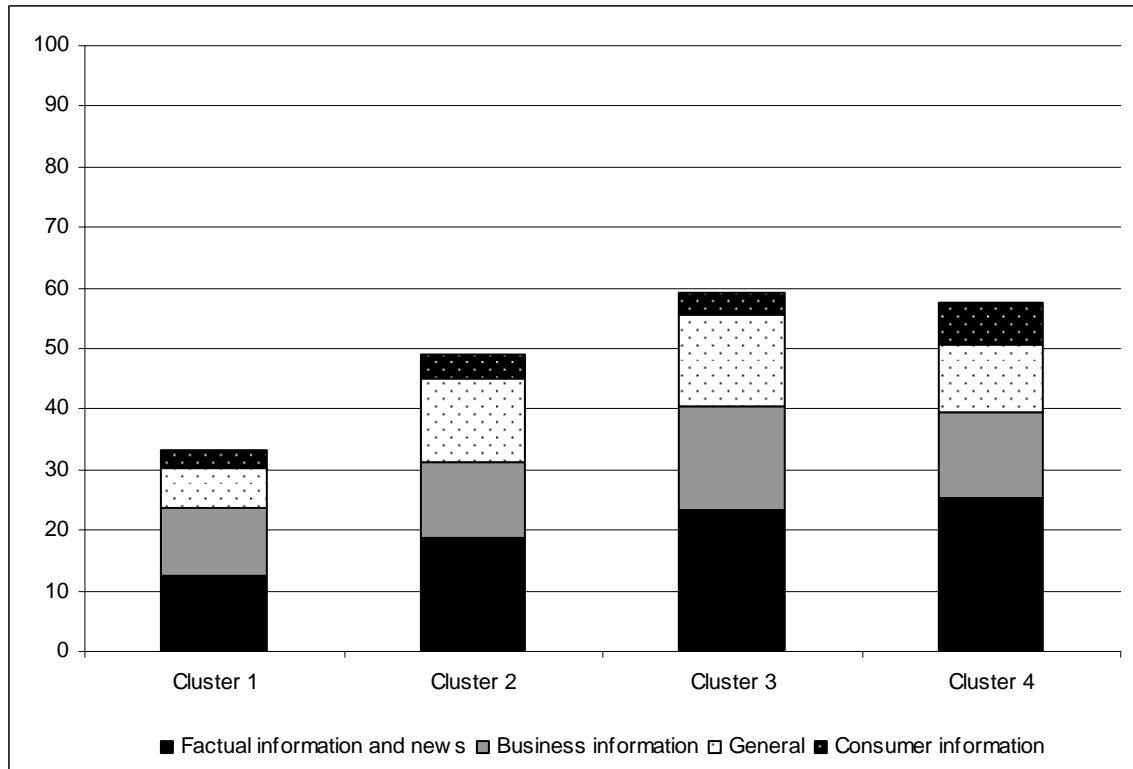
Figure 2.8 Cluster 1 performance

Factual information and news ■ Business information ■ General □ Consumer information ■
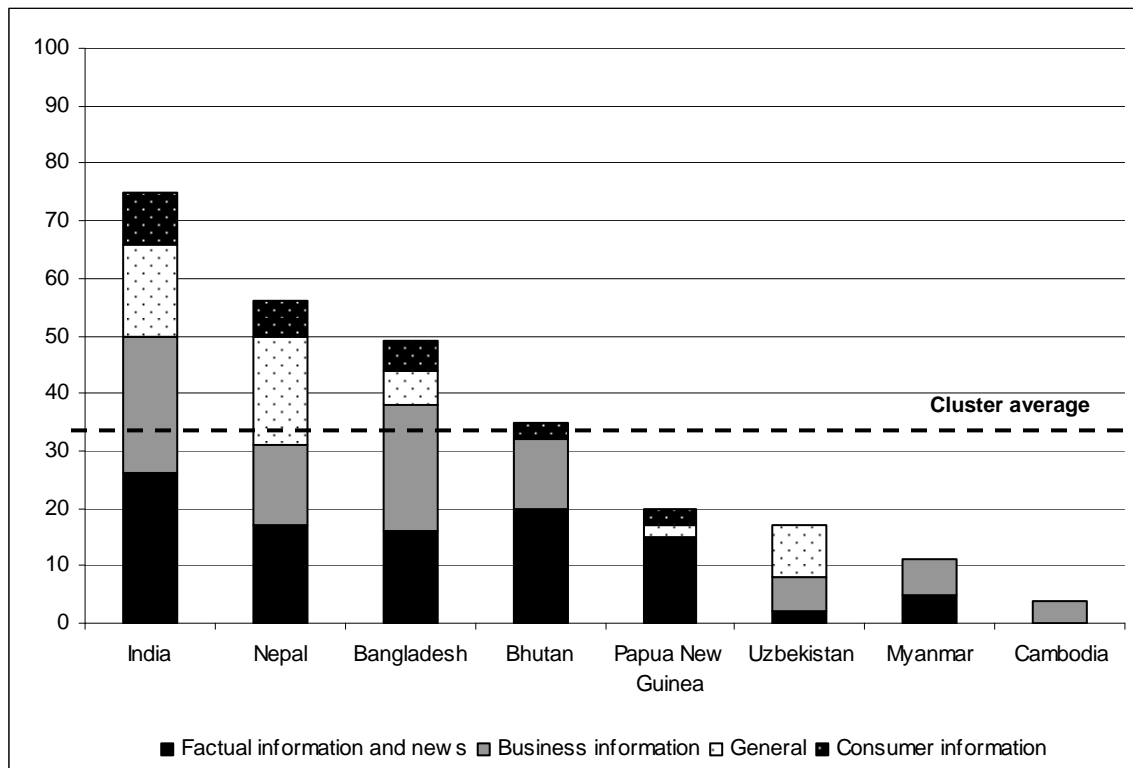
Figure 2.9 Cluster 2 performance
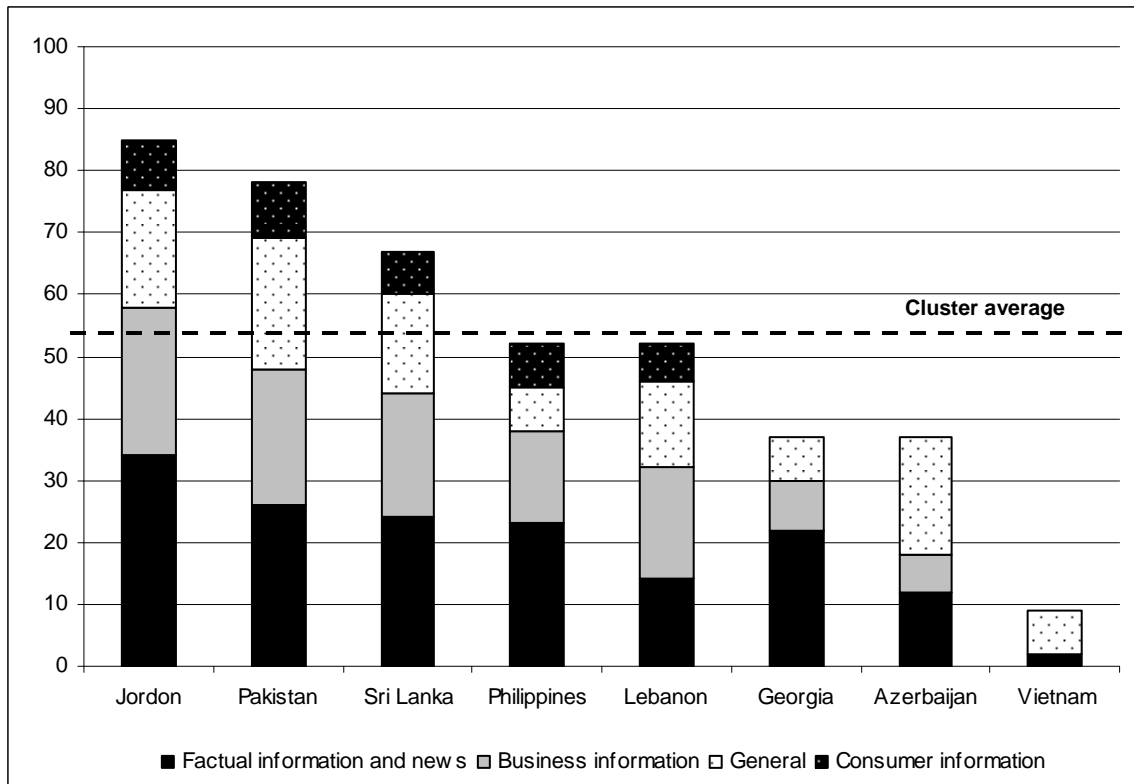
Figure 2.10 Cluster 3 performance
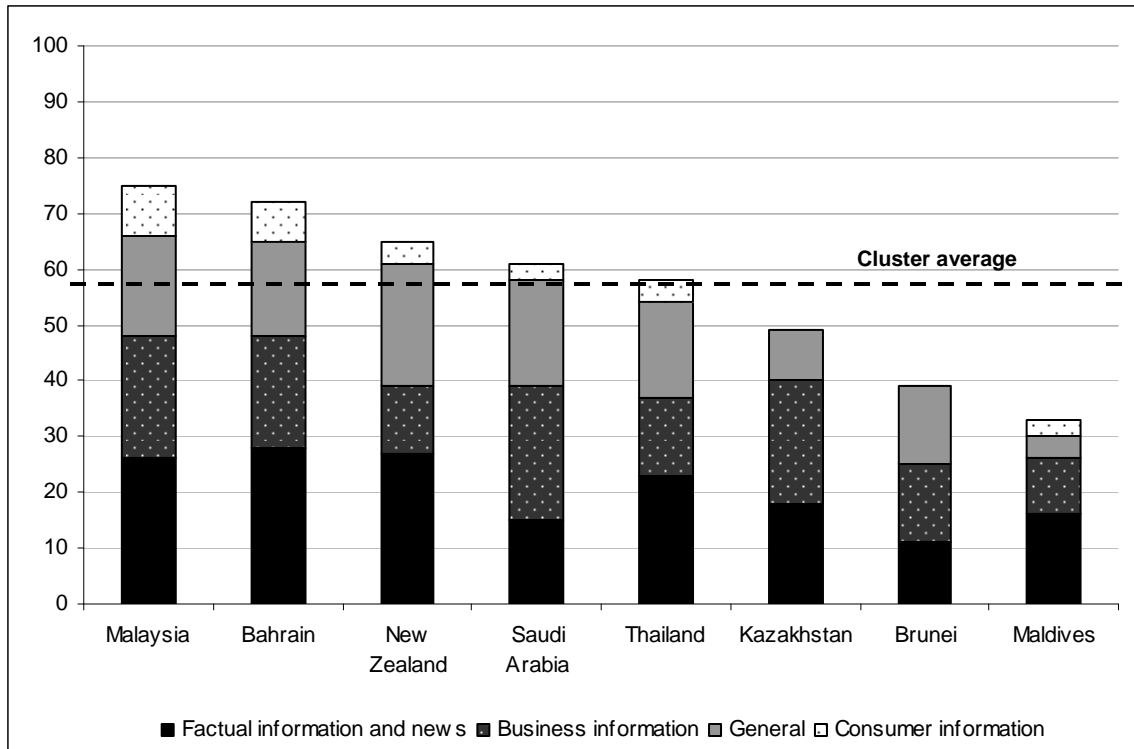
Figure 2.11 Cluster 4 performance

Cluster average

Legend: ■ Factual information and news ■ Business information ▨ General □ Consumer- related information

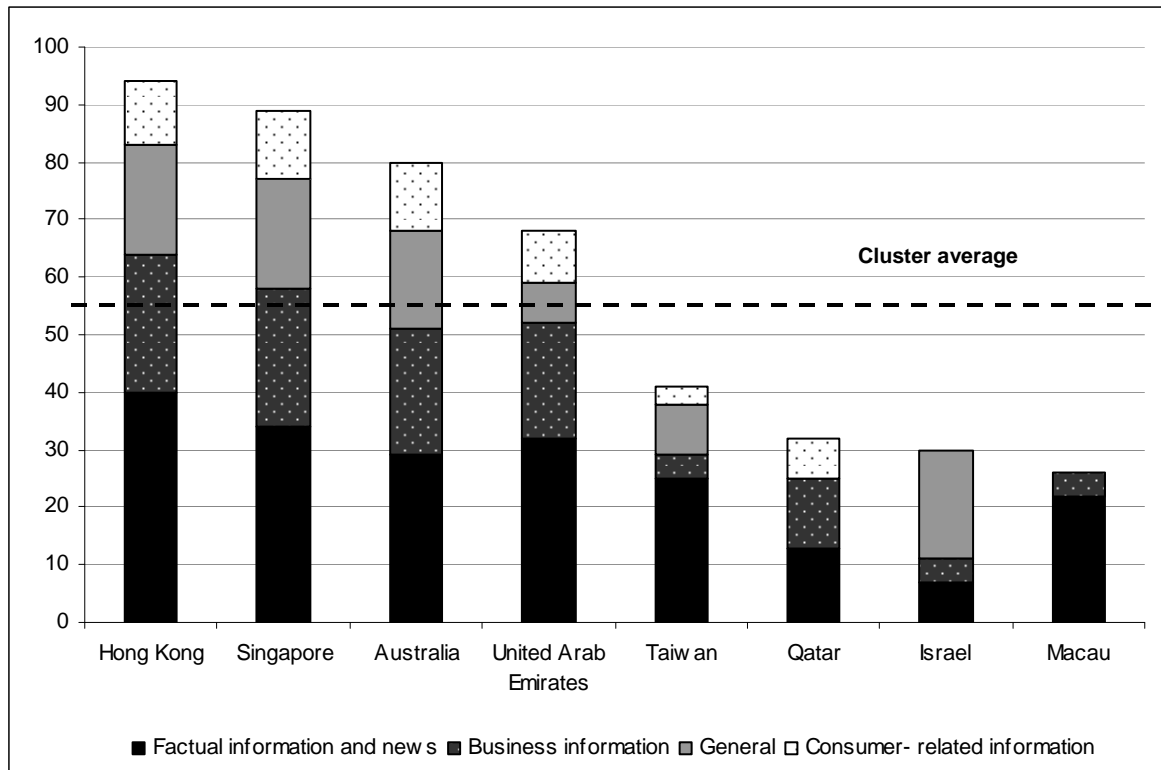X-axis categories: Hong Kong, Singapore, Australia, United Arab Emirates, Taiwan, Qatar, Israel, Macau

3. Limitations

This website survey attempted to capture as much aspects of the NRA websites as possible, but there can still be limitations with the methodology. This section briefly describes them and also explains how those limitations were addressed.

The weightage of marks awarded for different features has been point of a common criticism. Given there are no concrete rules that govern this, there is a degree of ambiguity about the way in which the weightage should be allocated.

Another difficulty is in the differences in the roles played by the NRAs. Not every one of them performs the same functions. A challenge faced by the researchers was to rate an area which was not within the purview of an NRA. So it was decided to check whether the NRA website presents a link to the agency that specific function and award full marks if so. Therefore some NRA sites could score good marks even if the regulator does not perform certain key functions.

Not reviewing non-English websites is another limitation in this study. Many sites 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 32 (51.6 %) 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 them are micro states) so the exclusion is not as large as it seems.

4. Conclusion

Overall, the websites performed relatively well in the factual information and news section with some exceptions. Of the 32 sites that were reviewed 59 % obtained total marks and 84 % scored at least half the marks allocated for the section regulatory acts, laws and legislature. In the statistical information and sector indicators section, 46.8 % scored total marks while 66 % obtained at least half of the score. Overall, 50 % of the sites obtained at least half of the marks allocated for that category. Of the total 32 sites included in the study, 84 % had sector news made available via their websites. The four clusters obtained the average scores of 12.6, 18.6, 23.2 and 25.2 respectively out of a total of 40.

The section that focused on operators and investors was called business information and carried 24 % of the total score. Most of the websites seem to have a satisfactory amount of data on market entry, interconnection and scarce resources. 45 % obtained full scores for market entry with 87.5 % obtaining at least half the score. 25 % of the sites received full scores for the interconnection section with 56 % obtaining at least half the score. 47 % of the sites reviewed obtained full marks for scarce resources while 69 % obtained at least half of the marks allocated for the section. A significant fact is that 81 % of the sites 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 11, 12.6, 17.2 and 14.2 respectively. It is useful to note that cluster 3 has obtained a higher score than cluster 4, which is out of the expected pattern. This may be due to the fact the most of the economies in cluster 3 are growing and hence place more importance on 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, 47 % of the sites scores full marks for the provision of public consultation/ white papers. 53 % of the total sites reviewed obtained at least half of the total marks allocated for the section. The clusters obtained the following scores: 6.5, 13.7, 15 and 11.2 (out of a total

of 24). It is interesting to note that 59 % of the sites had a local language version. Cluster 3 has obtained the highest score for this category.

Consumer-related information carries a total of 12 %. This category comprised of four sections that were allocated 3 % each. Under consumer and citizen rights information 38 % of the sites obtained full scores. 50 % of the sites have comprehensive information on the complaint process. However, the sites scored low marks on the sections for equipment certification and information on public hearings, with only 34 % and 16 % obtaining full marks for the sections respectively. Most of the websites did not have any information in regard to these two sections. However, it must be noted that equipment certification may not be in the domain of all NRAs such as India. In the rare cases that this arose, if the website provided a link to the relevant authority full marks were given. The categories obtained the following marks: 3.2, 3.8, 3.7 and 6.7. Here it should be noted that the margin between cluster 3 and 4 are greater than those of the others. This is because the economies in this cluster mostly have mature markets that place more emphasis on consumer affairs.

As figure 2.7 shows cluster 3 obtained an overall score higher than that of cluster 4, scoring the highest score under business information and general.

Within each clusters economies performed differently in the four categories, with some scoring more points for one and less for another. In cluster 1, India proves to be the best performer with an overall score of 75/100. However, six other sites within this cluster score less than 50% this reduces the overall cluster average to 33.37%. 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, while 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 this cluster have more sophisticated regulation regimes that cluster 1 and hence will perform better in the survey. The cluster average was 52.12. The top three performers were Jordon, Pakistan and Sri Lanka scoring 85, 78 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 59.31, 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 Malaysia, Bahrain and New Zealand which scores of 75, 72 and 65 respectively. The cluster scores the lowest points for consumer related information and highest points in the business information category.

The fourth cluster consists of the economies with the highest number of access paths 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. The cluster performed best in the factual information and news category and scored the lowest in the general category.

This study did not place any importance on the usability and aesthetics of the websites to reduce the subjectivity. 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 labeled and did not require much searching to obtain the required information whilst other sites required the constant use of the search function (where available) for obtaining information.

The researchers noted many of the websites have made significant progress since the last survey that was carried out in 2005 though a better comparison is not possible due to the changes in methodologies. The number of NRA having websites also has increased. It has also 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 that look to improve their websites.

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Annex 1: List of economies that came within the scope of study

	Country	National Telecommunication Regulatory Agency	Regulator site	English version available (Y/N)	Considered for survey (Y/N)	If not reason
1	Afghanistan	Afghanistan Telecom Regulatory Board (ATRA)	http://www.atra.gov.af/index.htm	**Y**	**N**	UC
2	Armenia	Public Services Regulatory Commission	http://www.psrc.am/en/?nid=198	**Y**	**N**	EVNC
3	Australia	Australian Communication and Media Authority	http://www.acma.gov.au/WEB/HOMEPAGE/pc=HOME	**Y**	**Y**	-
4	Azerbaijan	The Ministry of Communications and Information Technologies	http://www.mincom.gov.az/en/main.html	**Y**	**Y**	-
5	Bahrain	Telecom Regulatory Authority	http://www.tra.org.bh/en/home.asp?dfltlng=1	**Y**	**Y**	-
6	Bangladesh	Bangladesh Telecom Regulatory Commission (BTRC)	http://www.btrc.gov.bd/	**Y**	**Y**	-
7	Bhutan	Bhutan Infocomm and Media Authority	http://www.bicma.gov.bt/index.html	**Y**	**Y**	-
8	Brunei Darussalam	Authority for Info-communication Technology Industry	http://www.aiti.gov.bn/index.htm	**Y**	**Y**	-
9	Cambodia	Ministry of Posts and Telecommunications	http://www.mptc.gov.kh/	**Y**	**Y**	-
10	China	Ministry of Industry and Information technology	http://www.mii.gov.cn/	**N**	**N**	EVNA
11	Cook Islands	-	-	**-**	**N**	NWS
12	Fiji	Ministry of Industry, Tourism and Trade	-	**-**	**N**	NWS
13	Georgia	Georgian National Communications Commission	http://www.gncc.ge/index.php?lang_id=ENG&sec_id=10050	**Y**	**Y**	-
14	Hong Kong	Office of the Telecommunications Authority	http://www.ofta.gov.hk/en/index.html	**Y**	**Y**	-
15	India	Telecom Regulatory Authority of India (TRAI)	http://www.trai.gov.in/Default.asp	**Y**	**Y**	-
16	Indonesia	Badan Regulasi Telekomunikasi Indonesia (BRTI)	http://www.brti.or.id/index_en.php	**N**	**N**	EVNC
17	Iran	Communications Regulatory Authority (CRA)	-	**-**	**N**	NWS
18	Iraq	Ministry of Communication	http://www.iraqimoc.net/e_services.htm	**-**	**N**	UC
19	Israel	Ministry of Communications	http://www.moc.gov.il/8-en/MOC.aspx	**Y**	**Y**	-
20	Japan	Ministry of Internal Affairs and Communication - Global ICT Strategy Bureau	http://www.soumu.go.jp/joho_tsusin/eng/index.html	**N**	**N**	EVNA
21	Jordon	Telecommunication	http://www.trc.gov.jo/index.ph	**Y**	**Y**	-

		Regulatory Commission	p?option=com_frontpage&Itemid=1&lang=english			
22	Kazakhstan	Agency of the Republic of Kazakastan for Informatization and Communication	http://www.aic.gov.kz/?mod=news&lng=eng	Y	Y	-
23	Kuwait	Ministry of Communication	http://www.moc.kw/	N	N	EVNC
24	Kyrgyzstan	National Information Resources, Technology and Communications Agency	-	-	N	NWS
25	Laos	National Authority of Posts and Telecommunications (ANPT)	-	-	N	NWS
26	Lebanon	Telecommunication Regulation Agency	http://www.tra.gov.lb/	Y	Y	-
27	Macau	DSRT	http://www.gdtti.gov.mo/eng/News/index.html	Y	Y	-
28	Malaysia	Malaysian Communication and Multimedia Commission	http://www.skmm.gov.my/	Y	Y	-
29	Maldives	Telecom Authority of Maldives (TAM)	http://www.tam.gov.mv/	Y	Y	-
30	Marshall Islands	-	-	-	N	NWS
31	Mongolia	Communications Regulatory Commission of Mongolia	http://www.icta.gov.mn/	N	N	NWS
32	Myanmar	Ministry of Communications, Posts, and Telegraphs	http://www.mpt.net.mm/	Y	Y	-
33	Nauru	Ministry for Health, Sport, Telecommunications & Transport	-	-	N	NWS
34	Nepal	Nepal Telecommunication Authority	http://www.nta.gov.np/	Y	Y	-
35	New Zealand	Commerce Commission	http://www.comcom.govt.nz/index.aspx	Y	Y	-
36	Nieu	-	-	-	N	NWS
37	North Korea	-	-	-	N	NWS
38	Oman	Telecommunication Regulatory Agency	http://www.tra.gov.om/telecom.htm/	Y	N	UC
39	Pakistan	Pakistan Telecommunication Authority (PTA)	http://www.pta.gov.pk/index.php?cur_t=vnormal	Y	Y	-
40	Palau	-	-	-	N	NWS
41	Papua New Guinea	Independence Consumer and Competition Commission	http://www.iccc.gov.pg/home.htm	Y	Y	-
42	Philippines	National Telecommunication Commission	http://portal.ntc.gov.ph/wps/portal/!ut/p/_s.7_0_A/7_0_9D?cID=6_0_FM&nID=7_0_LU	Y	Y	-
43	Qatar	Supreme Council of Information and Communication Technology	http://www.ict.gov.qa/output/Page2.asp	Y	Y	-
44	Samoa	Office of the Regulator (APIA)	-	-	N	NWS
45	Saudi Arabia	Communications and Information Technologies Commission	http://www.citc.gov.sa/citcportal/Homepage/tabid/106/cmspid/%7B611C6EDD-85C5-4800-	Y	Y	-

			A0DA-A997A624D0D0%7D/Default.aspx			
46	Singapore	Infocomm Development Authority	http://www.ida.gov.sg/home/index.aspx	**Y**	**Y**	-
47	Solomon Islands	Spectrum Management Division- Ministry of Communication and Aviation	-	**-**	**N**	NWS
48	South Korea	Korea Communication Commission	http://www.kcc.go.kr/gts.do?a=user.index.IndexApp&c=1001	**N**	**N**	EVNA
49	Sri Lanka	Telecommunication Regulatory Commission	http://202.124.172.4/trc_test/index.php	**Y**	**Y**	-
50	Syria	Syrian Telecommunication Establishment	-	**-**	**N**	NWS
51	Taiwan	National Communication Commission	http://www.ncc.tw/	**Y**	**Y**	-
52	Tajikistan	Ministry of Transport and Communications	-	**-**	**N**	NWS
53	Thailand	National Telecommunication Commission	http://eng.ntc.or.th/index.php	**Y**	**Y**	-
54	Timor-Leste	-	-	**-**	**N**	NWS
55	Tonga	-	-	**-**	**N**	NWS
56	Turkmenistan	Ministry of Communications	-	**-**	**N**	NWS
57	Tuvalu				**N**	
58	UAE	Telecommunication Regulatory Commission	http://www.tra.gov.ae/	**Y**	**Y**	-
59	Uzbekistan	Communications and Information Agency	http://www.aci.uz/en/news/	**Y**	**Y**	-
60	Vanuatu	Vanuatu Independent Telecommunications Regulator	http://www.telecomregulator.gov.vu/	**-**	**N**	UC
61	Vietnam	Ministry of Information and Communications	http://www.mic.gov.vn/details_e.asp?Object=271032875&news_ID=4539827	**Y**	**Y**	-
62	Yemen	Ministry of Telecommunication and Information Technology	http://www.mtit.gov.ye/	**-**	**N**	EVNA

Abbreviations for table:

EVNA   English Version Not Available
NWS   No Website
UC   Under Construction
EVNC   English Version Not Comprehensive