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 its transparency and effectiveness in its regulatory functions. This study benchmarks the way in which NRA's use their websites to improve their overarching objectives pertaining to regulatory affairs. The Survey hopes to evaluate how well NRA's achieve this objective in regard to telecom operators, investors, consumers, researchers and the general public. The results of the survey will be a useful tool for regulators to improve their websites. Each website is awarded marks for the availability of information and features that are useful to the regulator's stakeholders. A total of 31 websites are evaluated from a region of 62 economies. The results are presented individually as well as under different country clusters. The objective of the survey is 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 NRA's to improve their websites so as to serve their stakeholders better.

1 Methodology

1.1 Previous initiatives on parallel lines:

For its methodology and structure, this website survey has been largely guided by previous studies, some of which are given below:

- A study jointly by the United Nations and the American Society for Public Administration (Ronaghan, 2001). 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 useful tool for policy-planners

- LIRNE.NET (Mahan, 2004) conducted a study that focused on the African region. This study 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 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 National Regulatory Authority (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 web sites 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 fully from the e-government angle. This is because the main obligation of a NRA is its regulatory functions and the way in which they achieve them and not purely delivering e-government services. Therefore, the study took a more regulatory focus with an emphasis on transparency, accountability while also providing its stakeholders, including consumers, with relevant information.

1.2 Selection of countries

The selection of countries 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 discrimate based on geography within the region, level of economic or human development achievements.

1.2.1   Asia and Pacific were defined as follows

Asia – The group of countries that 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 that were regulated by
         independent NRAs.

1.2.3   Effort was made to determine which authority was conducting telecom regulatory
         functions. In some countries 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 countries that had websites which were under construction such as
         Afghanistan.

1.2.5   The website would need to have an English version.[1] Total of 31 countries out of 62 have
         been selected. The number of countries 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] This research does not suggest that every NRA should have a website in English. If not for the practical difficulty we faced in sites with non-English versions, the number would have been higher. In future attempts we try our best 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 countries excluded for not meeting the criteria
NRA does not have a website	22
English language version not available	6
Website under construction	3
Total excluded	**31**

1.3 Clustering of countries

Clustering countries is a useful concept for comparative purposes.

LIRNE*asia*'s previous study (Wattegama, 2005) clustered countries 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	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)

Four clusters were made as quartiles. Except for the first one (which has seven) each of the rest has eight economies.

Table 1.3

Cluster number	Countries
Cluster 1	Myanmar, Papua New Guinea, Nepal, Uzbekistan, Cambodia, Bhutan, Bangladesh
Cluster 2	India, Lebanon, Georgia, Pakistan, Philippines, Sri Lanka, Vietnam, Azerbaijan
Cluster 3	Jordon, Thailand, Brunei Darussalam, Malaysia, Maldives, Saudi Arabia, New Zealand, Bahrain
Cluster 4	Australia, Israel, Singapore, Taiwan, Qatar, Hong Kong, Macau, United Arab Emirates
Note: Cluster 4 countries have the best telecom penetration 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 pertaining to market entry, Interconnection and scarce resources. Importance is given to the provision of online forms and enquiries being entertained. 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 carries great importance 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%

4	Consumer- related information	12%	Links to local/ intl sites	2%
			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
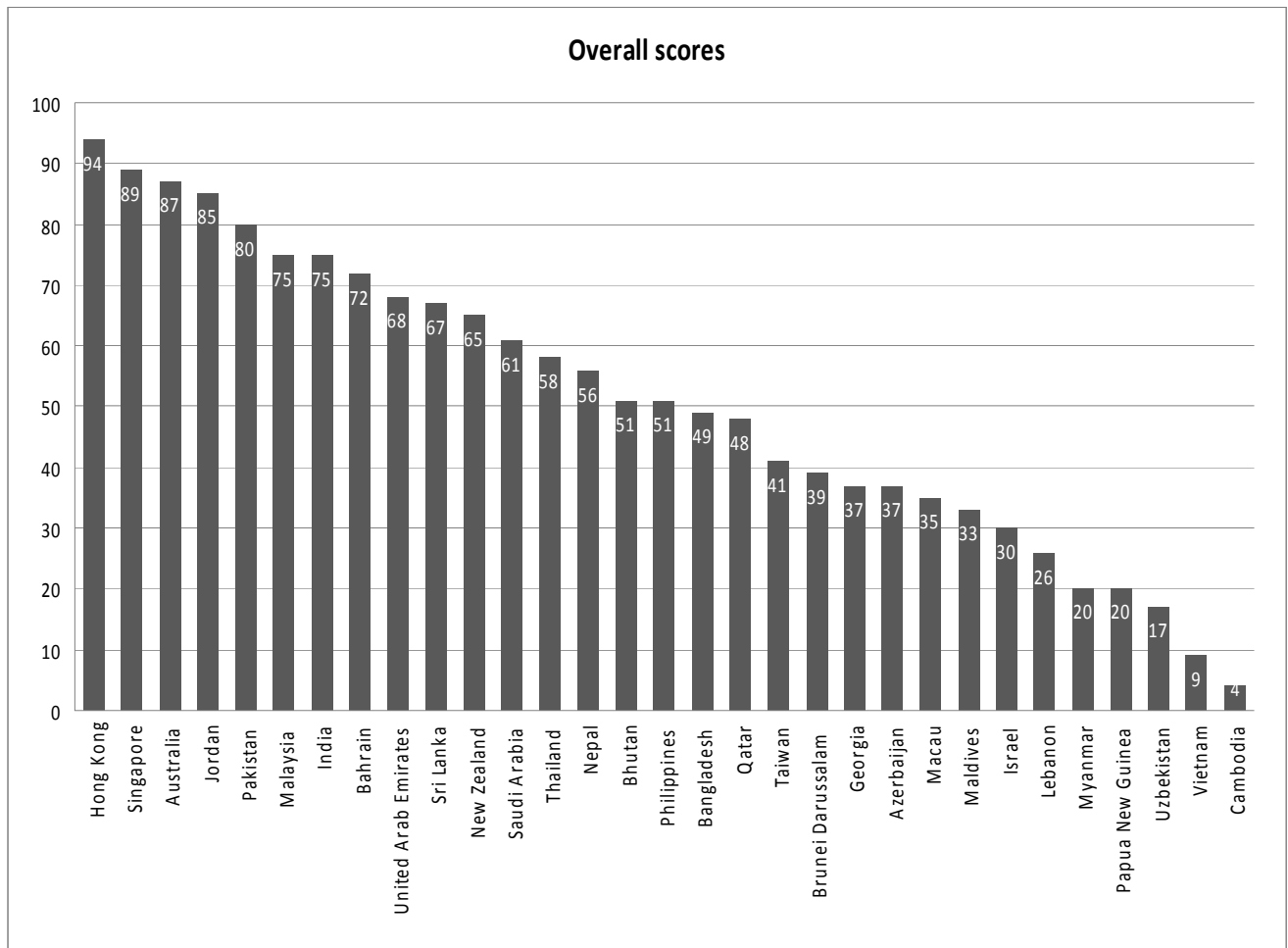
The countries are ranked in descending order according to the total score that the respective NRA website received.

Figure 2.2: Scores for Factual information and news

Factual information and news (40%)

Legend:
- regulatory Acts, laws & legislation, 8%
- statistical info & sector indicators, 8%
- mission / vision statement & work plan, 6%
- annual reports / budgets, 6%
- manuals, 6%
- organizational chart, 3%
- USO policy info, reports & plans, 3%
- sector news, 3%
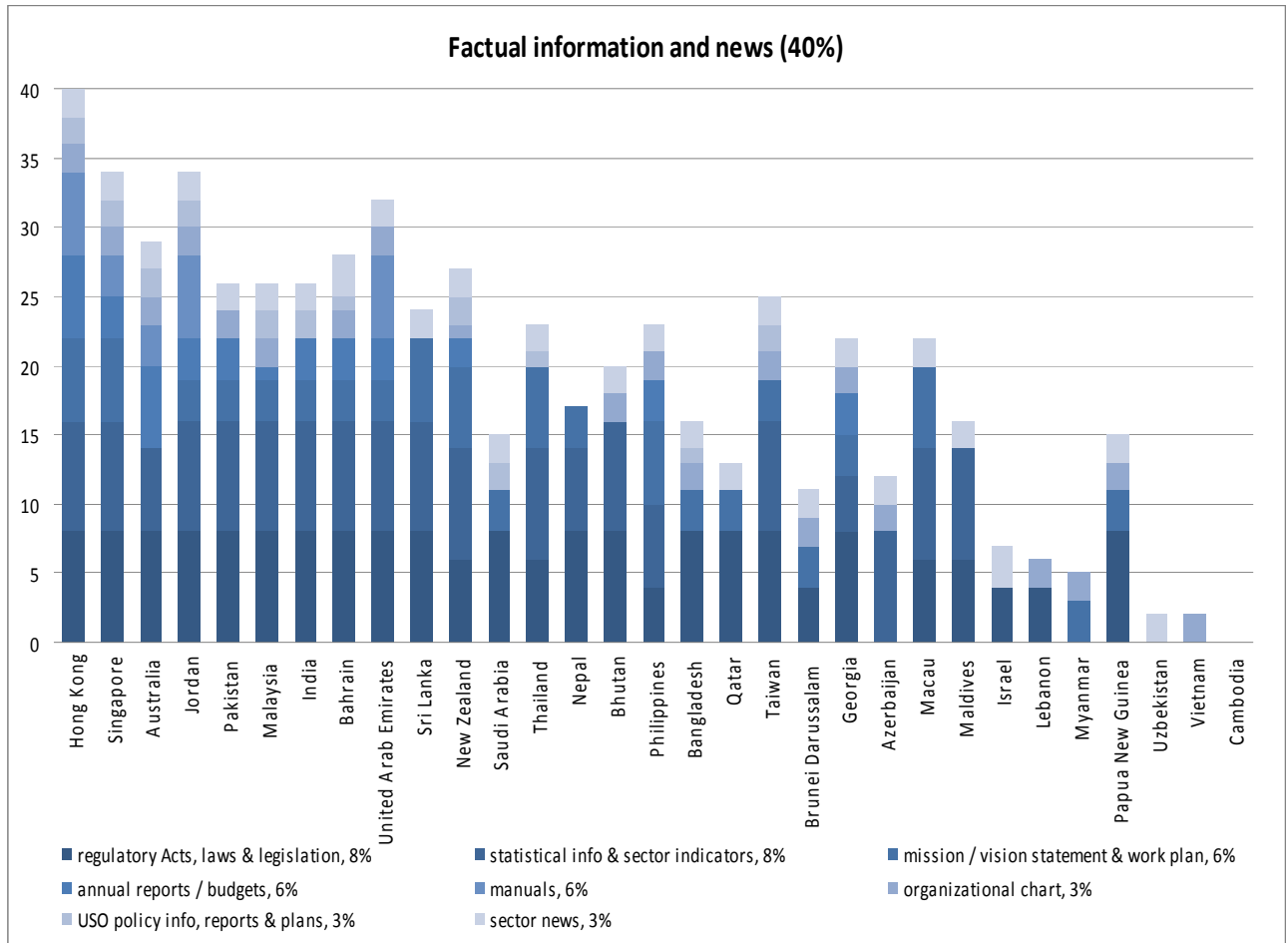
Figure 2.3: Scores for Business information

Business information (24%)
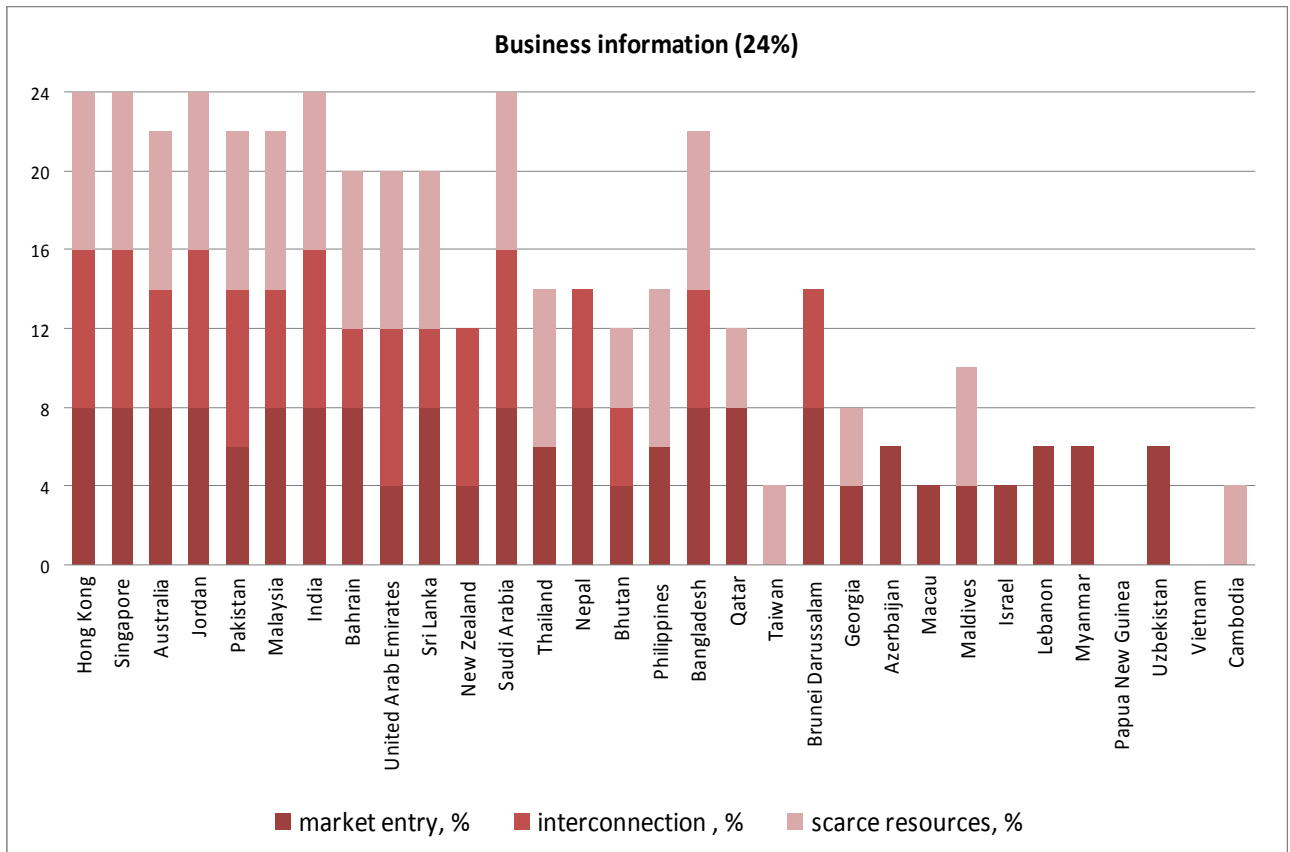
Figure 2.4: Scores for General informmation

General information (24%)

Legend:
- public consultations / white papers, 10%
- RFPs, 5%
- local language, 3%
- updated info, 2%
- contact details, 2%
- links to local / intl sites, 2%

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

Figure 2.5: Scores for Consumer related information

Consumer-related information (12%)

consumer & citizen rights info, 3% ■ complaints process, 3% ■ info on public hearings, 3% ■ equipment certification, 3%
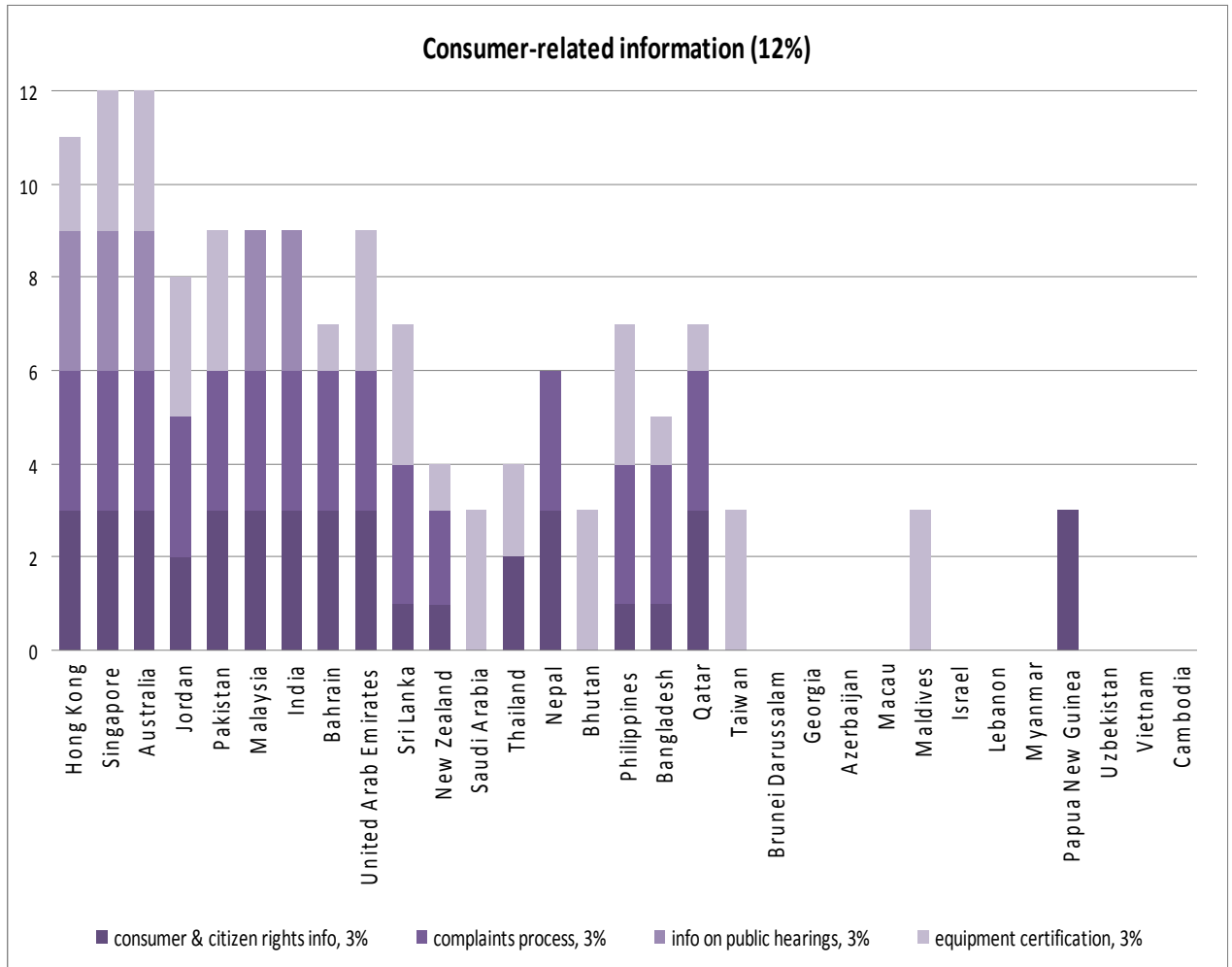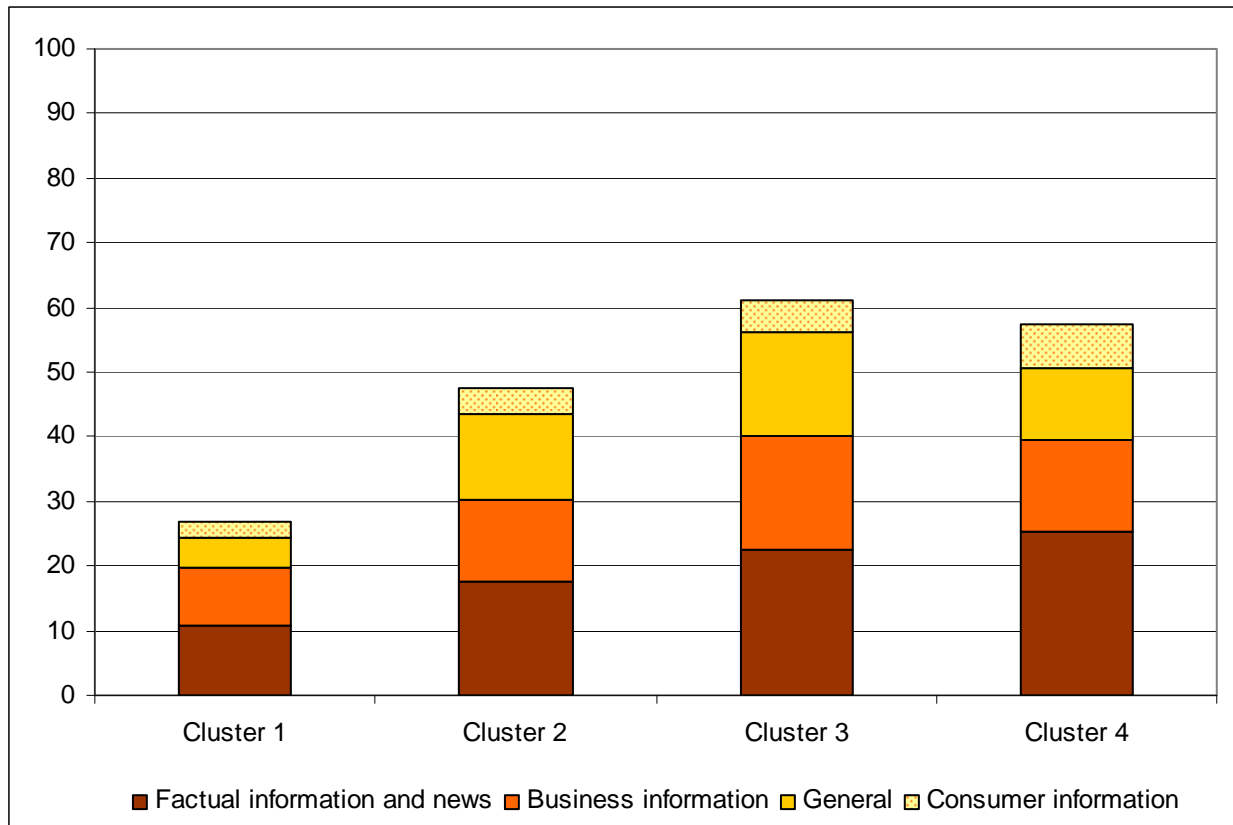
Figure 2.7: Cluster performances

3. Limitations

This website survey attempted to capture as much aspects of the NRA website as possible, but there still can be limitations with methodology. This section briefly describes them and also explained 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, it is natural the emphasis of a critics not fully matching with the criteria used in the study.

Another difficulty was that 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 treat 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 countries 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 countries 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 countries. For this reason it can be argued it is not

representative of the region. However one third of the countries in the region do not have NRA sites (some of them are micro states) so the exclusion is not as large as it seems.

5. 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 score. Overall, 55 % of the countries obtained 50 % of the marks allocated for that category. Of the total 31 countries included in the study 80 % had sector news made available via their websites. In 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 seem to have a satisfactory amount of data on market entry, interconnection and scarce resources. 42 % obtained full scores for market entry with 74 % obtaining at least half the score. 26 % of the countries received full scores for the interconnection section with 52 % obtaining at least half the score. 45 % of the countries 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 countries provided contact information and the same number provided updated information on the website. It can be agued 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 out of the expected pattern. This maybe due to the fact the countries in cluster 3 have economies that 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, 49 % of the countries scores full marks for the provision of public consultation/ white papers. 55 % of the total countries 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 countries 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 maybe cause by the emphasis the websites play on consumer affairs.

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 39 % of the countries obtained full scores. 41 % of the countries have comprehensive information on the complaint process. However, the 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 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 to the website. The categories obtained the following marks: 2.4, 4, 4.8 and 6.8. Here it can be noted that the margin between cluster 3 and 4 are greater than those of the others. This is because the countries that belong to this cluster all 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. Cluster 3 scored the highest score under business information and general.

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 was 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 countries 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	Ministry of Transport and Communication	http://www.mtc.am/	Y	N	UC
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 Information Industry	http://www.mii.gov.cn/	N	N	EVNA
11	Cook Islands	-	-	-	N	NA
12	Fiji	Telecommunication Unit	-	-	N	NWS
13	Georgia	National Communication 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	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	http://www.moc.gov.il/8-en/MOC.aspx	Y	Y	-
20	Japan	Ministry of Internal Affairs and Communication	http://www.soumu.go.jp/joho_tsusin/eng/index.html	N	N	NFPS
21	Jordon	Telecommunication Regulatory Commission	http://www.trc.gov.jo/index.php?option=com_frontpage&Itemid=1&lang=english	Y	Y	-
22	Kazakhstan	Telecommunications and Post Dept	-	-	N	NWS
23	Kuwait	Ministry of Communication	http://www.moc.kw/	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	http://www.mpt.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	Cabinet	-	**-**	**N**	NWS
31	Mongolia	ICTA	http://www.icta.gov.mn/	**N**	**N**	EVNA
32	Myanmar	Ministry of Communications, Posts, and Telegraphs	http://www.mpt.net.mm/	**Y**	**Y**	-
33	Nauru	Directorate of Telecommunications	-	**-**	**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**	NA
37	North Korea	-	-	**-**	**N**	NA
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**	NA
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	Ministry of Posts and Telecom	-	**-**	**N**	NWS
45	Saudi Arabia	Communications and Information Technologies Commission	http://www.citc.gov.sa/citcportal/Homepage/tabid/106/cmspid/%7B611C6EDD-85C5-4800-A0DA-A997A624D0D0%7D/Default.aspx	**Y**	**Y**	-
46	Singapore	Infocomm Development Authority	http://www.ida.gov.sg/home/index.aspx	**Y**	**Y**	-
47	Solomon Islands	Ministry of Transport, Works and Communication	-	**-**	**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 Communications	-	**-**	**N**	NWS
53	Thailand	National Telecommunication Commission	http://eng.ntc.or.th/index.php	**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	http://www.tra.gov.ae/	**Y**	**Y**	-
59	Uzbekistan	Communications and Information Agency	http://www.aci.uz/en/news/	**Y**	**Y**	-
60	Vanuatu	Ministry of Public works, Transport, Communication and Civil works	-	**-**	**N**	NWS
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