

Benchmarking National Communications Regulatory Authority Websites 2010

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Research ICT Africa

Research ICT Africa fills a strategic gap in the development of a sustainable information society and network knowledge economy by building the ICT policy and regulatory research capacity needed to inform effective ICT governance in Africa. The network was launched with seed funding from the IDRC and seeks to extend its activities through national, regional and continental partnerships. The establishment of the Research ICT Africa (RIA) network emanates from the growing demand for data and analysis necessary for the appropriate and visionary policy required to catapult the continent into the information age. Through network development RIA seeks to build an African knowledge base in support of ICT policy and regulatory design processes, and to monitor and review policy and regulatory developments on the continent. The research arising from a public interest agenda is made available in the public domain, and individuals and entities from the public and private sector and civil society are encouraged to use it for teaching, further research or to enable them to participate more effectively in national, regional and global ICT policy formulation and governance. This research is made possible by the significant funding received from the International Development Research Centre (IDRC) Ottawa, Canada. The network members express their gratitude to the IDRC for its support. The network is under the directorship of Dr. Alison Gillwald.

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Table of Contents

Executive Summary 1

Background 3

Methodology 4

Ranking 4

Categories and Sub-Categories 5

Summary of Findings 7

Findings 7

Best Practise: Factual Information Category 9

Best Practise: Consumer and Citizen Information 11

Best Practise: Business Information Category 13

Best Practise: General Information Category 15

Universal Access Benchmark 17

Observations and Recommendations 18

Conclusion 20

References 21

Executive Summary

This paper provides an executive overview of the communications sector's National Regulatory Authorities' (NRAs) website benchmark results for Africa in 2010, which were evaluated between March and April 2010. The analysis ranks the online component of information provision and facilitation of regulatory processes.

This study follows previous regional surveys conducted in 2008 (Kerretts-Makau, 2009) and in 2004-05 (Mahan, 2004), which examined the extent to which regulators were using websites to inform and communicate with the public – including consumers and citizens, the private sector, media actors and researchers and other governmental and non-governmental organizations. The benchmarking assessment documents the incidence of different aspects that are important for a regulator's web presence across the categories of basic information and responsiveness, factual information about the national telecom sector, consumer and citizen information including universal service and complaints procedures, business related information and forms, and information about the regulator and regulatory processes.

The ranking of the elements is derived from the 2001 UN "Benchmarking E-government" report categories. Each ranking examined the information offered in terms of its being up-to-date and facilitating inclusive and informed regulatory processes. The ranking was based on qualitative evidence, but subjectivity was reduced by using the following defined categories rather than simply relying on perceptions.

1. **Emerging:** Only basic and largely static information is available.
2. **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.
3. **Interactive:** Users can download forms, contact officials and make requests. Available information has further value added, such as being hyper-linked to relevant legislation.
4. **Transactional:** Users can submit forms online – for example to request information, or to submit a request for a license form.

The sub-categories were classified with each thematic element assigned a value from one to four based on the stages described above, with each category contributing to a final score.

It should be noted that a value of zero (0) was used to indicate the lack of information or a service. As shall be seen throughout the Africa analysis findings, countries that had no data within a given category were ranked with a zero. Intermediate scores were also used to provide a more precise assessment. For example, if information was available but not completely up to date and lacked sufficient explanation it was recorded as a score of 1.5.

Benchmarking implies that comparisons are undertaken between similar websites to identify good practices and to engender a sharing of strategies by which the functional profile of the websites may be enhanced, and informed regulatory processes may be facilitated. Because this is a rapidly evolving area, the primary focus of this methodology and this paper is the 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 access the evolution of their websites.

A country's inclusion into the assessment was contingent on the country having an independent authority¹ and the authority having a functioning website. Out of a total of 54 countries in Africa, 30 had regulatory institutions that could be classified as independent with websites, and 24 did not have websites and/or had websites that were not working as at April 8th 2010 and or were merged with the ministries.

The benchmarking results show marked differences across countries and regions. While ranking per se was not the major focus of the analysis, it is tempting to rank the countries in terms of their overall achievement. Egypt received the highest score and performed well across all categories. Nigeria, Mauritius, Kenya and South Africa were ranked in the top five. Following closely are Uganda, Algeria, Senegal and Tanzania. The top ten NRAs were considered to have had adequate content in support of users being informed and being able to participate in regulatory processes.

¹ The term independent is used loosely here to refer to an institution mandated as the regulator of the sector not also functioning in the dual role of a fixed mobile operator or mobile operator or ministry

Overall, the total African regional average was low, with a benchmark of between one and two, indicating that national regulatory authority websites hover between static and emerging levels of information provision. Nonetheless, it is not necessarily the case that a value of four is the desirable value for a particular area of information provision. In some instances clear and up-to-date information that is well explained may be preferable to a complicated interactive site.

In the same vein, use of Web 2.0 tools have not been specifically included in the assessment. However, this NRA survey ranks information provision in terms of increased interactivity and functionality, and hence websites with higher scores such as evidenced by countries such as South Africa, Kenya, Uganda, Tanzania, Morocco, Nigeria, Egypt and Tunisia have more likely embraced Web 2.0 philosophies of interconnectedness and sharing of information, if not the actual tools themselves. In this regard, findings indicate that there is room for development of best practise around using Web 2.0 technologies 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.

The full data analysis is provided in another report. The following analysis provides a summarised overview of the performance of African regulatory websites within the benchmarking criteria. It should be noted that this analysis does not judge websites by their look and feel, rather the main aim of the analysis focuses on revealing best practise of what NRAs are doing within their websites. The analysis thus reveals the type of content provided and the ease of using or accessing the requisite information. Ranking, per se, is thus only a by-product of the exercise. It is hoped that this study will provide African regulators with an insight into what their users will most likely be looking for when searching through their websites. The study also highlights best practices that can be replicated.

Background

The policy challenges of Information Communication Technologies (ICT) governance in the Global South begun receiving attention with the surge of privatization and liberalization, which for the most part took place over a ten-year period between 1994 and 2004. This attention however has mainly centered on the liberalization process and how it has helped bridge the “digital divide”. As a result this bias of analysis has led to research that has focused mainly on ICT indicators such as ICT penetration, Internet hosts and subscribers and level of ICT literacy within a given economy. This research has been and continues to be of invaluable importance for the development of the ICT sector in any given country.

Nonetheless, the concept of ICT governance in recent years has evolved as Governments can now provide services without the need for 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. 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 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. An 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 through 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 in 2008 (Mahan 2008), which focused on a global regional based analysis of the telecom sector’s NRA websites.

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.

Methodology

This study is comprised of regional assessments of NRA websites in Africa during a common timeframe and using the same methodology in the different regions. Several previous studies underpin and inform this research:

- A study jointly done 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 through 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, 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 LIRNEasia (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 out of a total of 62 economies.
- A further study combining all continents and edited by Mahan (2009) was completed in 2008. This marked the second time that African NRAs were evaluated (Kerretts, 2008). The African NRA benchmark study conducted by Kerretts (2008) also provided comparisons with the Mahan (2004) study.

Ranking

In order to capture both the volume of information and the ability to use the website as a vehicle for participating in regulatory processes, the websites are benchmarked using the following scheme for awarding points. This approach is derived from the 2001 UN "Benchmarking E-government" report categories. Elements in each category should be examined in terms of whether they are up-to-date, complete, contextualised (for example, explained or hyperlinked) and the degree to which the category facilitates inclusive and informed regulatory processes. The ranking of the elements is derived from the 2001 UN "Benchmarking E-government" report categories. Each ranking examined the information offered in terms of its being up-to-date and facilitating inclusive and informed regulatory processes. The ranking was based on qualitative evidence, but subjectivity was reduced by using the following categories rather than relying on perceptions.

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The sub-categories were classified with each thematic element assigned a value from one to four based on the stages described above, with each category contributing to a final score.

It should be noted that a value of zero (0) was used to indicate the lack of information or a service. As shall be seen through the Africa analysis findings, countries which have no data within a given category were ranked with a zero. Intermediate scores were also used to provide a more precise assessment. For example, if information was available but not completely up to date and lacked sufficient explanation it was recorded as 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. The key categories and subcategories are shown in Table 1 and are explained below.

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. The section also comprises legislation, statistics, annual reports and sector news amongst other information. 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 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.

Table 1: Categories and sub-Categories

	Category	Category Weighting	Sub-Category	Sub- Category Weighting (within the category)	Final Weighting
1	Factual Information and News	25%	Regulatory acts, legislation, laws	40%	10%
			Statistical information and sector indicators	40%	10%
			Sector news	20%	5%
2	Consumer and Citizen Information	25%	Consumer information (other than rights – e.g. tariff information, new numbering plans, etc.)	20%	5%
			Consumer and citizen rights information	20%	5%
			Complaints process	20%	5%
			Information about public hearings	20%	5%
			Statistical information on consumer attention and complaints resolution	20%	5%
3	Business Information	25%	Equipment Certification	20%	5%
			Market entry details (such as licensing)	20%	5%
			Interconnection information	20%	5%
			White papers/Consultancy papers	20%	5%
			Scarce resources (e.g. spectrum allocation)	20%	5%
4	General	15%	Mission Statement	10%	1.5
			Local Languages	30%	4.5
			Links to local and international sites	20%	3
			Contact details of key officials (phone number, emails, or online contact form)	20%	3
			Ease of use (navigation tools, website map, search engine, overall organisation)	10%	1.5
			Organisation chart (or equivalent)	10%	1.5
5	Universal Service / Universal Access	10%	Policy information, reports and plans	100%	10%
Total		100%			100.00%

Summary of Findings

An initial attempt was also 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 1 indicates the percentage of countries included in this study.

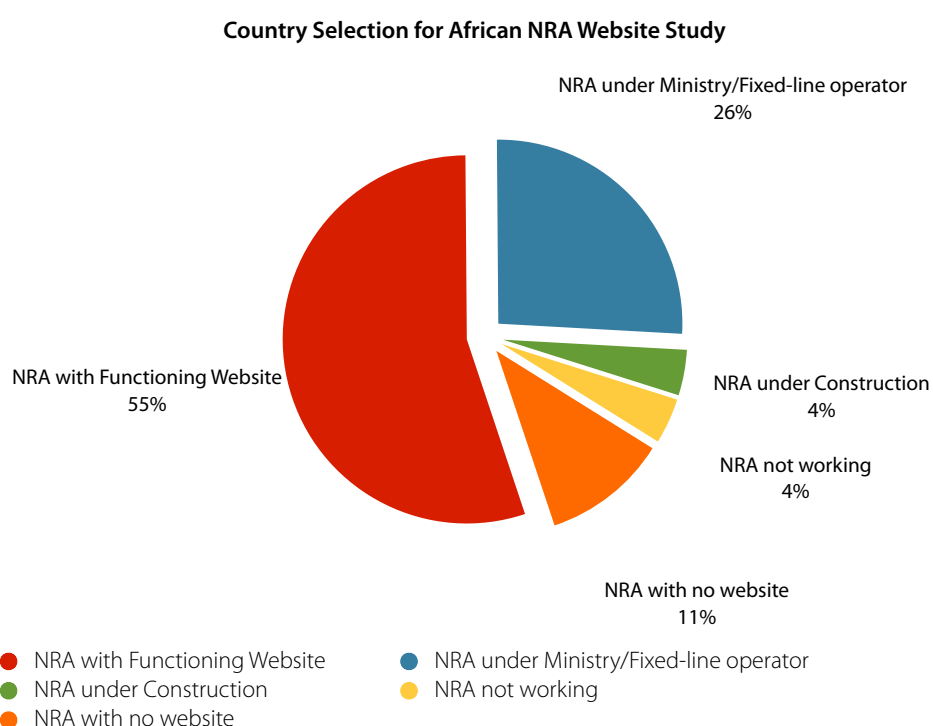


Figure 1: Country selection

Of a total of 54 countries in Africa, 30 were found to have regulatory institutions with websites that could be classified as independent, accounting for 55% of the websites analysed.

Findings

This study indicates significant differences among the NRA websites in terms of information provision, usability and functionality. As noted earlier, ranking per se is only an outcome of the process rather than the specific aspect of the analysis. Thus the summary of findings center on best-practice indicators within the NRA websites based on the category and sub-category content.

Across the countries accessed, it is clear that a website that scored highly within the various categories and sub-categories had the following characteristics:

- A clear awareness of who the client/users are and what they need.
- 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.

Table 2: Best practice examples: Egyptian NRA.
Best practice example of links under categories from the NRA of Egypt's NTRA

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

As illustrated in Table 2, the Egyptian NRA not only ensured that each subcategory provided adequate information but 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 practice 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 with the Egyptian website, these countries 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 four, therefore ranging more towards the rank of enhanced information provision) exhibited clear effort in providing detailed content, relevant topic banners and submenu categories within each banner, simplified explanations of the function of all content provided, downloadable content in PDF, and so forth. In addition and in contrast with the other NRAs, these provided information about 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 basic introductory pieces, and very little digested or descriptive information – in many instances having no information at all.

Best Practise: Factual Information Category

A common denominator between compared NRA websites is the provision of the main legislative background information, statistical information such as sector indicators and sector news. Figure 2 provides the ranking assessment for this category across the countries evaluated in Africa.

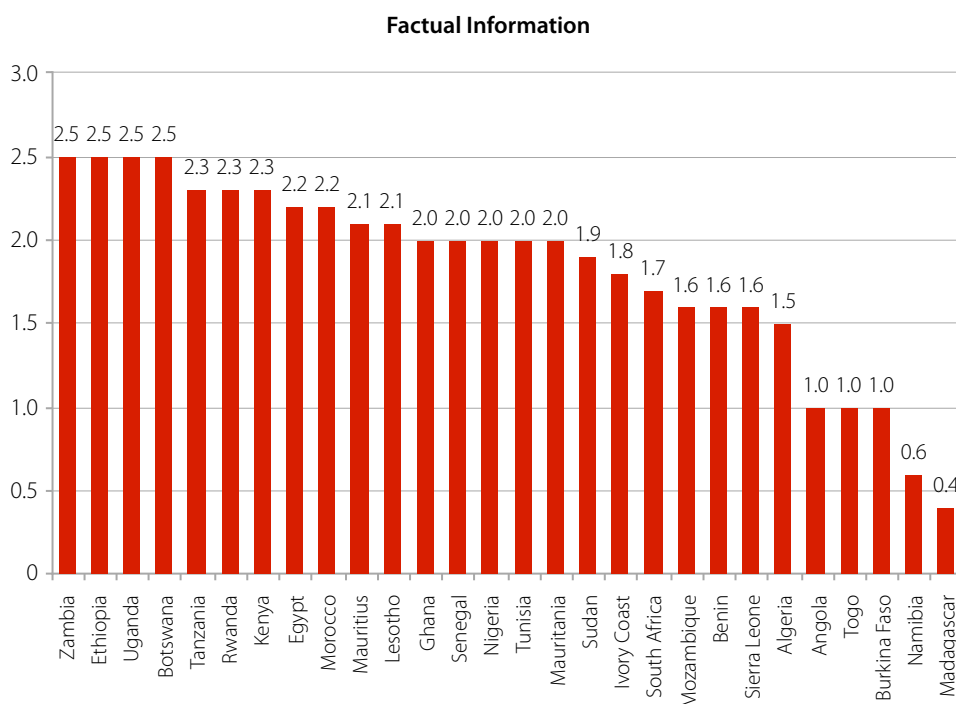


Figure 2: Factual information benchmark

Within the factual information category, content that focused on laws and regulations, statistical information and indicators for the sector and sector news was assessed. As depicted above, a score above two indicates that content was regularly updated, informative, hyperlinked and could be easily downloaded.

However, the actual benchmark within each subsection differed substantially. Within the News section, Rwanda, Mauritania, Burkina Faso and Nigeria had scanty information on sector news, whereas in the southern African and western African regions, 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 press reports released by the regulator (such as press statements by the Director Generals) and press releases of notices to the operators, to changes in policy and/or legislation.

Exceptions were the Zambia, 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, dating 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 section. Others had items marked 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. 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. 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 as PDFs. Two NRAs stand out as typifying best practice in this sub-category:

- 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 make regulatory and policy documents available, 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.

Best Practise: Consumer and Citizen Information

The objective of this category is to assess the degree to which NRA websites cater to the needs of the end-consumers and provide information to citizens. The content assessed in this category includes: Information for users' rights, rate information and new numbering plans, information about users and consumer rights, information on how to process complaints, information about public hearings and statistical information about assistance to users and resolution of complaints. Figure 3 below provides a summary of the ranking per country.

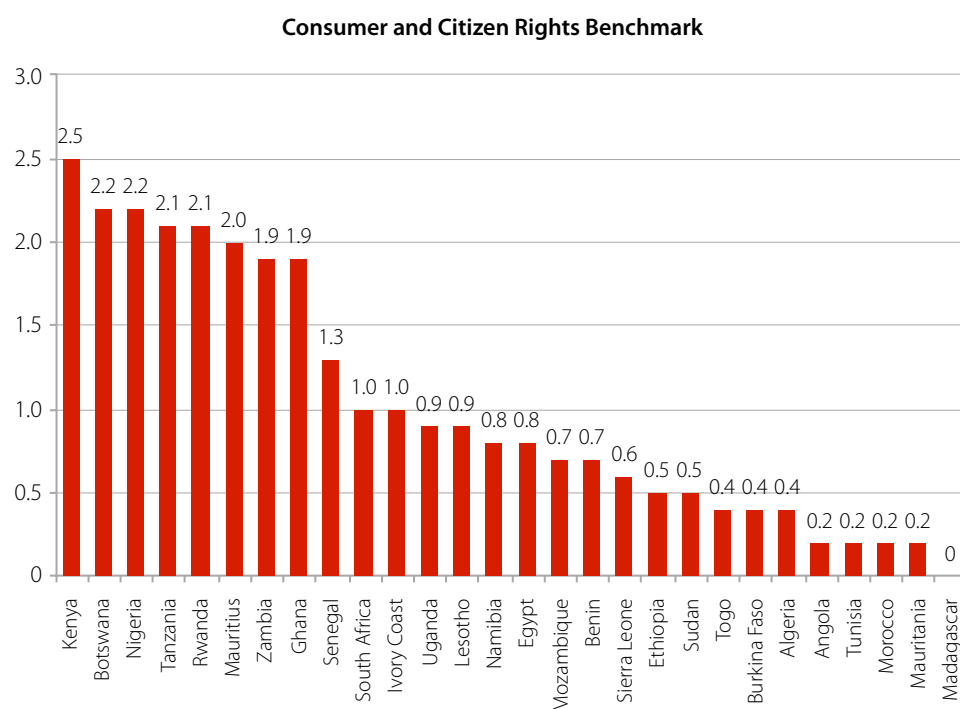


Figure 3: Consumer and citizen rights benchmark

As shown in Figure 3, the websites that performed well had content that could be termed as complete, up-to-date and contextualised – with benchmarks ranging between 2.5 and 2.0. Within this category most African NRAs had the option to download content. However, when each category is viewed in detail significant differences occur in the type of content provided.

In the category of *Consumer and citizen information*, Kenya scored the highest (3.5), falling between interactive and transactional. A best practice 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 and press release statements* headings. 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, none of the NRAs except for Egypt covered information on possible equipment hazards.

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 was rated at 3 and Mauritius at 2.5. Botswana and Mauritius provided a downloadable complaints management procedure while Tanzania provided a complaints form in both Swahili and English. These four NRAs were considered best practice in this section. Fourteen NRAs, accounting for more than 40% of the NRAs analysed, provided no complaint forms. Most countries assumed this to be an aspect that should be covered by writing directly to the Director General of the NRA and provided 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 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 practice 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 Wategama (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. This may be attributed to the fact that Internet penetration is still very low and therefore perceived as an unlikely means of citizen participation and information retrieval².

² 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.

Best Practise: Business Information Category

This category deals with the information usually sought by business firms and investors such as market entry details, interconnection information, scarce resource allocation, process for equipment certification and any publications/consultancy work done in the area. Figure 4 below depicts the individual benchmark scores for this category.

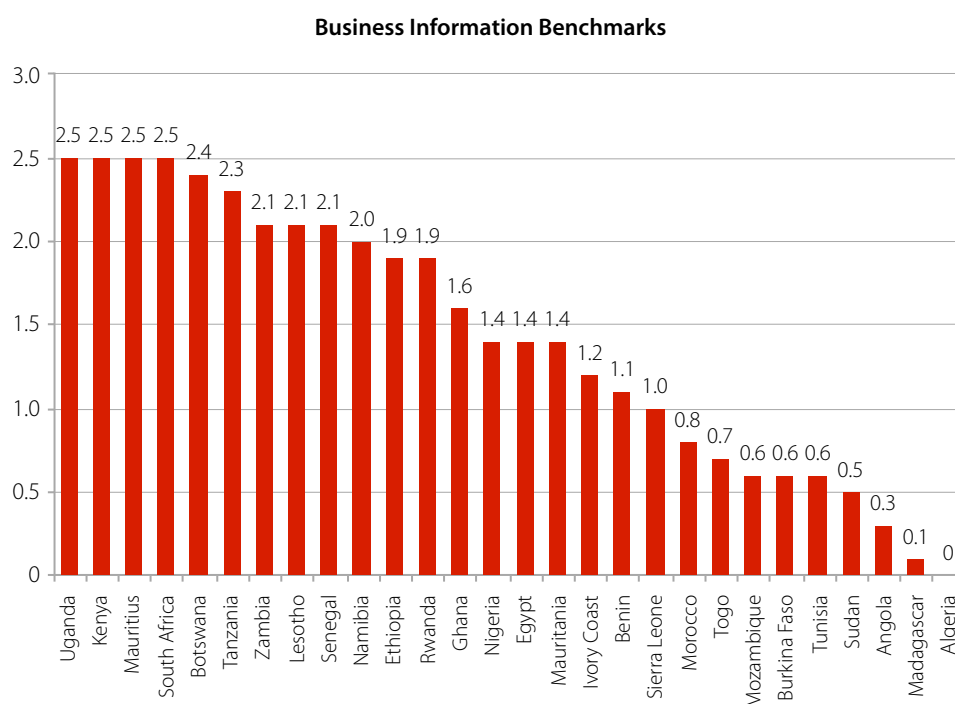


Figure 4: Business information benchmarks

Business information was a strong category across all websites. Even most websites which scored lowest in overall ranking offered licensing forms available for download. As for the other categories reviewed, actual content within this category differed.

Within the individual sub-categories the content provided differed. In the category of *Equipment certification*, the websites for Kenya, Tanzania, Ethiopia, Mauritius, Zambia and Botswana had the highest rating of between interactive and transactional at 3.5. These websites covered 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 a list of equipment approved and rejected in Kenya, approval fees and forms. The Tanzanian NRA in addition had a checklist of equipment certification forms. Those not scoring highly in this section include Malawi, Mozambique, Namibia, Angola, Rwanda, Cameroon, Gabon and South Africa from the southern 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. None of these NRAs did had 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, and Kenya. Uganda 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. Within *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.

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

Best Practise: General Information Category

This section, *General information*, looks for more general features such as mission statements, links to other national and international sites, contact details of key officials, ease of navigation and organizational charts.

As illustrated in Figure 5, the benchmark scores within this category differ significantly when compared to the performance in the other categories. NRA websites that had been ranked poorly across the other categories generally fared better under 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.

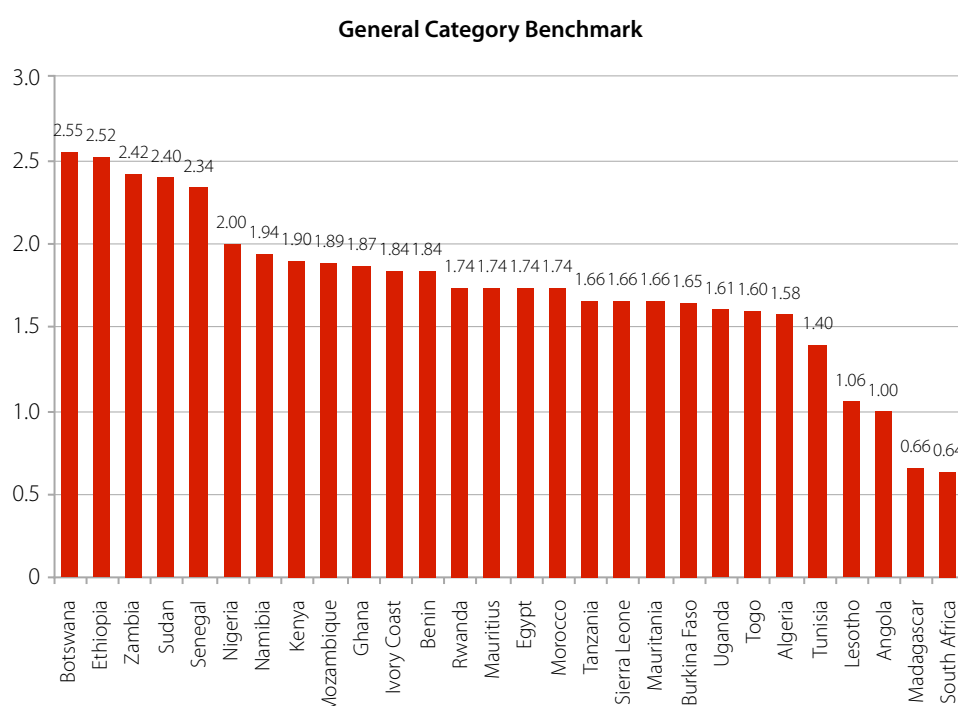


Figure 5: General category benchmark

While there was effort made to provide information on the organization of the NRA, the depiction of an organogram was only included by slightly more than half of the thirty NRAs analysed. Malawi, Namibia, Cameroon, Gabon and Rwanda in eastern and southern Africa had no organogram provided, while in western and northern Africa, Tunisia, Mauritania, Ivory Coast, Togo, Niger and Gambia provided no organogram.

The use of *links to other institutions* both locally and internationally was also 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 between local, international and national.

The category of *contacts* differed across the NRAs benchmarked. While most provided contact details of the regulator, not many provided contact details of key officials within the regulatory institution. Tanzania, Rwanda and Sudan were the exception in eastern Africa, while in the southern and western African regions, 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.

The overall ease of navigation across all the websites varied. Four websites stood out out of the 30 NRAs evaluated, namely: Egypt, South Africa, Mauritius and Nigeria, which provided 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 information location.

NRAs that could do with some improvement include Sudan, which was crowded with information on its centre and left hand columns making it confusing 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.

Universal Access Benchmark

This final section, *Universal access*, addresses policy information, reports and plans on universal access. Most NRAs benchmarked relatively low marks compared to the other categories.

Best practice NRAs that stood out within this category were South Africa, Kenya, Uganda, Mauritius and Mozambique, which had dedicated banner headings for this section, highlighting relevant policy and activities being undertaken. In addition, the Uganda NRA provided a diagrammatic representation of the process.

The dismal lack of information in this section depicts the lack of activity by NRAs in Africa in providing Universal Access. It is noted nonetheless that this activity may be a function of the telecom operators through their licensing obligations. And while this study cannot confirm this, NRAs are encouraged to provide information on this area within their website.

Observations and Recommendations

As noted in the introductory section of this report, this study and others like it were not designed simply to fulfill the limited objective of identifying leading countries, but rather to identify specific best practices, which are likely to vary between countries. Thus 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. This was particularly the case for NRAs that play dual roles as the main regulator for all other sectors.

Thus, as noted earlier, country ranking is performed, but what this study has done as shown in the preceding pages is to identify specific strengths and weaknesses and where specific improvements are warranted. The study adopted 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.

Although most countries in Africa are 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. Use of local languages is a category that was not evaluated in the 2010 NRA analysis due to the varied languages in Africa, but is nonetheless an extremely important vehicle for communication. Feedback from several NRAs reveals that many NRAs in Africa conduct road shows in the local languages to reach the different communities mostly in rural areas. 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.

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 Kerretts (2009), 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. There was, disappointingly, a lack of effort made to analyse the statistical information that was laid out on all websites. Most of the information was laid out without any effort for comparative analysis across the years. This type of information would be very informative to many stakeholders, and in addition provides information on the development growth of a country for researchers and journalists.

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 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 toll free 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.

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.

The ability of the NRA to participate as a vehicle for participating in regulatory processes is in need of improvement. Nearly all the websites had an overall ranking of between *emerging* and *enhanced* levels – i.e. presenting 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 as well making sites more functional.

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

- A common understanding of the role of and opportunities to apply ICT in general and web presence in particular in communicating to the various stakeholders in the sector ;
- The 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 in relation 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.

Conclusion

The study attempted to show the interrelations between African NRA website development and telecom network development by placing research within the context of overall telecom reform and ICT development. The recommendations for improvement in responding to best practices within each category 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 African NRA analysis was performed by applying a consistent methodology and covering the same time period, it was carried out by different researchers, each with specialized knowledge of their regions in Africa (east, central, west, north and southern Africa), the researchers have not attempted to provide comparative comparisons between regions but rather to reveal best practice within each country. However, the detailed assessments of specific strengths and weaknesses as shown by particular indicators are generally comparable.

This study sought to focus on the available information uploaded as content to 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. In 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 to share their experiences with other NRA's both in the region and internationally. This report thus provides an important step in preparing research on these issues as telecom reform proceeds.

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