

Preparing the Ground for the West Africa Internet Governance Forum: A review of Internet public policy interests and processes in selected countries in the region

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IISD gratefully acknowledges the support of the following institutions and partners: International Development Research Center (IDRC) and the Open Society Initiative for West Africa (OSIWA), and the participation of the following; Free Software and Open Source Foundation for Africa (FOSSFA), Association for Progressive Communication (APC), Internet Society (ISOC), African Network Information Center (AfrINIC), Economic Community of West African States (ECOWAS), Panos Institute West Africa (PIWA), West African Internet Governance Forum (WAIGF) including its country coordinators, and the East African Internet Governance Forum (EAIGF).

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Published by the International Institute for Sustainable Development

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Table of Contents

| | | |
|-------|---|----|
| 1.0 | Background: Internet policy and governance and sustainable development..... | 1 |
| 2.0 | Introduction | 3 |
| 3.0 | Review of Internet/ICT policy in Africa | 5 |
| 3.1 | Evolutions of Africa’s Internet/ICT Policy | 5 |
| 3.2 | The Policy Ecosystem..... | 9 |
| 4.0 | The State of Internet Public Policy and Development in West Africa | 12 |
| 4.1 | Telecommunication and Development in the Region | 12 |
| 4.2 | ICT Policy Development | 18 |
| 4.2.1 | <i>National Initiatives</i> | 18 |
| 4.2.2 | <i>Regional Policy Attempts</i> | 22 |
| 5.0 | The West Africa Internet Governance Forum (WAIGF)..... | 24 |
| 5.1 | About the Survey— Mapping Opinions in West Africa | 24 |
| 5.1.1 | <i>Overview</i> | 24 |
| 5.2 | Survey Methodology | 25 |
| 5.2.1 | <i>Survey Instrument</i> | 25 |
| 5.2.2 | <i>Target Population and Choice of Countries</i> | 26 |
| 5.3 | Results/Findings..... | 28 |
| 5.3.1 | <i>Demographics</i> | 28 |
| 5.3.2 | <i>Key Messages from the Survey</i> | 30 |
| 6.0 | Discussion | 39 |
| 7.0 | Conclusions | 42 |
| | References..... | 44 |
| | Appendix: Survey Questions..... | 48 |

List of Figures

| | |
|---|----|
| Figure 1: Mobile and Fixed Teledensity in Africa 2005-2010..... | 5 |
| Figure 2: Fixed and mobile broadband subscription rate. | 6 |
| Figure 3: Annual GDP growth for selected countries..... | 14 |
| Figure 4: Combined fixed and mobile teledensity for selected countries (lines per 100 people)..... | 15 |
| Figure 5: Internet users per 100 people. | 16 |
| Figure 6: Gender distribution..... | 28 |
| Figure 7: Age distribution | 29 |
| Figure 8: Affiliations of respondents..... | 30 |
| Figure 9: Would you like a national mechanism to discuss Internet policy and decision making?.. | 31 |
| Figure 10: Stakeholders that should be part of national IGFs | 31 |
| Figure 11: Which of the following kinds of stakeholders do you think should also be encouraged to participate?..... | 32 |
| Figure 12: Who should have predominant responsibility for the national evolution of the Internet? | 33 |
| Figure 13: Concerns over Internet-related issues | 34 |
| Figure 14: Concerns over the impact of ICTs on the environment..... | 35 |
| Figure 15: How significant a need is there for public education in digital literacy? | 36 |
| Figure 16: Significance of the role of the Internet in other areas of public policy..... | 37 |
| Figure 17: Should national forums share perspectives and knowledge with other similar forums, regionally and internationally? | 38 |
| Figure 18: The evolution of the Internet in other African countries is relevant domestically..... | 38 |

List of Tables

| | |
|---|----|
| Table 1: GNI per capita (USD, PPP) for West African least developed countries | 12 |
| Table 2: Teledensity (number of active lines per 100 people)..... | 13 |
| Table 3: Total survey responses..... | 27 |

1.0 Background: Internet policy and governance and sustainable development

From a sustainable development perspective, the most important story of the past 20 years has been the exponential growth of two new components of the global connectivity system — the Internet and mobile communications — and the transformative changes they have begun to enable in all aspects of human life, in both developed and developing countries.

In 1995, there were 16 million Internet users in the world; today there are two billion, the majority of whom live in developing countries. In 1998, there were 300 million cellular mobile subscribers in the world; today there are five billion, with the majority again from developing countries. In 2009, there were 850 million broadband subscribers in the world, half through fixed links and half through mobile connections. In the case of broadband, the majority of subscribers are from the developed world.

In the past decade, the rapid growth of mobile communications has begun to close the divide in access to basic telecommunication services between developed and developing countries. According to the International Telecommunication Union, around half the people in developing countries are mobile subscribers. However, as one divide has begun to close, another has begun to open. Fewer than 20 per cent of the people in developing countries are Internet users, compared to more than 60 per cent in the developed world. In 2008 only three per cent of people in developing countries had fixed broadband subscriptions, and only 1.5 per cent had mobile broadband connections, compared to penetration rates of 24 per cent for fixed broadband and 31 per cent for mobile broadband connections in developed countries.

These numbers are significant because the Internet, mobile communications, and emerging combinations of these two technologies provide unprecedented access to information and knowledge. They enable new forms of communication, commerce, working, social interaction, entertainment, and self-expression. They can be used to improve education, health care, and the delivery of public services. And they empower users to advance their rights and engage in governance activities at every level in ways and on a scale never before possible.

In the years since the Rio Earth Summit, experience has demonstrated that when supportive policies are in place, the Internet, mobile communications, and related technologies have the potential to enable transformative changes in economies and societies. The challenge policy-makers now face is to learn the lessons of this experience, to build on success, and to create the conditions that will allow developers to extend the reach of these technologies in ways that will help individuals and

communities — as well as government, private sector, and civil society stakeholders — move toward sustainability by combating climate change, reducing demand for energy and material resources, and better managing the goods and services provided by the earth's ecosystems.

There are a number of ways the technologies can be developed and applied to help achieve environmental sustainability. There is a lot of interest at the moment in the development of smart grids, buildings, and transportation systems that will make more efficient use of energy, including from renewable sources, and give end users greater control over their energy consumption. The Internet has already enabled significant “dematerialization” of goods, services, and activities, with resulting savings in energy and materials consumption — for example, through e-commerce, telework, and the substitution of virtual products for their physical equivalents. Work is now underway to develop and deploy an “Internet of Things,” composed of intelligent sensor networks that will help monitor and manage environmental resources that range in size from farmers' fields to the earth's major ecosystems.

Yet the economic, social and environmental benefits of global connectivity come at a price. It has been estimated that the manufacture and use of the information and communication technologies that make up the system currently account for around two per cent of global greenhouse gas emissions — a share equivalent to that of the airline industry — and that the volume of these emissions is growing at a rate of 6 per cent a year. Clearly, the ICT sector has to clean up its own act by improving the energy efficiency of its products and services, shifting to renewable sources of energy, and reducing the waste that result from short product life cycles. To be a credible champion of sustainable development, the ICT sector must itself become a model of sustainable policy and practice.

The Internet, mobile communications, and related technologies are significant for global sustainability because they put the power to change the world in the hands of communities, small organizations, voluntary groups, and individuals, not just in the hands of governments, large organizations, and institutions.

It is with this in mind, therefore, that IISD is working with partners at international, regional and national levels on the development of Internet policy making and governance mechanisms that will support sustainable development. The following paper presents our initial work in scoping out critical issues facing stakeholders across West Africa and public policy processes being implemented to address those issues.

2.0 Introduction

The recent growth in telecommunication in Africa places pressure on countries for the development of appropriate policies to maximise the gains that it offers. As much as \$56 billion in private sector investments have been stimulated by the growth of technology, particularly, mobile, in Africa between 2004 and 2008 (ITU, 2010). Infrastructure growth and the rapid deployment of undersea cables have characterised the technological landscape of the continent in recent times. Where there was only a single undersea cable in the West coast of the continent carrying most of its Internet voice and data traffic only five years ago, there are several strands in various stages of completion (Song, 2010) that will carry most of its traffic and connect countries where communication had previously been via satellite signals.

Thirty eight per cent (World Bank, 2010, “Connecting Africa”) of Africa’s citizens use a mobile phone, and its Internet penetration has continued to increase and is projected to reach 9.6 per cent by 2010 (ITU, 2010). Although a far cry from global averages of 30 per cent, its growth is still remarkable given recent figures.

This growth in the mobile sector presents interesting opportunities for rapid development and deployment of broadband technology, especially in areas where access is low, thereby potentially making up for lapses in penetration of fixed lines.

Opportunities and challenges to the growth and advancements of technology tools and infrastructure (and their impact on economic and social development) have characterised discussions in local and global Internet policy platforms such as the Internet Governance Forum (IGF). Broad policy discussions at the global level can potentially have a far-reaching impact when their importance is recognized at the local level. A number of African countries have recommenced processes of national Internet policy dialog similar in format to the IGF and different from structures they have previously been used to. The United Nations Economic Commission for Africa’s (UNECA) National Information Communication Initiative (NICI) strategies have been one significant model that has contributed a great deal to policy formulation in the continent. However, these formats are structured differently. While this document is not a comparison of these formats, it recognises the role that NICIs have played in extending policy dialogue and in establishing ICT policies in African countries.

This document focuses on a survey that was conducted by IISD in seven West African countries to explore whether there is interest in increasing dialogue around the evolution and use of the Internet. These countries include Burkina Faso, Gambia, Ghana, Liberia, Nigeria, Senegal, Sierra Leone and

Togo. Senegal was dropped because the quantity of data collected was not significant enough for any analysis to be conducted. However, substantial statistical data was collected from Kenya, and used for comparative purposes. The survey methodology, results and discussion is available in Chapter five.

To give context to the study, it is important to provide a background on the evolution of Internet policy in Africa, more broadly and in West Africa specifically. We have focused the discussions on policy around the events, infrastructures and activities during the past decade, exploring issues of teledensities and Internet penetration, examining the institutional frameworks that have guided policy formulation in the continent, and the issues around which policy makers have converged. These are discussed in Chapter three.

Chapter four explores the West African policy space more specifically, focusing on institutional frameworks such as those presented by the West Africa Telecommunications Regulatory Assembly (WATRA). It specifically addressed the policy environment surrounding the countries covered in the survey. While it was presented as a broad discussion, we have made specific efforts to analyse the situations in a few of the countries mentioned in the survey.

In Chapter six, we explore the challenges that the West African policy arena may face and suggest some of the responses that could potentially address these challenges.

3.0 Review of Internet/ICT policy in Africa

3.1 Evolutions of Africa's Internet/ICT Policy

The information and communication technology (ICT) ecosystem has seen incredible progress since the mid- to late-1990s, a period that marked increased activity between various stakeholders involving African governments, civil society, Internet actors, academia, and private sector who realised the need for collaboration to narrow the growing digital divide between the West, Europe and the African continent. Sub-Saharan teledensity figures were characterised as “Less than one per two hundred inhabitants” (Jansen, 1996) where “achieving a teledensity of one per hundred presented a major milestone” (ITU, 2009). Fixed telephone lines were at 8.2 million corresponding to a 1.4 per cent penetration rate for the entire continent in 1998. An additional 2.4 million more lines were added between 1998 and 2008, amounting to less than one per cent of global growth during the same period. However, mobile subscription rates increased from less than two per 100 inhabitants to 32 per 100 from 1998-2008 and to 41 per 100 in 2010. Fixed telephone lines have remained unchanged during the period 2005-2010 and currently stand at 1.6 per 100 inhabitants (see Table 1)

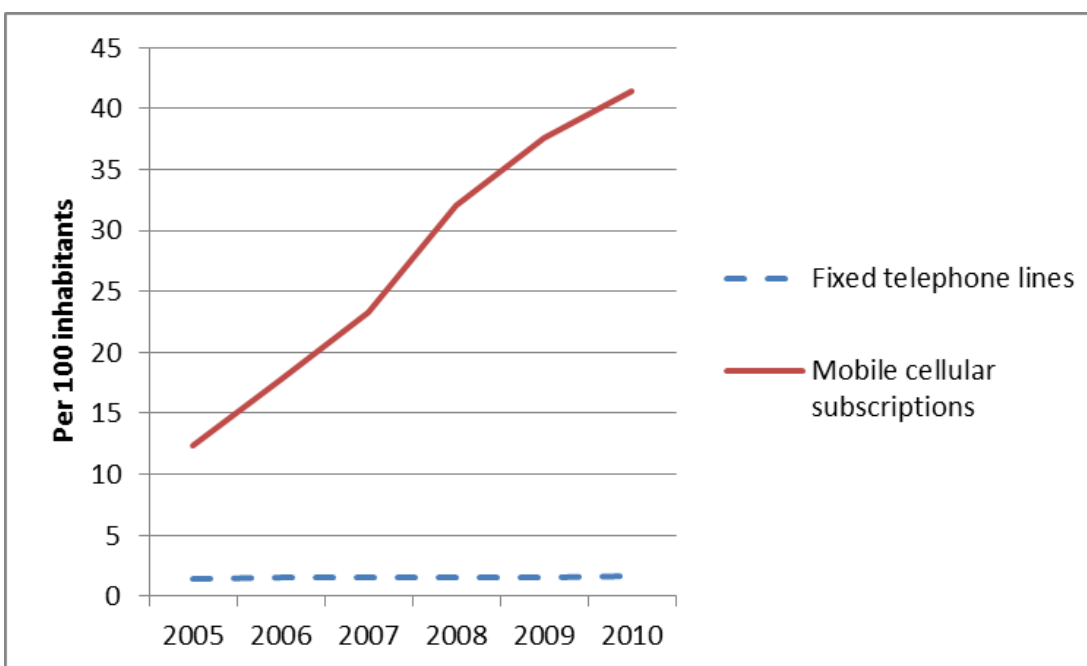


Figure 1: Mobile and Fixed Teledensity in Africa 2005-2010. Source: ITU. *2010 Estimate

The discussion of teledensities is important because it is a basic and essential building block for broadband communication. The most popular model for the delivery of broadband access in the absence of pervasive cable television in Africa is through Asymmetric Digital Subscriber Lines (ADSL) which is delivered over fixed infrastructure. Low fixed teledensities imply low penetration of broadband access. Mobile broadband therefore presents an opportunity for Africa to improve on its Internet penetration rates.

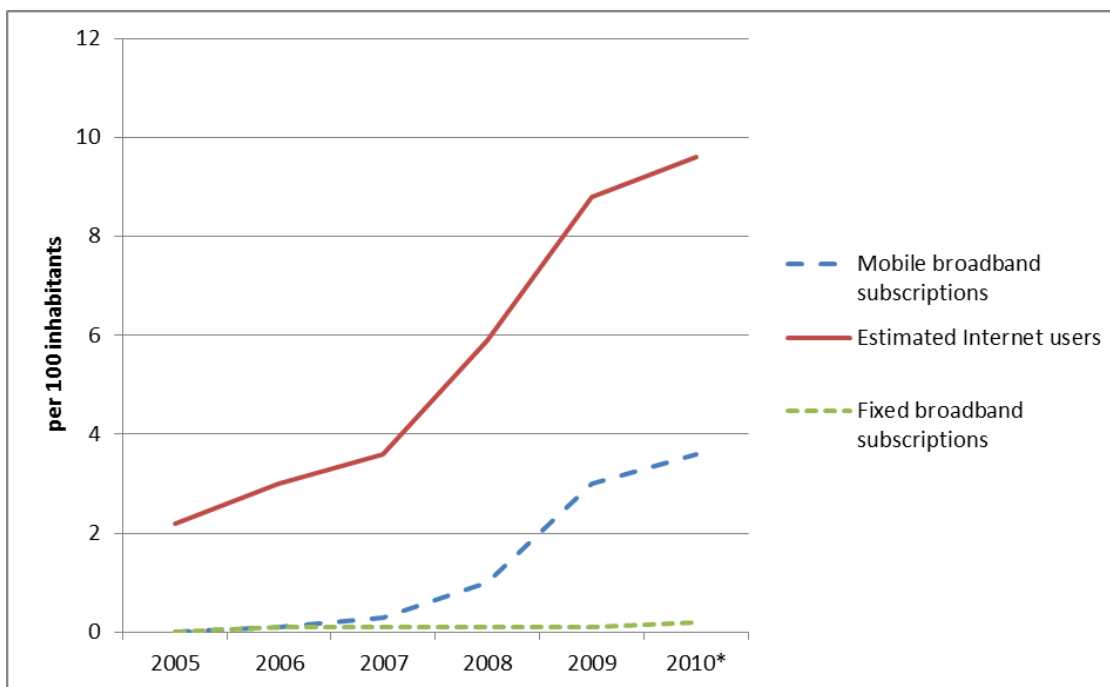


Figure 2: Fixed and mobile broadband subscription rate. Source: ITU, *Estimate

Mobile broadband subscription has increased from 0.1 per cent to 3.6 per cent between 2005 and 2010 in direct correlation with the growth of Internet users from 2.2 to 9.6 per cent over the same period. Fixed broadband subscription has largely remained stable at 0.1 per cent (see figure 2 above).

Backbone infrastructure development such as undersea cables and inland fibre optic networks has significantly improved between 2005 and 2010. As recently as 2007, only three undersea fibre optic cables (SEA-ME-WE, SAT3/WASC/SAFE and ATLANTIS-2) carried most of Africa's data and voice traffic. East Africa and indeed most landlocked countries depended on very small aperture terminals (VSATs) for the delivery of Internet, voice and data traffic. The arrival of EASSy, Seacom and Teams has boosted access to global networks for East African countries. MainOnE and Glo-1, in addition to SAT-3/SAFE/WASC has improved access to West Africa. The growth of such infrastructure development may be attributable to many factors, including the demand for quality

service, increase in voice and data traffic and the liberalisation of the telecommunications sector. The growth in the mobile sector has, however, stimulated over USD\$56-billion in private sector investments between 2004 and 2008 (World Bank, 2010, “Connecting Africa”).

However, infrastructure development did not emerge without a considerable change in the local policy landscape. In fact, infrastructure presented only one factor in the many constraints to Africa’s Internet uptake. Lack of technical know-how, absence of local champions, cost of implementations, political support and availability of suitable policies to support earlier implementations of technologies such as VSATs, third party investments in the telecommunication industry, and the emergence of VoIP met with the strictest of policy constraints and characterised the continent’s earlier struggles (Jansen, 1996). Early adopters of email infrastructure argue that its development was met with mixed feelings by the authorities, who claimed that such networks resulted in high expenses in telecommunications.¹

High tariffs characterised an era where policy was lacking: this necessitated the creation of ad hoc groupings of actors willing to address the widening digital gap. National groups such as “Bringing the Internet to Ethiopia (BITE)” sought to address policy constraints such as the Post, Telegraph and Telephone’s (PTT) clamp down on third party service providers, and a national cross-sectoral Internet working group in the Gambia planning to ensure the increase of local content along with access to international content. The East African Internet Association (EAIA) recorded the beginnings of regional interest groups collaborating to “improve their service, share resources and ultimately to set up an international hub to share leased line costs” and a shared Internet hub facility for its members in Kenya, Uganda and Tanzania (Jansen, 1996). Multilateral and international aid agencies such as UNESCO, IDRC (and the Bellanet Secretariat), UNECA and ITU formed the African Network Initiative (ANI) to study future information infrastructure building activities in Africa.

These emerging developments in the telecommunications and infrastructure sectors led to the establishment of the African Information Society initiative (AISI) initiated by African ministers of economic, social development and planning and spearheaded by UNECA in 1996 (see BOX on AISI and NICI). AISI became the policy vehicle for information and communication policy in Africa. With a mandate to support policy promulgations across African countries, it began the process of national consultations with governments and local interest groups leading to a massive policy drive by the UN Economic Commission for Africa’s (UNECA) National Information and Communication Infrastructure (NICI) project (Economic Commission for Africa (2007), in collaboration with ECOWAS (UNECA 2007), countries in West Africa for the formulation of new

¹ “Internet Development in Africa: The Case of Cameroon” discusses the challenges of deploying email in the School of Polytechnic, Yaoundé, Cameroon.

ICT policies. The African Information Society Initiative (AISI) was established to address the challenge of the growing digital divide:

AISI provides the roadmap to guide African countries in addressing the challenges of the emerging globalization and the information age by developing and implementing NICI policies and plans within the wider national socio-economic development objectives, strategies and aspirations. NICI provides the framework within which ICT's are mainstreamed into the national planning process in order to facilitate the achievement of national and sectoral development priorities and objectives. It is an ongoing process through the planning, implementation and regular evaluation of programmes and projects developed according to the needs and priorities of each country (Economic Commission for Africa, 2007).

Box 1: African Information Society Initiative (AISI) and the National Information and Communication Infrastructure Plan (NICI)

African ministers responsible for economic and social development and planning adopted the “Building Africa’s information Highway” Resolution 795 (XXX) of May 3, 1995 which called for the setup of a high level working group on information and communication technologies in Africa. This group produced a plan of action known as an “An Action Framework to Build Africa’s Information and Communication Infrastructure.” This framework was presented to the same conference of Ministers in May 1996 resulting in the adoption and launch of Resolution 812 (XXXI) of May 1996 called the “Implementation of the African Information Society Initiative” (UNECA, 2003).

African Heads of States adopted the plan which was subsequently endorsed by all African telecom ministers in the same year who were convinced that accelerating Africa’s development plans, stimulating growth, providing new opportunities in education, trade, healthcare, job creation and food security, can be aided by an African information society.

Included as a recommendation from the Ministers’ conference was a call for the formulation of a national information and communication infrastructure (NICI) plan in every African country. The plan was intended to be “driven by the national development challenges such as debt management, food security, health, education, population, unemployment, job creation, industrialization, land reclamation, water, tourism, and trade. “ One of its emphases was to “provide information and communication infrastructure for government, business and society (UNECA, 2003).”

The NICI process is different from other state-level policy initiatives in that it seeks to attract input from a much wider array of stakeholders. Policies are furthermore designed and enacted on the national rather than the regional level, but with the support of the resources of the NICI process. In 2010, Ghana is set to conclude an ambitious policy program that will touch on the use of ICTs in government, development, education, the private sector, commerce, community programs, health, infrastructure, law, science and cyber-security (UNECA, 2003). Quite a few of these policies are linked to development initiatives such as the MDGs or the African Peer Review Mechanism (See Box: African Peer Review Mechanism). The NICI process also reveals a problem that ICT policy is prone to, as the rapid growth of the ICT field rendered some policies obsolete before they could be implemented. This raises the question of how policies can be broad and flexible enough to not expire too quickly yet still be effective.

Box 2: African Peer Review Mechanism (African Union, 2002)

At the 38th Ordinary Session of the Assembly of Heads of State and Government of the Organisation of African Union, held on July 8, 2002 in Durban, South Africa, the African Peer Review Mechanism was initiated. Within the framework of the New Partnership for Africa's Development (NEPAD), it was created as an instrument voluntarily acceded to by Member States of the African Union as an African self-monitoring mechanism. Its mandate is to ensure that the policies and practices of participating states conform to the agreed political, economic and corporate governance values, codes and standards contained in the Declaration on Democracy, Political, Economic and Corporate Governance. The APRM is the mutually agreed instrument for self-monitoring by the participating member governments.

Its primary purpose is to foster the adoption of policies, standards and practices that lead to political stability, high economic growth, sustainable development and accelerated sub-regional and continental economic integration through sharing of experiences and reinforcement of successful and best practice, including identifying deficiencies and assessing the needs for capacity building.

3.2 The Policy Ecosystem

ICT policy spans institutions, networks and infrastructures as technology's influence continues to become more far-reaching. Souter (2009) asserts that recent innovations have spread into broadcasting, telephony and the Internet. He argues that these technologies are central to contemporary societies, and that they share the same basic technical language and, in some cases, the same equipment. This phenomenon, called convergence, cuts across the broadcast, telephony and Internet business models. As a result, new models of relationships between governments, businesses and consumers have also emerged. Souter further asserts that ICT policy covers these broad ranges of components – “networks, services, markets and the relationships between the different actors

involved in these. While ICT policy is primarily concerned with the ICT sector itself and the services it provides, the increasing importance and diversity of ICTs mean that it also intersects increasingly with other areas of public policy” (Souter, 2009).

This intersection of actors and institutions, in what Vetter & Creech (2008) call the Global Connectivity System, is comprised of information technology, telecommunications and information-content-producing industries, and institutions involved in the allocation of Internet resources, Internet standards, networking standards, international organisations, civil society organisations and end-user institutions.

This convergence of systems, networks of technologies and peoples was not particularly clear during the earlier stages of Internet adoption in Africa. A common thread, however, guided interactivity among stakeholders who were interested in the benefits that the Internet provided. This is evident by the groups in Ethiopia and The Gambia that were mentioned earlier, but also more apparent through regional groupings particularly in the Eastern part of the continent. The East African Internet Association was perhaps the first of such regional groups of infrastructure operators who were planning to “develop a shared Internet hub facility for its members in Kenya, Uganda and Tanzania, a model that could readily be replicated elsewhere in Africa” (Jansen, 1996). This model of collaboration became common for service providers as well as users.

The concern for cooperation between Internet service providers was significant and transcended a number of factors – i.e. sharing the cost of international links (Jansen, 1996) and to peering networks for routing local traffic. Policy debates in the past decade have discussed Internet exchange points (IXPs) and consequently countries’ top level domain names and how their model of management became a part of this ecosystem. The cost of Internet access and associated information and communication technologies was a major deterrent to its proliferation across the continent and thus made up a significant part into policy discussions. One of AISI’s objectives, for instance, was the elimination or the drastic reduction of import tariffs, taxes and other legal barriers to the use of information and communication technologies (UNECA (2003). Early Internet service providers such as AfricaOnline offered high cost Internet access, at USD\$100 a month in Ghana and Cote d’Ivoire, “to those who could afford them” (Jansen, 1996). Senegal offered comparatively lower charges at USD\$20 per month for 4 hours of dialup each month, and USD\$2000 per month for 64kbps leased line. Inter-country pricing structures emerged as a way of comparing the penetration of the Internet in countries and a means of applying pressure on incumbent PTTs to lower Internet access costs. It was not uncommon to hear policy discussions address – alongside

other issues such as infrastructure – best pricing models that obtained in one country and why another country must shift its pricing structure and policy in compliance.²

This collection of technologies, concerns, peoples and processes paved the way for increased dialogue on ICT policy issues including software. AISI was also concerned with the role that software played in national development and ensured its inclusion in policy recommendations to African governments within its NICI process. The creation of the Free and Open Source Foundation (FOSSFA) was in response to some of the policy dialogues that emerged in the wake of civil society dialogue on ICT policy in 2002, and leading up to the first phase of the World Summit on Information Society (WSIS) in Geneva in 2003 (FOSSFA, 2008).

The outcomes of African preparations leading to these summits (ITU, 2002) resulted in a platform where policy could be discussed in a multi-stakeholder fashion and across a broad array of issues. Governments recognised the complementary role of civil society and other actors in driving technological advancements and the impact that ICTs and the Internet had on social and economic aspects of development.

Although multi-stakeholder dialogue had characterised most of Africa's information and communication technology policy space – inclusive of infrastructure, software, and Internet – and leading up to 2003, policy development was deferred mostly to the countries through the promotion of NICI and its implementation mechanism which experienced reduced participation in stakeholders during national policy dialogues in more ways than one.

Africa's participation in the second phase of the world summit in 2005 continued on to the Internet Governance Forum (IGF) – a non-binding, multi-stakeholder dialogue process held each year from 2005 to 2010. Regional multi-stakeholder Internet policy sessions began to gain ground in East Africa (EAIGF, 2010) and in West Africa (WAIGF, 2010) in 2008 following the formats of the global IGFs. These policy platforms have in recent times matured and have the potential of becoming strong regional spaces for ICT policy dialogue.

² Jansen (1996) writes, "Senegal: This country is one of the best models of national Internet access provision - The PTT operates a full dial up and leased line Internet service, but also allows other organisations to lease a circuit from them to resell Internet access. Charges for the dialup and leased line service are low for Africa (\$20 a month for 4 hours a month dialup, and \$2000 a month for a 64Kbps leased line). Of particular note is the availability of access from anywhere in the country at the cost of a local call via a special number service established by the PTT which can be used by any Internet service provider." (p. 20).

4.0 The State of Internet Public Policy and Development in West Africa

4.1 Telecommunication and Development in the Region

Some of the countries in West Africa are classified according to the World Bank as Least Developed based on their Gross National Income (GNI)³ per capita criterion (See Table 1: GNI per capita (USD, PPP) for West African least developed countries) in comparison to other regions/countries on the continent. Of the 36 countries on the World Bank's list of Highly Indebted Poor Countries that have received full or partial debt relief, most are in West Africa, including Burkina Faso, Cote d'Ivoire, Ghana and Cameroon. On a range of indicators from health and literacy to infrastructure and economic development, these countries consistently rank low. Literacy represents a problem in some of the countries in the region, such as Burkina Faso and Senegal, where only 21 per cent and 36 per cent, respectively, of the adult population is literate. The region has further been plagued with violence and election malpractices, though in recent years, democratic governance has emerged in most of the countries, although not without some challenges. West African countries have made concerted efforts to entrench democratic values.

Table 1: GNI per capita (USD, PPP) for West African least developed countries

| | |
|----------------------|---------|
| Benin | \$1,470 |
| Burkina Faso | \$1,160 |
| Gambia, The | \$1,280 |
| Guinea | \$970 |
| Guinea-Bissau | \$520 |
| Mali | \$1,100 |
| Mauritania | \$1,990 |
| Niger | \$680 |
| Senegal | \$1,780 |
| Sierra Leone | \$770 |
| Togo | \$830 |

Infrastructure in sub-Saharan Africa, including roads, electricity and telecommunication, has faced considerable challenges. A critical lack of both external and internal integration has long been a large

³ The Gross National Income (GNI) per capita is based on the World Bank's operational lending categories (civil works preferences, IDA eligibility, etc.). Source, World Bank Country Classifications, <http://data.worldbank.org/about/country-classifications>

component factor—though far from the only relevant one—in preventing Africa from reaping the advantages of globalization and integration into the global economy.

National telecommunication incumbents have generally been hampered by bad management and poor infrastructure. Fixed-line infrastructure, in particular, is in various states of underdevelopment, with the largest country in the region, Nigeria, having as few as 144,000 fixed line subscribers in a population of 152 million (Table 2: Teledensity (number of active lines per 100 people) and Figure 1: Mobile and Fixed Teledensity in Africa 2005-2010. Source: ITU. *2010 Estimate). Liberia, on the other hand, is doing even worse with a mere 3,000 subscribers in a population of 3.7 million— less than 1 phone per 1,000 people. Burkina Faso, Togo, Liberia and Sierra Leone rank at the very bottom for Internet use in West Africa. Burkina Faso comes as number 150 out of 154 countries in the ITU's ICT development index, which measures the digital divide across a series of indicators like teledensity, computer density and digital literacy (ITU, 2009). Burkina Faso and Mali, being landlocked countries, have been sidelined from broadband connectivity as a result of their lack of direct access to fibre landing stations. Other countries in the region, notably Sierra Leone and Liberia, have experienced bloody civil wars lasting several years that have laid waste to infrastructure and buildings, incurring a huge opportunity cost in terms of lost development at a time when the ICT field was developing fast.

Table 2: Teledensity (number of active lines per 100 people)⁴

| | Fixed Telephone | Mobile Cellular | Internet users | Fixed Broadband |
|---------------------|-----------------|-----------------|----------------|-----------------|
| Burkina Faso | 0.968 | 24.266 | 1.130 | 0.072 |
| Gambia | 2.874 | 84.036 | 7.630 | 0.018 |
| Ghana | 1.122 | 63.384 | 5.440 | 0.115 |
| Liberia | 0.051 | 21.290 | 0.506 | |
| Nigeria | 0.917 | 48.161 | 28.430 | 0.053 |
| Senegal | 2.224 | 55.061 | 14.500 | 0.468 |
| Sierra Leone | 0.576 | 20.363 | 0.262 | 0.000 |
| Togo | 2.700 | 33.048 | 5.384 | 0.041 |

⁴ ITU Data, available at: <http://www.itu.int/ITU-D/icteye/>

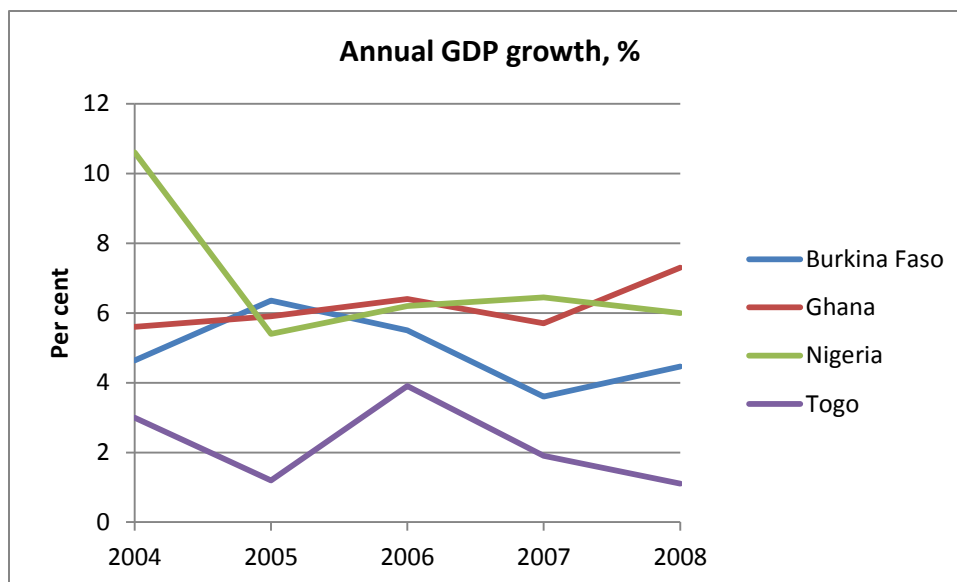


Figure 3: Annual GDP growth for selected countries⁵

It may be tempting to conclude from such dismal numbers that nothing can be done about the situation—that Africa is doomed to be the “Dark Continent” of Western myth (Eko, 2006). Several trends in West Africa over recent years contradict that common belief, however; for example, much of sub-Saharan Africa has experienced brisk economic growth rates since the millennium and West Africa is no exception, with GDP growth above 6 per cent in both Nigeria and Ghana in 2008. In telecommunications, a revolution is taking place. Mobile phone coverage is reaching high levels and the adoption of mobile phones has been swift across most of the region. Africa on the whole is leapfrogging expensive and capital-intensive fixed lines by focusing on expanding mobile phone service. As noted above, 38 per cent of Africa’s population uses mobile phones (World Bank, 2010, “Connecting Africa”), a proportion that is expected to grow to 41 per cent by the end of 2010 (ITU, 2010). Over 65 per cent of the continent lives under the footprint of a mobile network that stimulated over \$56-billion in private sector investments between 2004 and 2008 (World Bank, 2010, *ibid.*). The highest penetration in West Africa is in Ghana, with 63 mobile phones per 100 people; a number that almost compares to the world average of 68 and surpasses Canada’s 47 (CRTC, 2009). Overall, teledensity across West Africa has increased dramatically in the last decade, and recent ITU data show that some of the countries in West Africa are increasing their teledensities at a rate faster than others globally (See box: Telecommunication Growth in Nigeria).

Ghana and Nigeria are better prepared for a digital future than their neighbours, ranking 117th and 130th, respectively.

⁵ World Bank data, available at <http://data.worldbank.org/>

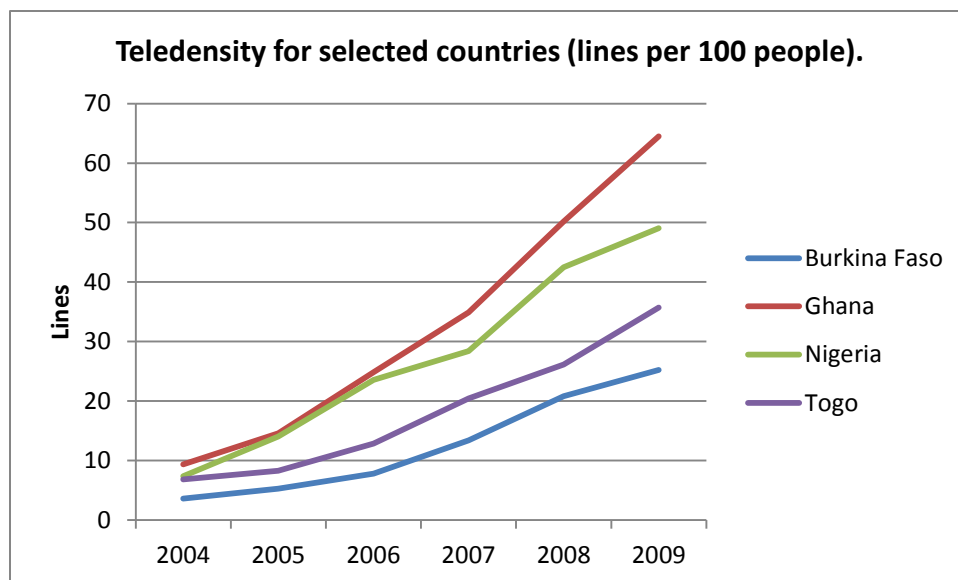


Figure 4: Combined fixed and mobile teledensity for selected countries (lines per 100 people).

Nigeria in particular has further seen enormous growth in Internet use: of the country's roughly 152 million people, more than 40 million are now Internet users. Both Ghana and Togo trail Nigeria, reporting that only approximately 5.4 per cent of their populations are Internet users. Its large pool of Internet users, however, may also prove an advantage for Nigeria: 40 million users represent a vast resource that can create local and localized content, software and solutions, facilitating the Internet experience for others, driving demand for Internet services and enabling economies of scale. Business process outsourcing and call center operations are opportunities that such human resource and growth provides.

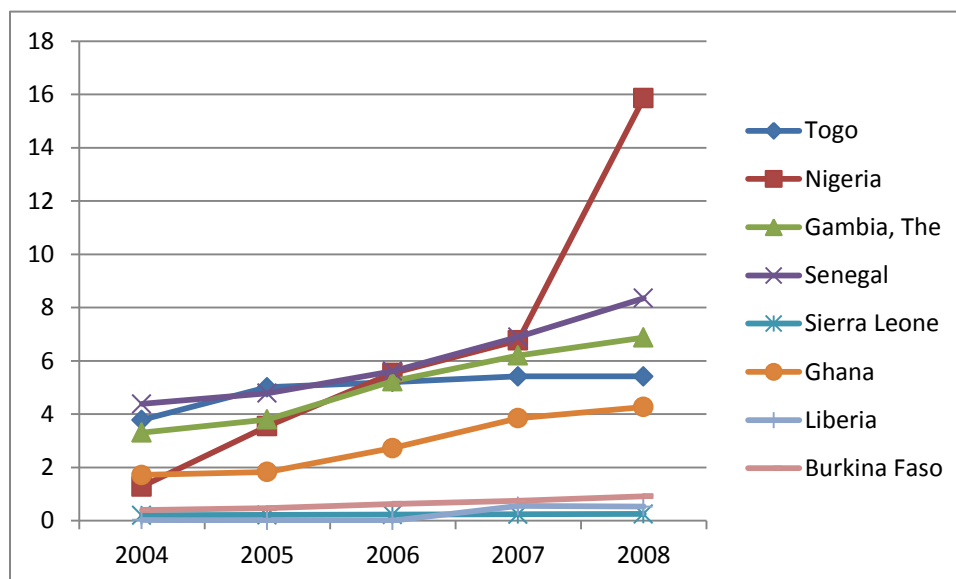


Figure 5: Internet users per 100 people⁶.

Box 3: Telecommunication growth in Nigeria

Since the millennium, Nigeria has become a leader in telecommunication in West Africa. Teledensity has increased exponentially, going from 0.72 lines per 100 people in 2000 to almost 60 lines (combined fixed line and mobile) in August, 2010.⁷ This stands in stark contrast to the very low historical level of telepenetration; even today, Nigeria has less than one fixed line per 100 persons. Overall, however, Nigeria is set to become the largest telecom market in Africa (Radwan and Pellegrini, 2010). The country even joined the space age with a Chinese-built communication satellite that was launched in 2008, though the satellite later failed (“Nigerian satellite fails in space,” 2008). Today, Nigeria has four GSM operators, two fixed line operators and several CDMA operators. The NCC has awarded four 3G licences that will enable high-speed mobile services (Radwan and Pellegrini, 2010). Despite the tremendous growth in telecom infrastructure, Nigeria still struggles in narrowing the digital divide between itself and the rich, industrialized world.

This is not to say that all countries have reached the same level of technological penetration and use. It is clear that West African countries are in different lanes on the ICT development highway, with a vast gap between the best and poorest achievers and between different technologies. Accessing the Internet is still difficult across most of West Africa, as connections—where they exist—suffer from high latency and low speeds. The absence of existing fixed line infrastructure is an enormous obstacle to the expansion of Internet access, and the region has long been underserved by

⁶ World Bank Data. Available at <http://data.worldbank.org/indicator/IT.NET.USER.P2/countries/1w-TG-NG-GM?display=default>

⁷ See data from the Nigeria Communication Commission at <http://www.ncc.gov.ng/subscriberdata.htm> and http://www.ncc.gov.ng/industrystatistics/subscriberdata_files/Telecoms_Subscriber_Information_2001-2009.pdf

submarine fibre-optic cables that connect it to the rest of the world, even though this has been changing in recent times.

An influx of new fibre-optic cables, however, is about to multiply the available bandwidth and offer fast connections to many countries for the first time, changing the Internet landscape.⁸ Even so, there is an acute shortage of backbone networks connecting cities and places away from the landing points for these cables that the World Bank argues are not likely to be supplied by the market alone, requiring significant public investment (Foster and Briceño-Garmendia, 2010). Furthermore, there is no regional Internet backbone in West Africa, so that even communication between neighbouring countries must pass through the submarine fibre-optic cables at a high cost (Williams, 2010). There is also very little focus on critical Internet resources; for example, only Ghana, Cote d'Ivoire and Nigeria have domestic Internet Exchange Points (IXPs). IXPs could be particularly valuable in the West African context, as they will allow companies to save on costly international bandwidth, to increase speeds and decrease latency for end users. IXPs further tend to function as hubs for local ICT communities, fostering local industries of scale (for example in the local accumulation of competence and know-how, benefiting all firms in the area) (Spintrack, 2005), and many IXPs have taken active roles in technical Internet governance through, for example, regional Internet registries, IETF and ICANN. In the face of these benefits, trust and business concerns remain a major challenge to the implementation of exchange points (Spintrack, 2005).

The new fibre-optic cable connections will not be a panacea. They offer the cheapest, fastest and most reliable connectivity, but not all coastal countries are connected to submarine cables, and landlocked countries require inland cables to connect. The question of “right of way” and rights to landing stations to other undersea submarine cable infrastructure and the private sector investments initiatives required to fund them remains a challenge. Satellite will continue to be the most versatile and often the least expensive (or even only) feasible option for remote areas until “last mile” challenges are addressed. As coastal Africa is brought into the global connectivity system, attention must shift to landlocked countries and to domestic conditions: how to bring it to end users and underserved areas. With the nearly total lack of wired infrastructure, the “last mile” problem is particularly challenging in West Africa, because of the cost of stretching wires to individual households that may not be able to afford the initial connection, much less to pay for service at market rates. Yet household access is not a prerequisite for accessing the Internet and is indeed low: people can access the Internet in public places such as cybercafés or a growing number of telecentres. Although recently mobile broadband holds interesting prospects with the increase of 3G and other protocol deployments, it is unclear how many people would access the Internet using

⁸ For a graphical overview of the fibre-optic submarine cables that are currently serving Africa, or will soon be commissioned, see <http://manypossibilities.net/african-undersea-cables>

these options, especially given that an Internet-capable phone would likely be far more expensive than a regular mobile phone used for voice and text messaging.

The Internet (and the policies that support its use) is a part of a dense network of interrelated challenges and opportunities that must be addressed in this region. Once the digital infrastructure is in place across West Africa, there are other challenges such as demand, availability of necessary content, digital literacy skills, and a lack of global confidence in content from this region. Of course, issues such as the deployment of Internet Protocol version 6 (IPv6) presents newer challenges while at the same time it provides opportunities for growth in how new tools connect to the Internet. The dense linkages between different challenges, as well as opportunities for powerful synergies (such as the positive contribution of ICTs to economic growth (World Bank, 2009), dictates the need for holistic policy frameworks for ICTs and Internet issues.

4.2 ICT Policy Development

4.2.1 National Initiatives

The narrative of constant African under-achievement skirts a dangerous tendency in developed nations of characterizing it as a kind of natural, deterministic, “backwardness” that can only be negated by the intervention of benign, Western “developers” (Eko, 2010). This is a familiar dichotomy in the development discourse, and it has also found expression in the ICT field: indeed, ICT development and deployment could be seen as the latest development imperative (or fad) and “silver bullet” imported from the industrialized world. It also piqued the interest of would-be philanthropists from the West. In the mid to late 1990s, for example, the American telecom giant AT&T planned to build a submarine fibre-optic cable ring around Africa (Bray, 2001). It was presented as simultaneously bringing the outside world to Africa and as a brilliant strategic move into what was seen as vast, underserved market ripe for the picking. The planets in the universe appeared to align, creating a classic win-win situation where a corporation pursuing its self-interests could also be a major source of “good.” This ambitious foray of AT&T (and subsequent owners of the project) into African broadband development, however, hobbled along, unfulfilled, for years before finally being scrapped.

Though prompted by western technological advances, Africans themselves (and African entrepreneurship) played an instrumental role in bringing advanced communication links to Africa. African telecoms have taken the lead on laying down their own fibre-optic cables, a development that has recently reached a new pinnacle with the opening up of several new submarine cables that reach West African countries, many of which got their first high-speed connection to the global Internet (Song, 2010). This has been driven to a large degree by African imperatives and entrepreneurship, albeit with strategic partnerships with non-African companies.

Neither national governments nor regional organizations in West Africa have so far played a very active role in policy development, coordination, strategizing or direct investment in ICTs. In most countries, the development of modern ICT infrastructure (in the countries where it has occurred) has likewise been driven almost entirely by the private sector. Urged by the World Bank, the OECD, other international economic actors, continental economic commissions such as the UNECA, and included in policy frameworks such as NICI mentioned in Chapter 2, many sub-Saharan countries have gone through privatization, deregulation and liberalization of their telecom markets and other industries (Berthélemy et al, 2004). Experiences and success-rates in cutting old telecom incumbents loose from state control and introducing competitors in the market vary wildly from country to country, depending on implementation, political climate and other factors (Spintrack, 2005). At its best, telecom reform has been a success. For example, evidence suggests that in Senegal, privatization of the incumbent telecom Sonatel (now owned by Orange) contributed to the rapid improvement and efficiency of their operations, turning the country into one of the leaders in mobile phone and Internet use in West Africa in just a few years (Berthélemy et al, 2004). Sonatel was already one of the most proactive operators in the region even before privatisation—thus giving the reform process a firm foundation for success—but increased competitive pressure after deregulation led to significant price reductions for customers (Akoh, 2008; Berthélemy et al, 2004).

An exploration of other countries shows how the lack of national policies, strategies and priorities may have counterproductive effects or dramatically dilute the benefits of privatization and liberalization. Nigeria and Ghana went through more difficult privatization/liberalization processes where investor confidence was challenged by how the incumbent telecoms were packaged for the market (Alhassan, 2003). Overall, privatization in sub-Saharan Africa has a poor record; the process of liberalization and privatization has been slow and problematic (Spintrack, 2003). In Nigeria the government was slow to facilitate an effective telecom environment. After the National Communications Commission (NCC) was created in 1992, Nigeria's government still took three years (a tumultuous time which transformed the country from a military dictatorship to the country's first stable, representative democracy) to formulate a government ICT policy, which, when it finally arrived, proved to have been made obsolete by the technological development that had taken place in the meantime (Government of Nigeria, 2000). Only after a new policy document introducing full liberalization in 2000 did the market take off (Ndukwe, 2009).

When Ghana reformed the telecom market in 1996, the government was very reluctant to let go of the state telecom, seen as an object of national pride, out of fear that it could alienate voters, and chose instead a timid half-privatization that failed to deliver the strong growth that was expected (Alhassan, 2003). Like many other countries across sub-Saharan Africa, both the Ghanaian government and the national assembly found it difficult to undermine the interests of the

incumbent, which had deep ties to the state. Even after privatization, the telecom sector remained highly regulated, with limited opportunities for the private sector; telecom growth during the first five years after reform likely owes more to pre-reform state investment and the rapidly falling prices of equipment than corporate efficiency. Ghana's national assembly furthermore instructed the incumbent not to carry out unpopular mass redundancies, undermining the privatization process. On top of that, it left the newly created national regulator, the National Communication Authority (NCA), without leadership and a board of directors for four years.

As opposed to many other countries in the region, Togo has not yet reformed its telecom market but is doing better than Burkina Faso in terms of penetration (Table 2: Teledensity (number of active lines per 100 people)), indicating that a botched reform process can be worse than no reform. But effective governance of a highly technical and extremely fast-moving sector like ICT, and the effective balancing of the priorities of vested interests with those of consumers and society as a whole, is a daunting challenge that industrialized nations has problems with as well. The success of Senegal's privatization owes much to idiosyncratic factors that helped negate the consequences of an indecisive regulatory regime and lack of national priorities to achieve good outcomes. Senegal has high Internet penetration rates and low phone charges and has shown remarkable progress in lowering the cost of international bandwidth: yet it achieved such progress without a coherent framework for introducing information and communication technologies (ICTs) (Sene, K. & Thioune, R., (2003). Senegal's success may be attributed to a vibrant participatory Internet community and political goodwill. But political goodwill that supports telecom development is not common across the region.

Privatization does not an active government telecom policy make, and a regulation that is not enforced or implemented does little good. Market reform has occurred against a backdrop of relatively little government engagement. Privatization is no panacea: it depends, for one thing, on a robust regulatory environment and active government policy with carefully designed priorities that fit into a holistic national strategy of development and growth. Effective regulators to oversee the operations and practices of the private telecom market and infrastructure are often missing, along with more comprehensive government treatment of interconnected challenges. Short-term political expediency, squabbles and jealousy (Alhassan, 2003) have been allowed to jeopardize the success of the process, often imposing onerous conditions and demands with little regard for creating a coherent and stream-lined policy environment. In Ghana, for example, there has not been enough separation between lawmakers and the supposedly independent NCA, with the result that the government has frequently meddled in managerial decisions for political reasons. Alhassan (2003) writes about ICT policies in Ghana:

One of the most important elements of effective regulation is legitimacy beyond mere legality. This type of legitimacy is achieved when various constituents of the telecom sector accept the authority of the regulator in matters of arbitration and even opinion. When such legitimacy is lacking, telecom operators are likely to challenge the authority of regulators by appealing to the executive (...) or, through litigation, to the judiciary. Oftentimes, when regulator legitimacy is lacking, corruption finds its way in through the back door.⁹

This paragraph highlights the pervasive problem of poor governance and how it can affect development efforts. Compounding the complexity of getting ICT governance right are very specific goals about using ICTs to achieve socioeconomic development, lower inequality and assist in reaching the Millennium Development Goals. The challenge is to harness the power of the Internet and related technology to achieve sustainable social, economic and environmental development. This must occur in an environment of critically scarce resources, and government policy is necessary to, for example, make difficult decisions about where to funnel scarce resources (when the same funds could be used to build roads, hydroelectric dams or buy retroviral drugs for HIV). In many cases, lack of development elsewhere in society and the lack of critical resources like electricity make ICT deployment difficult. Making trade-offs, declaring priorities and facilitating are fundamental but immensely difficult political responsibilities that require a firm vision of where a nation wants to go in the future and how it wants to get there, but it also requires a lot of resources and a highly competent civil service, resources that are scarce themselves.

After its initial stumbling, Ghana now may be closest of the countries discussed here to having a comprehensive ICT policy strategy, with its World Bank sponsored “e-Ghana” initiative that started in 2006 (World Bank, “eGhana,” 2010). According to the project website, the e-Ghana project is developing policies for a range of areas in what looks like a comprehensive manner, although its focus is mainly on policies with an economic impact. The official goal of the project is to use government policies and capacity building to enable the growth of the ICT sector, to leverage ICTs for socio-economic growth, and to develop the government’s use of ICT tools. In 2010, it was reported that the project is on track to create 6,000 ICT jobs in Ghana before it concludes in 2011 (Nonor, 2010). A word of caution is necessary, however, as little information about this project is available beyond what is furnished by the World Bank. When it concludes, it will be imperative that independent researchers carry out a thorough investigation of the project: its outcomes, stated goals, process by which it got there and lessons that can be drawn from it, both good and bad.

Although Ghana is finally developing the necessary policy landscape to support the deployment of ICTs throughout society and to make use of its potential, overall, efforts to create ICT policies in

⁹ Ibid., 16.

West Africa have been sporadic. This situation is finally changing. A number of regional initiatives are now underway to facilitate a common approach to ICTs across the region to common problems and to facilitate advantages from scale and cross-border cooperation. Smaller nations in particular are interested in pooling regulatory resources (Kessides et al., 2009). One of the most important issues is interconnectivity between neighbouring countries, which have generally had to use expensive microwave relay, satellite or fibre-optic marine cables for such communication. The World Bank goes so far as to assert that “reforms that reduce cross-border transaction costs and improve the performance of ‘backbone’ infrastructure services are arguably even more important for the creation of an open, unified regional economic space than trade policy reforms narrowly defined” (Kessides et al., 2009). In addition, they point out that in the absence of harmonized regulations, conditions can be imposed by national regulators and governments specifically in order to hinder foreign firms from competing in the domestic market. Protectionism of that kind may have its benefits in the ensuing open market and the opportunities for the growth of local businesses, but if not handled properly, it could encourage inefficiency and the creation of an inefficient domestic industry.

4.2.2 Regional Policy Attempts

ECOWAS—the Economic Community of West African States—has appropriately become an active actor in policy coordination and development. ECOWAS is a regional community formed in 1975 as an economic bloc and monetary union between fifteen of the West African countries. It has been instrumental in negotiating regionally agreed instruments and protocols relating to democracy and good governance; mechanisms for conflict prevention, management, resolution, peace keeping and security; and the protocol on free movement of persons, the rights of residence and establishment, among many. The ECOWAS commission has in recent years engaged in harmonising the regional telecommunication codes and it has declared a set of policy goals for regional ICT development and integration in its 2007–2010 strategic plan (ECOWAS, 2007). Beyond merely working on policy, ECOWAS is also deploying a vast, scalable high-speed intranet platform called ECOWAN across West Africa, introducing ICTs as an important tool for customs offices and other government agencies that is envisioned to facilitate a number of different applications, such as customs and trans-boundary trade, across a range of protocols.¹⁰

In 2008, ECOWAS communications ministers passed two acts on cybercrime and personal data protection, attempting to plug a legal void (“Ecowas Telecommunications Ministers Adopt Texts,” 2008). ECOWAS members are required to harmonize their legislation with these acts. The Supplementary Act on Cyber Crime within ECOWAS criminalises a new set of offenses relating to ICT use as well as the use of ICTs to commit traditional offenses. ECOWAS ministers further urged

¹⁰ Information on this topic is scarce; see “ECOWAN talks underway.” and <http://www.uneca.org/e-trade/Presentations/ECOWAS%20Trade-Custom%20Programme%20-%20Mohamed%20Mansaray.ppt>

each country to create cybercrime surveillance centres. The text on personal data protection mandates that each member country must establish mechanisms to protect privacy standards in the collection and use of personal data by private entities. However, despite this effort to give privacy rights to private individuals, a lot more needs to be done in the area of domesticating these instruments nationally and in the digital literacy of the citizens for them to be effective. Privacy laws may have little protective power if they go against cultural norms or if people cannot make informed decisions about what risks to take or not. Industrialized countries are also struggling with these issues. The Internet further complicates the issue, as national privacy regulation has no bearing on applications hosted on foreign servers (notably social networks); censorship and surveillance are possible potential actions but the most direct recourse might be blocking of offending websites, which is not a new step by some countries in response to perceived offenses against domestic laws.

Telecom regulation has also been progressive, although that has recently declined. The West African Telecommunications Regulatory Assembly (WATRA) is a regional regulatory body set up as a platform to harmonise regional regulation (see box: WATRA). WATRA was instrumental in facilitating some of the discussions on the harmonisation of the telecommunication codes in the sub-region and was, a few years ago spearheading the discussions on regulating undersea cables.

Box 4: WATRA

WATRA's mission statement is "to foster liberalization and competition through the establishment of modern legal and regulatory structures for telecommunication delivery in West Africa towards a common, virile common Telecommunications market."¹¹ WATRA exists to coordinate, harmonize and help with the creation of telecom policy by national regulators in West Africa, offering services to its members such as research, statistical data, workshops and conferences.

¹¹ See WATRA's website, at <http://www.watra.org>

5.0 The West Africa Internet Governance Forum (WAIGF)

5.1 About the Survey— Mapping Opinions in West Africa

5.1.1 Overview

In 2010, IISD and its partners carried out a survey across West Africa to gauge the concern and awareness of different technical and social issues related to the Internet, as well as the support for various policy directions and the future of regional Internet governance. This section shows the results of the survey from seven countries— Togo (105), Burkina Faso (56), Nigeria (38), Ghana (25), Sierra Leone (14), Liberia (16), The Gambia (11), and a comparison country in East Africa, Kenya (34). Senegal (1) was removed from the survey as it did not present a sample size sufficient enough to be included in the survey. Empty answers were removed from the data set. The survey was open for a six month period from May to October, 2010.

Mapping opinions about Internet issues serves four purposes:

1. To find out about concerns and support for different policies
2. To increase the legitimacy of the regional Internet governance process, policy recommendations and reports
3. To spread awareness in West Africa about Internet issues and linkages with other policy areas, such as the environment, education and economic development
4. To inform the wider world about the concerns of West Africans.

The survey sought input on three broad areas:

- Prioritization of Internet related issues, from access to net neutrality.
- Level of support for various policy areas, such as the role of the government in increasing digital literacy.
- How the Internet should be governed: support for the multi-stakeholder forum model, including which stakeholders should be included in such a forum.

The survey was conducted as a part of a larger WAIGF process which consists of:

- The selection a national country coordinator responsible for the coordination of the national process including the dissemination of the survey, moderating a national policy discussion listserv;

- The setup of a national listserv, where one did not previously exist, to encourage national level online discussion of Internet policy and ICT related development issues. Burkina Faso, Ghana, Liberia and Sierra Leone explored these discussion listservs as extensions of their in-person conferences and seminars. Other countries such as Senegal continued the use of its existing ICT discussion platform.
- A national multi-stakeholder face-to-face consultation process leading to or immediately following the regional event. Consultations in Senegal and Sierra Leone led to the production of nationally nuanced country-specific policy issues.
- A survey of national interests in Internet public policy issues, which this report is about. The survey was conducted at the national level, and prior to the regional workshop. A draft was presented at the regional consultation to; validate the results and to gather further input that would help in its analysis.
- A regional consultation process to synergise national and regional issues and to promote the sharing of best practices between countries. The regional consultation was held in Dakar, Senegal, where it also served to articulate regional challenges for discussion at the global IGF in Vilnius.
- The participation of stakeholders at the global Internet governance forum where the outcomes of the regional process will be shared and discussed globally. The global policy process also encouraged the learning of best practices for implementation at the national and regional African level.

The survey instrument was disseminated electronically via national discussion lists and it generated a total of 299 responses, including Kenya but excluding Senegal. IISD's goal is to reach people with diverse backgrounds, representing different stakeholder groups— cultural, consumer, technical, not-for-profit, public policy, media, environmental, international development and faith based organizations, and government. The goal was not, however, to reach a sample that can represent the population as a whole but rather the subset representing technologically literate professionals.

5.2 Survey Methodology

5.2.1 Survey Instrument

The survey instrument was developed and delivered online to Burkina Faso, The Gambia, Ghana, Liberia, Nigeria, Senegal, Sierra Leone and Togo. Survey questions focused on Internet development issues of access and use; importance of Internet literacy, role of the Internet in other areas of public policy, regional cooperation between countries in addressing infrastructure and Internet policy gaps, partners and stakeholders responsible for Internet public policy and the most suitable platform for multi-stakeholder policy dialogue.

The survey contained groupings of questions with a Likert-type scale for responses, ranging from “very concerned” to “Not concerned.” A “Not aware of issue” response was included with some of the questions to reduce incidents of ambiguous answers.

The initial grouping of the questions outlined the major Internet public policy issues and their importance to the respondents. Affordable, speedy and quality access; content filtering and blocking of relevant content; what constitutes critical Internet resources to the respondent; privacy and the respondents concerns, are some of the issues discussed in this group of questions. Security; Internet abuse and misuse in relation to spam; intellectual property rights and the perception of respondents about the adequacy of Internet governance also make up this group of questions.

The importance and significance of Internet literacy and public education on issues such as Internet rights, responsibilities, and consequences of online actions were considered in the next group of questions.

How the Internet impacts other public policy areas such as economic development, health, education, employment, arts and culture, broadening citizen participation in governance, on social cohesion and in relation to environmental stewardship were considered in the next grouping of questions. This question provides room for additional considerations of the Internet in these non-technical policy areas.

The survey allowed room for additional information not initially listed in the survey instrument, such as other public, private, intergovernmental and civil society organizations; the mechanism through which public policy dialogue can occur; and whether or not the public policy process should attract a broader community of users besides the technical community that ordinarily assume responsibility for such issues.

Respondents were asked concerning their opinion about sharing their perceptions with similar forums nationally, regionally or in global policy spaces such as the Internet governance forum. Developing country participation at such global forums has been noticeably low in comparison to other regions and continents. The question should test the availability of Africans for discussing their national policy issues at the regional or global level.

5.2.2 Target Population and Choice of Countries

Language specific surveys were administered in French to Togo, Senegal, Burkina Faso, and in English to Nigeria, The Gambia, Sierra Leone, Ghana, and Liberia. A comparative survey was

administered in Kenya¹². National coordinators for the WAIGF distributed the survey instruments to local email discussion listservs; initially to existing national ICT listservs including those specifically created in the context of the project and subsequently to other non-technical cross-sectoral national policy discussion lists, particularly targeting the media, government, and civil society.

A total of 266 non-empty, valid responses were collated from the targeted West African countries, or 33.3% of initially targeted sample size of 100 respondents per country, and 300 responses including Kenya, with an unchanged mean response rate.

Table 3: Total survey responses

| Country | N valid entries | % of total | N excluding Kenya | % of total excluding Kenya |
|--------------|-----------------|------------|-------------------|----------------------------|
| Burkina Faso | 56 | 18.67 | 56 | 21.05 |
| Gambia | 11 | 3.67 | 11 | 4.14 |
| Ghana | 25 | 8.33 | 25 | 9.40 |
| Kenya | 34 | 11.33 | | |
| Liberia | 16 | 5.33 | 16 | 6.02 |
| Nigeria | 38 | 12.67 | 38 | 14.29 |
| Senegal | 1 | 0.33 | 1 | 0.38 |
| Sierra Leone | 14 | 4.67 | 14 | 5.26 |
| Togo | 105 | 35.00 | 105 | 39.47 |
| Total | 300 | 100 | 266 | 100 |

Senegal has a low response rate because of the inability to reach a national coordinator responsible for widely disseminating the survey in local discussion listservs. Response rates for The Gambia, Sierra Leone and Liberia, in spite of the efforts made by the country survey coordinators to disseminate widely, are low and indicative of the challenge of Internet access in these countries. However, these present an opportunity for future surveys and research that is targeted at a much wider West African population which comprises of the fifteen ECOWAS member states.

Although Internet penetration has been on the rise, the growth rate is variable across these countries (Figure 2: Fixed and mobile broadband subscription rate. Source: ITU, *Estimate). Nigeria, Senegal, Ghana, and Togo have better Internet penetration and thus present a better representative sample for the region but their survey response rate shows a contradiction to this trend. While it may be easier to limit and streamline the exercise to countries with more responses, we have however decided to include all the countries in the survey.

¹² This paper particularly focuses on the seven countries in the West African region. Outcomes including discussions do not include the findings from Kenya. A future publication will specifically focus on the Kenyan survey.

5.3 Results/Findings

5.3.1 Demographics

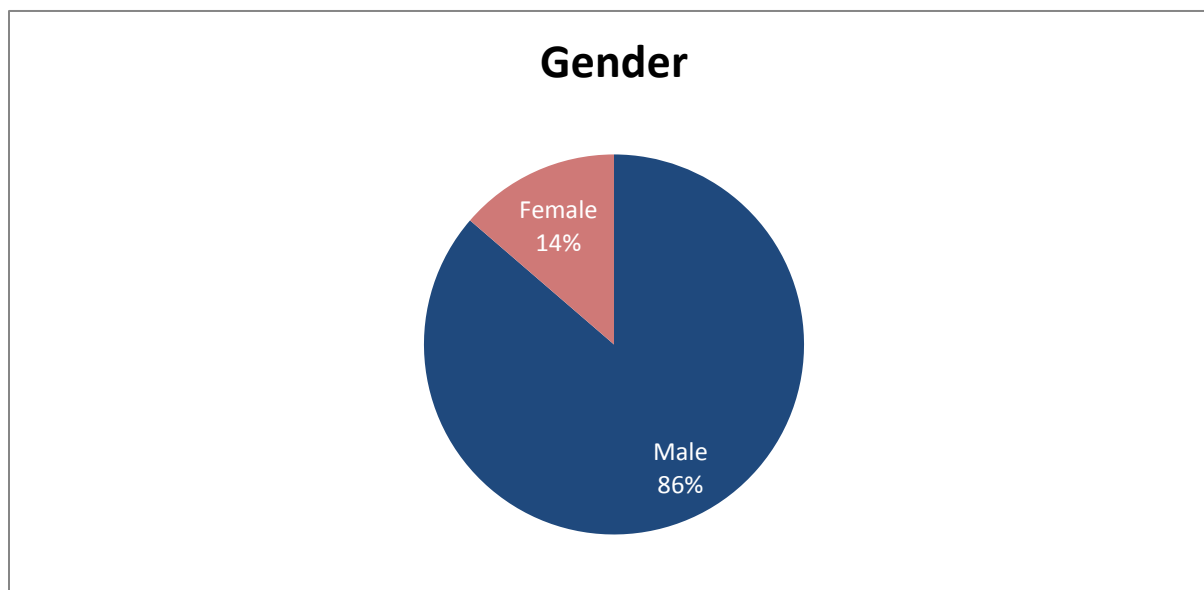


Figure 6: Gender distribution

The survey findings indicate that 85 per cent of the respondents were male. An extremely important consequence is that the male bias quite likely entails that the survey has not captured the concerns of one important stakeholder group: women. The gender bias may have had a significant effect on, among other things, issue priorities and what stakeholders were considered legitimate participants in the Internet governance process. Furthermore, the age distribution (among the 62.8 per cent who reported their age) was skewed towards the age group 18-34; 54.6 per cent were in this group. The next bracket of 35 to 49 has 35.2 per cent of respondents and 9.6 per cent are in the bracket of 50 to 64. Only one respondent was over 65 years of age. This, however, is somewhat commensurate with the age distribution in the surveyed countries, where populations are young and life expectancy is much shorter than in the Global North.

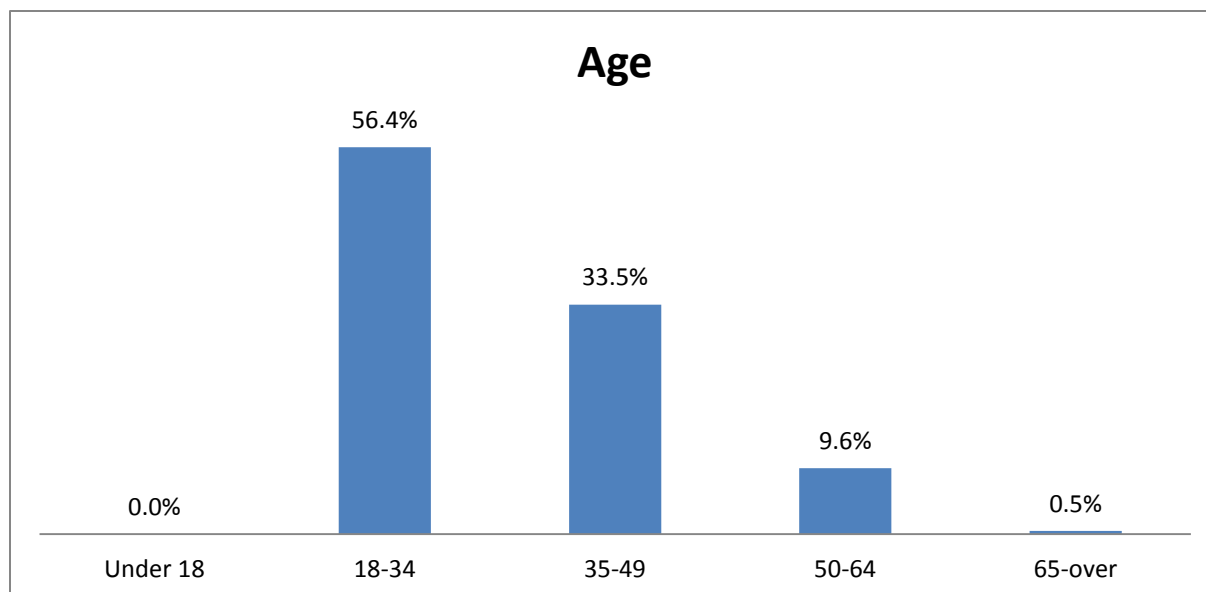


Figure 7: Age distribution

The survey was distributed electronically through contact persons in each country, and all survey responses were collected through an online survey application. We must acknowledge the probability of a positive bias artifact, as the respondents are self-selected and are likely technologically literate as well as in a privileged position with access to an Internet-connected computer as opposed to the population as a whole. As such, we were very likely to reach individuals who are already generally concerned about Internet development and other social issues. As indicated above, however, the survey was designed to measure support from precisely these individuals. Diversity in the affiliations reported by respondents was considered a far more important indicator of the quality of the sample and the ability of the survey to capture the opinions of a wide range of people. On this point, the survey results met our goal quite well, with a good spread among types of stakeholders and focuses of organizations represented. Note that the groupings below are not exclusive and represent how individuals perceive their own role as stakeholders.

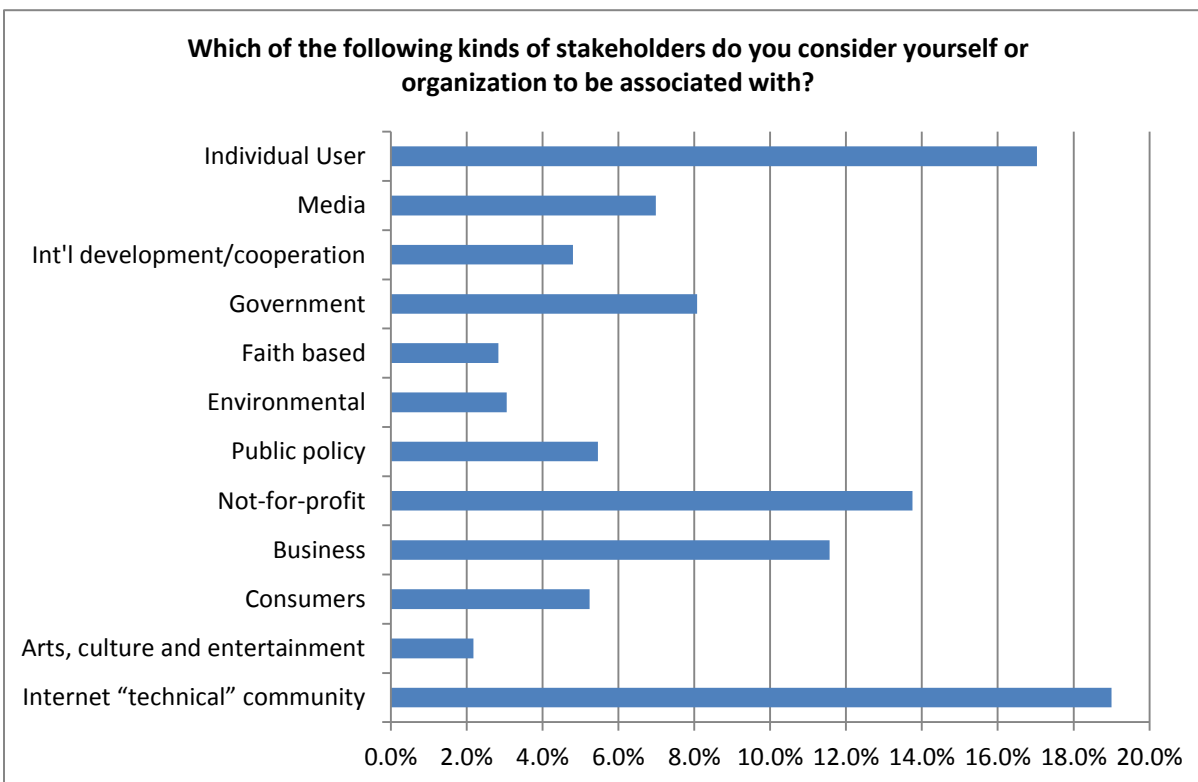


Figure 8: Affiliations of respondents

5.3.2 Key Messages from the Survey

1. There should be national multi-stakeholder Internet governance forums.

Given the non-existent national multi-stakeholder policy formulation processes, there is a clear preference among respondents for national Internet governance forums (IGFs) to discuss Internet policy issues and challenges. The findings indicate overwhelming support and legitimacy for the multi-stakeholder model, and that the forums should include stakeholders from all areas of society, not just technical communities. The conclusion that there is strong support for a national IGF is particularly strong for countries with high response rates, notably Burkina Faso, Togo and Nigeria.

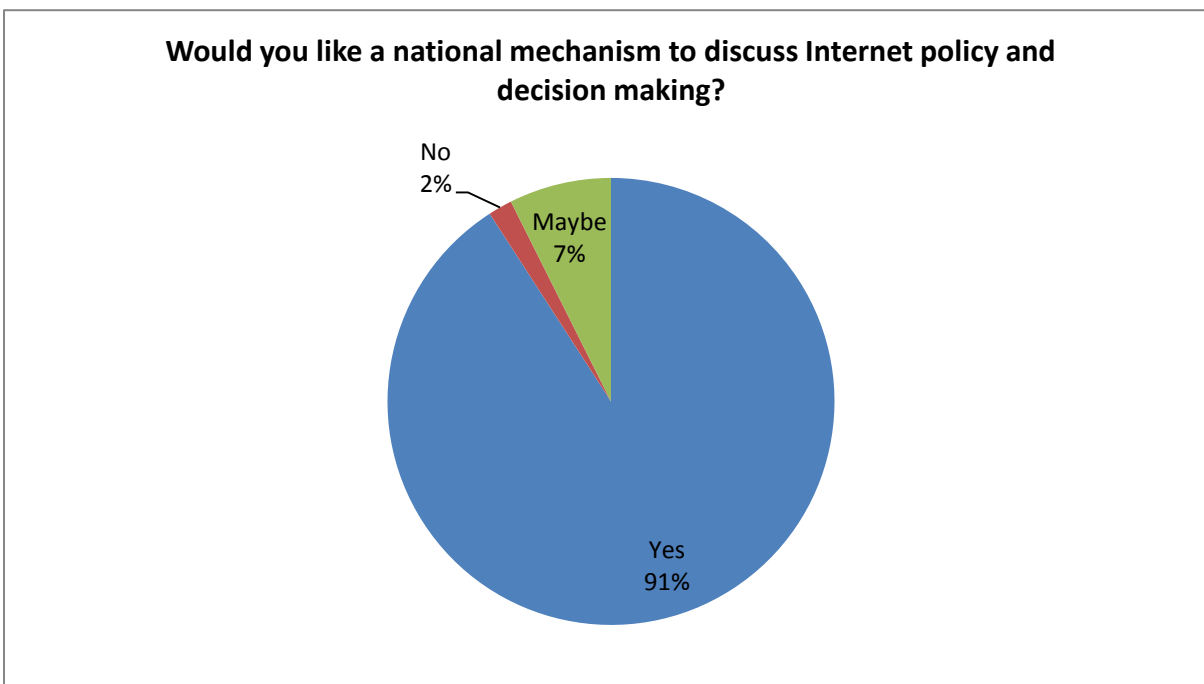


Figure 9: Would you like a national mechanism to discuss Internet policy and decision making?

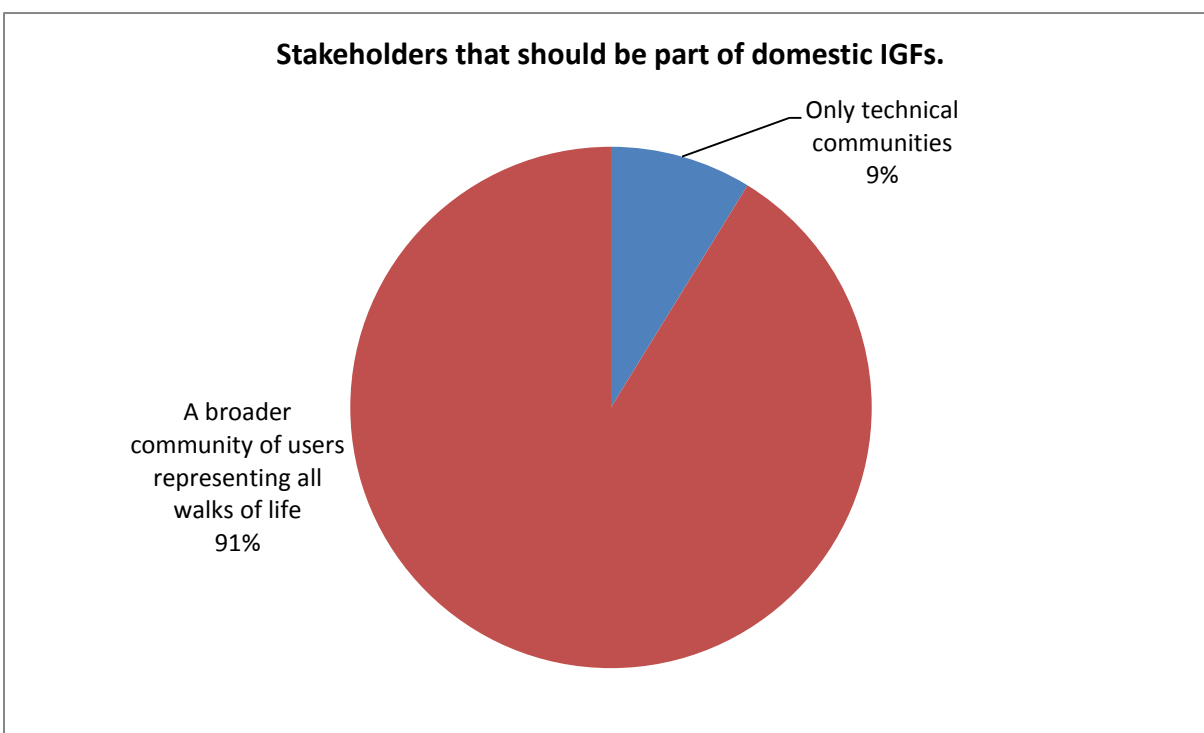


Figure 10: Stakeholders that should be part of national IGFs

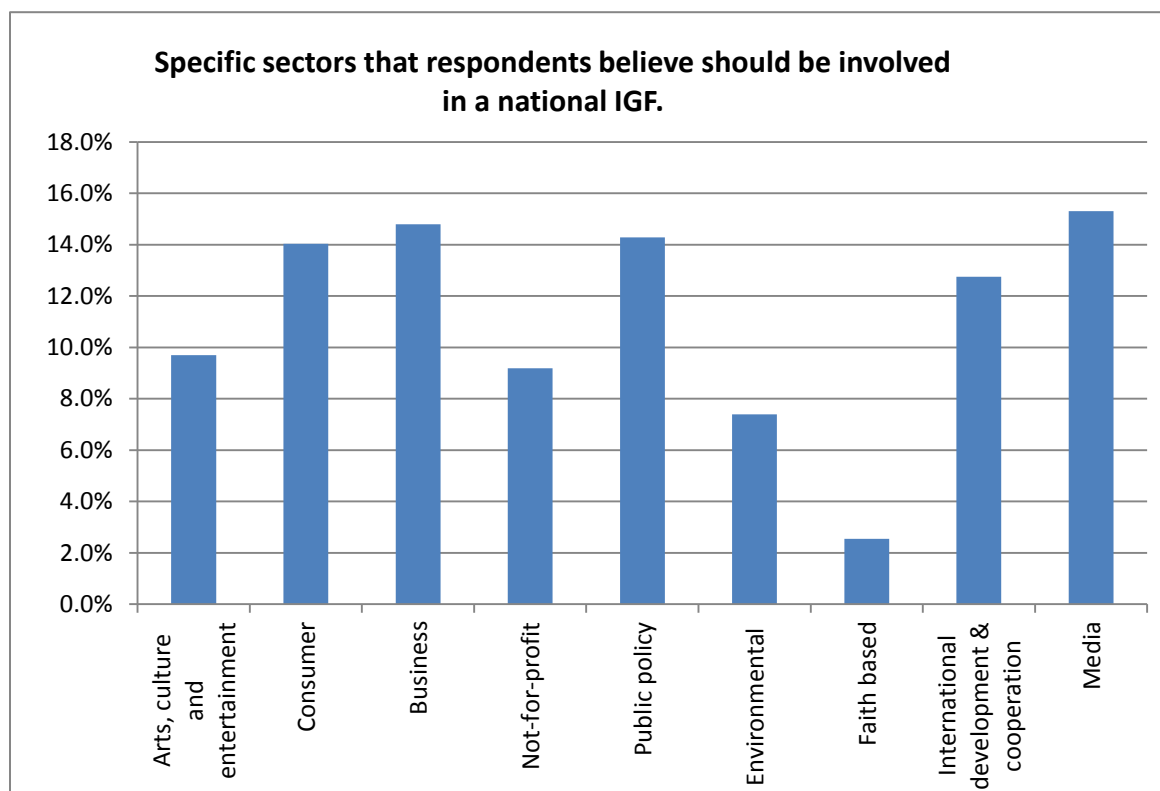


Figure 11: Which of the following kinds of stakeholders do you think should also be encouraged to participate?

A majority of respondents further felt that the responsibility for driving the evolution of the Internet domestically should be shared between the government, private sector, technical developers and users, though there is less agreement at this point. Roughly one third of respondents answered that this responsibility properly lies with the government only. It is nevertheless clear that there is a need for a national discussion arena where all stakeholders should be involved.

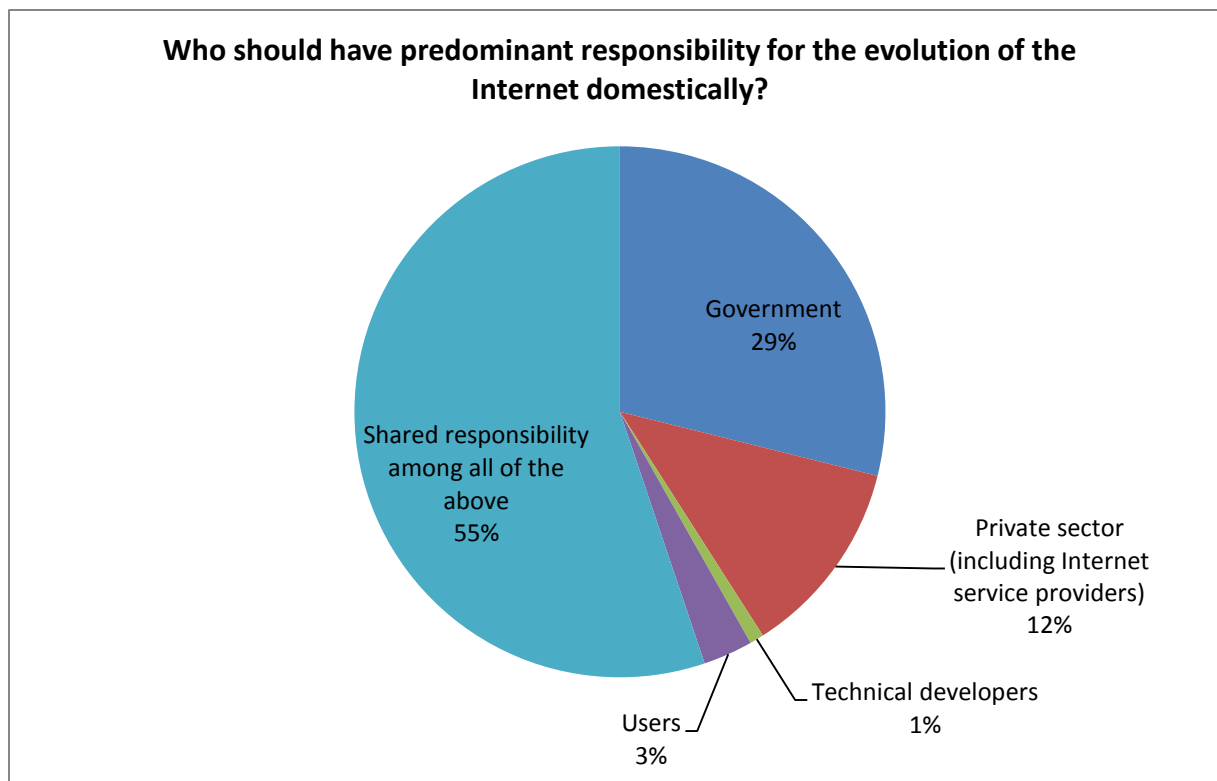


Figure 12: Who should have predominant responsibility for the national evolution of the Internet?

2. Core Internet issues, including access, security, abuse/misuse and privacy, should be priority areas for these forums.

Internet penetration in West Africa is extremely low; not surprisingly, it led all other issues with respect to the priorities of respondents, but the high concern for security, privacy and abuse indicate that West Africans find security and confidence levels in the use of the Internet important.

In general, all issues in the survey were of concern to the large majority of respondents. There were minor variations — fewer respondents were concerned about intellectual property rights (IPR) or critical Internet resources. This may either reflect a lack of understanding of the implications of IPR on Africa's content and heritage on the web or that, for West Africans, all other issues are secondary to the issue of access. The need for Internet governance and Internet neutrality fall in the middle of respondents' interests.

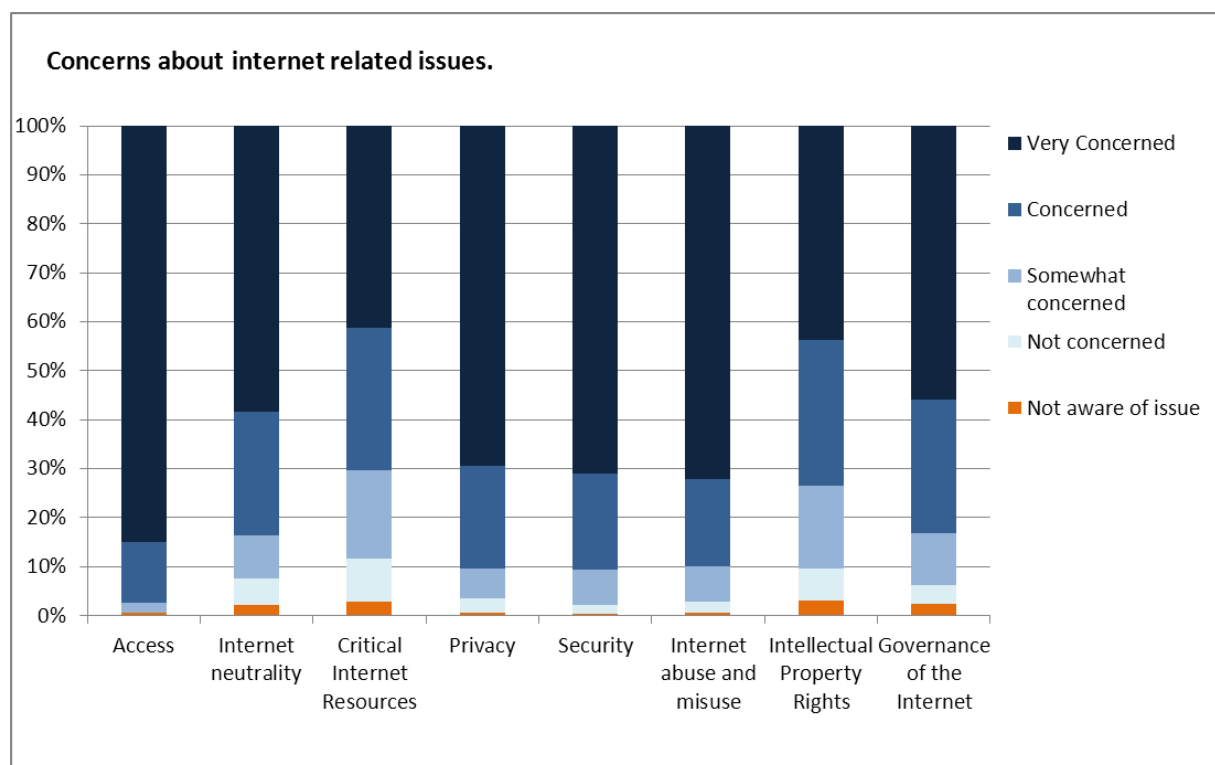


Figure 13: Concerns over Internet-related issues

- The forum should also be concerned about issues beyond the core challenges listed above and should engage with a broad range of policy areas.

Respondents show appreciation of the complex linkages between Internet governance and other policy areas, and that Internet governance processes need to engage with these. Although respondents identify core issues as the foremost priority of national IGFs, these forums must take a holistic approach to the challenges and opportunities inherent in Internet technology, as well as the wider ramifications that the evolution of the Internet may have on society and the environment.

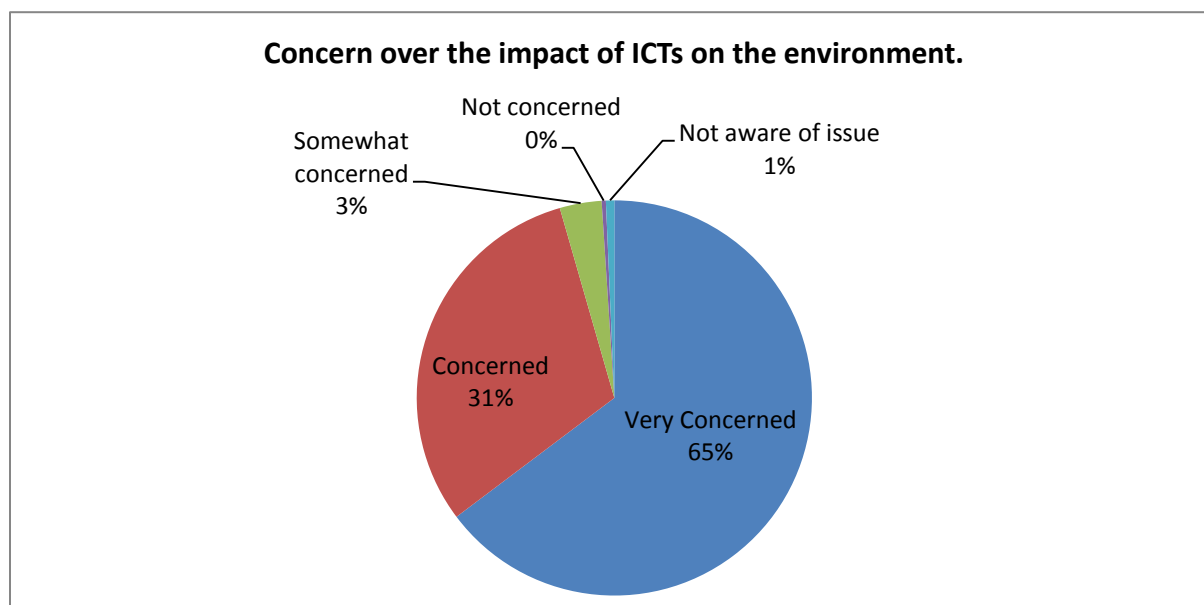


Figure 14: Concerns over the impact of ICTs on the environment

There was also broad-based support for and agreement with the need for public policy to support the development of environmental applications of ICTs, for example by developing reporting tools, applications for disseminating information, and remote sensing (networks of environmental sensors). The survey indicated a high level of concern for the impact of ICTs on the environment, including the negative effects of extracting raw materials for production and the resulting e-waste that comes from broken and obsolete equipment, as well as the carbon emissions that ICT equipment generates during its lifetime.

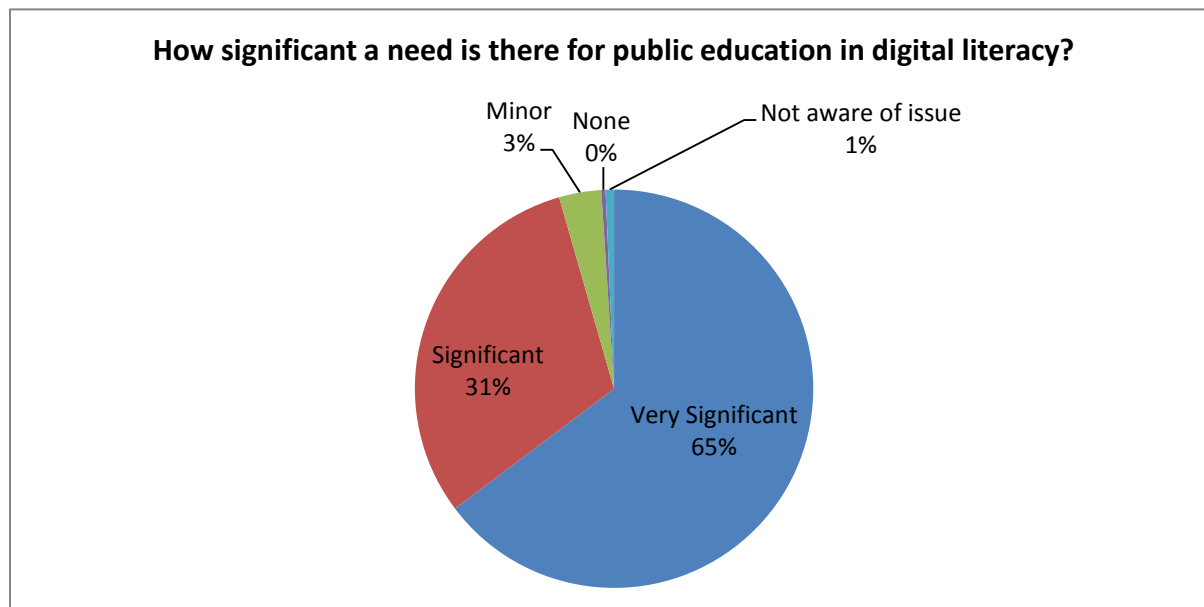


Figure 15: How significant a need is there for public education in digital literacy?

The survey indicated wide agreement with public education to increase digital literacy; the need for public policy to guide and encourage innovation and the development of a digital economy and the need for public policy to guide Internet innovation in other areas of society, such as health, education, employment and culture. Finally, it indicated support for broad-based agreements increasing e-governance, government online presence and tools for citizen participation.

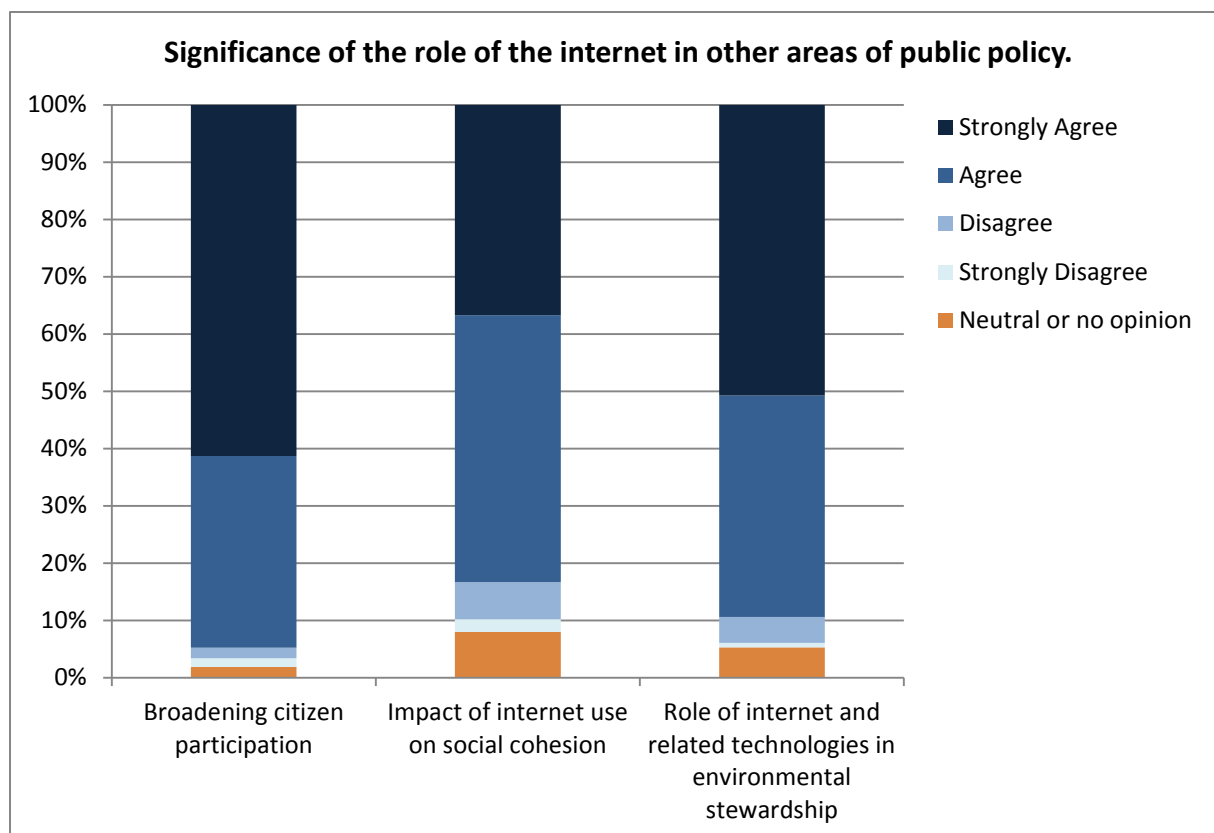


Figure 16: Significance of the role of the Internet in other areas of public policy

4. It is important for West African countries to engage with other nations in the region and the world on Internet governance.

There is a great deal of recognition that events and developments in the Internet area in neighbouring countries matters domestically, and high support for active engagement and knowledge sharing with partners both in West Africa and globally. In other words, respondents agree that many of the issues West Africa face are shared and trans-boundary, and therefore hard to resolve on a strictly domestic basis.

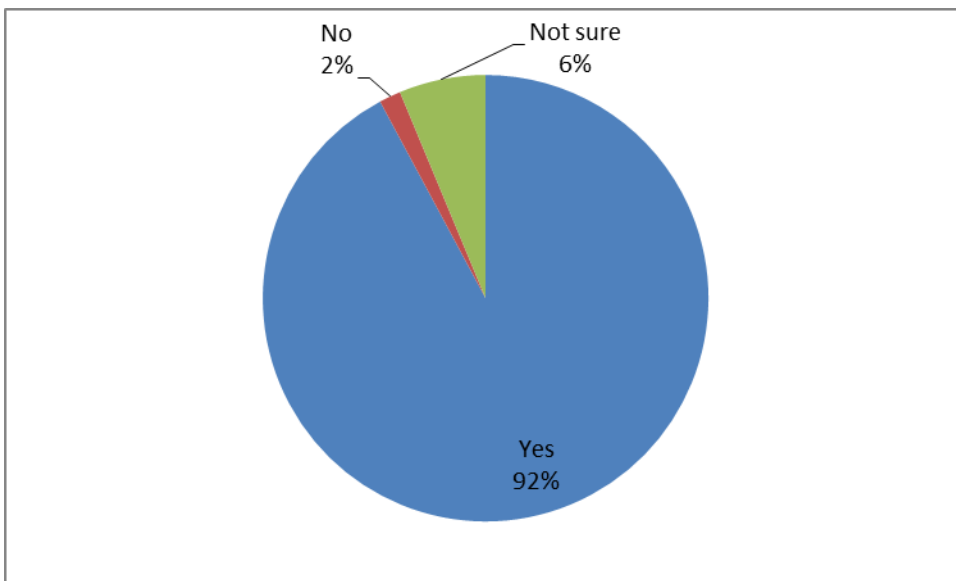


Figure 17: Should national forums share perspectives and knowledge with other similar forums, regionally and internationally?

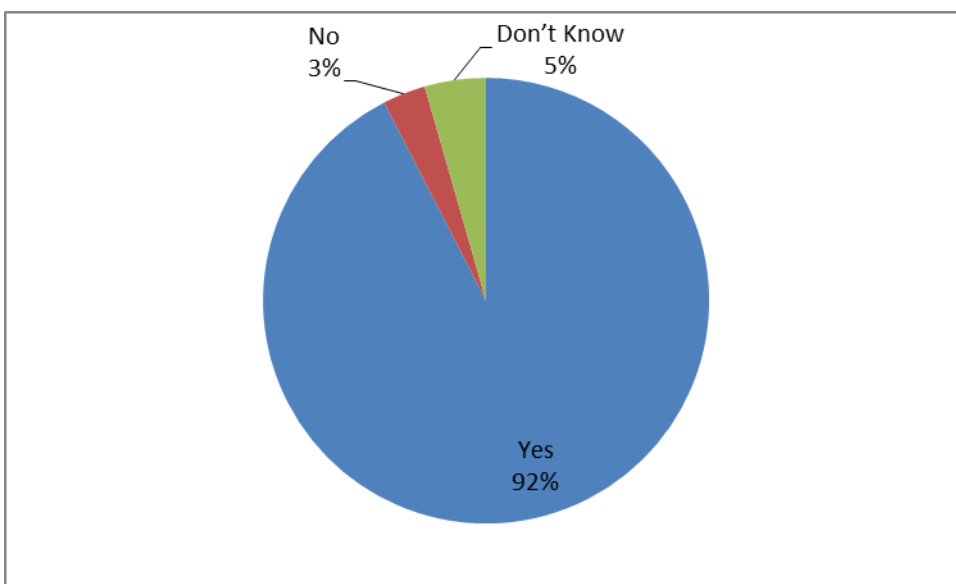


Figure 18: The evolution of the Internet in other African countries is relevant domestically

6.0 Discussion

So far the Internet has been largely the domain of the private sector and technical communities, driven by commercial imperatives, with little regulatory intervention. Government policies and initiatives, where they exist, have been designed and implemented in a top-down manner, but often with the significant influence of vested interests and a focus on political priorities rather than those of society. With closer government attention to ICT issues, there is a danger that these governance practices will only grow worse. Domineering regulatory practices, complete government control and corruption are real concerns. There is further danger that ICT deployment will be seen as purely the central government's domain, increasing dependency and extinguishing initiatives in other societal sectors. The broader implication is that technocrat-led development may exacerbate people's relationship to authorities (whether that is the government or other benefactors) as passive recipients of "development".

But government intervention is necessary. The solution is not to remove the government from the equation but rather to augment the process of knowledge and policy creation, bringing all stakeholders together in open dialogue. This was recognized by the World Summit on the Information Society (2008), out of which the unique bottom-up, multi-stakeholder model of the global Internet governance forum (IGF) emerged in 2005. The IGF, existing as it does at the intersection between the different interest groups that would otherwise lack mechanisms for coequal participation, is unique at the United Nations, which is typically dominated by states insisting on the preservation of their sovereign prerogatives. However, the IGF model has now been tested in many countries and regions, and participants have generally found it to be a highly useful forum and a powerful venue for an evolving policy dialogue.

Following in the footsteps of the global IGF and the East Africa IGF, the West Africa Internet Governance Forum (WAIGF) was thus established in 2008, with the goal of also establishing national forums in all participating countries. WAIGF is run by a consortium led by the Free Software and Open Source Foundation for Africa (FOSSFA), in cooperation with AfriNic, Panos West Africa, the IISD, APC, ISOC and ECOWAS.¹³ The first regional WAIGF event was a one-day discussion held in Saly Portudal, Senegal, in 2008 and it focused specifically on capacity development of the participants on global Internet governance issues. A second event was held in Accra, Ghana, in 2009 in which a number of countries participated. Still, the process was largely separated from the global IGF as there were no structured linkages between both forums. The third meeting of the WAIGF was held in Dakar in August, 2010, with the theme "Promoting [the] multi-stakeholder model for the development of the Internet in Africa." Some of the outcomes of this gathering

¹³ Official information from WAIGF is available at <http://waigf.org>.

indicated a call for more proactive government engagement in the multi-stakeholder Internet policy process which is currently predominantly spearheaded by civil society; and an increase in participation of countries and their stakeholders at the global forum. The meeting represents a new hallmark in the budding Internet governance landscape of West Africa. At the conclusion of the meeting, the assembled participants passed a resolution naming the priority areas for the forum in the future.¹⁴

The WAIGF has the potential to become an important piece in entrenching the tradition of democracy in West Africa, being not only an expression of democracy but a force for the advancement of powerful communication tools that play an important role in supporting democracy, transparency and accountability. WAIGF is young and has particular problems arising from the context of the region it is trying to integrate, with its poor infrastructural development. Two countries—Liberia and Sierra Leone—emerged only a few years ago from bloody and debilitating civil wars.

So far, organizers have worked very hard to make the WAIGF process a success, but they have run into several obstacles, many of which can only be solved by the community as a whole. Challenges and issues that have materialized include the following:

Organization:

The multi-stakeholder IGF process is still novel in the global context, involving a complex task of organizing participants on two levels, national and regional. Though each national IGF will be an independent and autonomous participant in the regional IGF, the initial work of setting it up has been organized by the WAIGF consortium. Although the accomplishments and progress made at the third WAIGF should not be trivialized, there was a notable lack of pre-defined goals (which could perhaps have been negotiated through the WAIGF discussion forum before the meeting), and few specific requirements in terms of the preparation required from participants, especially the national IGFs. With most international forums, the groundwork for substantive progress is laid in the intervening time between each meeting. Participants should then have been able to discuss concrete steps that can be taken. It is only natural, however, that a forum like WAIGF should experience growth pains, and the progress that has been made since the process started is substantial. The main purpose, yielding the most important output of the event, is the dialogue and familiarization that the event enabled, between government officials, stakeholders and national IGF members.

¹⁴ See <http://www.waigf.org/publications/article/waigf-communique-2010>.

Raising awareness:

In a part of the world where access to basic life necessities is not secure and literacy rates may be low (there is great variability between different countries), getting attention for a seemingly esoteric issue like Internet governance may not be easy. In the case of civil society organizations (CSOs), it is easy to imagine that the topic is perceived as lying too far outside of an organization's mission, whether that is social, economic or environmental issues. Civil society may be of the impression that there are more important near-term challenges to deal with. Other constituencies like the technological sector may not be interested in other stakeholders entering what can be highly technical debates. Raising the awareness of stakeholders—not just non-technical CSOs but also government and academia—is imperative for the success of the WAIGF. We have learned that getting the attention of governments, regulators and parastatals at different levels can be very difficult. Unfortunately, there are many competing interests that want the authorities' attention, not least of which is the private sector, which may have an easier time gaining access.

Capacity building and funding:

Although the WAIGF consortium has had access to a good and reliable source of funding so far, the question of a permanent model for self-sustenance has not been addressed. Funding to address additional challenges such as extending this process to other West African countries will remain a challenge if not adequately addressed. Unlike its East African counterparts, where private sector funding has supported its growth, the private sector in West Africa is yet to see the value of the process.

Though officially organized as a consortium, the role of its partners should become more visible for it to remain sustainable. Presently, the WAIGF has been supported by partners who have contributed assistance in various forms, ranging from financial to capacity building support. Partner contributions span funding to capacity requirements for the WAIGF structure. Run as a loose network, this model may cease to function as the WAIGF process grows. It will demand more resources and a formalized secretariat (whether permanent or rotating).

Direction:

Now that the process has been firmly established and national IGFs are becoming a reality, it is important that the consortium and its participants sustain the momentum they now have behind them. The next WAIGF meeting must therefore strive to go a step beyond where it went this year, and hopefully declare concrete goals and initiatives, such as work groups and committees. It has been pointed out that a lot of hard work has gone into capturing the attention of the authorities in many countries — this hard-earned political capital must now be used to maximum effect.

7.0 Conclusions

Remarkable progress has been made in the infrastructure landscape in Africa, broadly, and West Africa more specifically. The region has experienced exponential growth in Internet and mobile communications with substantial impacts on its economic landscape. Education, healthcare and (in several states) the delivery of public service have experienced increasing ICT and Internet uses. Social interaction has an added dimension as a result of emerging tools associated with mobile and Internet uptake. While opportunities have emerged, there have also been substantial challenges to policy formulation process in the continent, raising the possibility that there could be significant diminishing returns as countries scale the technological ladder, from mobile to the Internet to broadband and to advanced applications.

Recognising the benefits of these technologies and their impacts on social, economic and environmental aspects, and considering possible negative trends, certain questions arise in regard to how positive technological impacts can be assured and how these technologies can be further leveraged to maximise the gains in these sectors.

For instance, how can these gains bring about further improvements to economic growth? How do these technologies increase understanding of the environment to better mitigate negative environmental impacts? What future does the African Internet hold and how can these be attained? Who are the additional stakeholders and what needs to be brought on the table for productive dialogue? Do these technologies impact governance and how can they be used to initiate sustainable governance initiatives?

The development of broad-based, multi-stakeholder dialogue may not directly provide answers to these questions, but it does create a basis for collectively exploring these issues in greater depth, and where clearly defined and technologically adaptive strategies and policies can be employed to leverage ICTs and the Internet. This paper ends with a set of possible recommendations of what next to focus on in terms of Internet public policy dialogue in West Africa.

The first recommendation addresses the need for clearly defined policy dialogue processes at the national level. Countries in the West African region can leverage the existing loosely defined structures that have emerged from the regional IGFs but must develop their own structures in ways that they produce more concrete values and benefits, focus on sustainable development, and involve a broad base of stakeholders. Attention must be paid so that such structures do not follow very tightly defined processes that may hamper innovative dialogue, impede creative policy formulation and/or isolate certain stakeholders rather than engender growth and innovation.

The second recommendation is for the development of guidelines and tools that country IGFs can use to build their own surveys, analyse and produce clearly defined outputs and conduct public consultation work in more depth to generate knowledge to inform national development policies and strategies. This will provide broad-based evidence and will generate consent by all stakeholders on Internet public policy issues. One way of doing this involves leveraging their existing online discussion platform and national face-to-face forum as a constant dialogue platform to iteratively feed into the process of policy making while responding adaptively to policy constraints.

The third recommendation focuses on the need for broad-based participation of all stakeholders at the national and regional level. The participation of governments and the private sector, and indeed other stakeholders, in national and regional policy dialogue is intrinsic to national growth and development. Public participation will most likely increase ownership of the policy process, contribute to richer policy debate, and generate permanent dialogue. Private sector partners, government and others should be made aware of these processes, and their contributions sought through ongoing public consultations.

For IISD, the question of what tangible steps need to be employed immediately following the survey and the policy dialog process at WAIGF is important. For instance, how will policy makers and other stakeholders benefit from their outcome? What lessons can be learned? What are the conditions that need to be created for developers to build on past successes and to extend the reach of ICTs and the Internet in ways that their communities and all stakeholders can benefit? How these questions are answered will create more opportunities for small organisations, communities, individuals, large institutions as well as governments to engage in creative and innovative policy processes in support of sustainable development.

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Appendix: Survey Questions

Please see following page.

Internet Policy Dialogue in Liberia

1. Welcome!

Liberian Public Interest in Internet Policy and Decision Making

A survey to explore whether there is interest in increasing dialogue around the evolution and use of the Internet

The growth of the Internet and its increasing role in our daily work and lives is generating a broad range of issues that may warrant more public discussion among users, developers, industry and government. OSIWA, APC, FOSSFA The International Institute for Sustainable Development (IISD), ECOWAS, AfriNIC, Panos and others believe that it is time to assess the value in establishing national and regional fora which Liberians can explore issues around the growth and use of the Internet.

The following survey should only require 10 to 15 minutes of your time.

2. Welcome!

We would like your input on the following:

- Your priorities and concerns around the evolution of the Internet in Liberia;
- Your views about the type of process that might best serve Liberians to advance public debate on these concerns;
- How this process might best be linked to regional and international stakeholders involved in shaping the future of the global Internet.

3. Issues of importance to you: Internet development, access and use

On Internet development, access and use, please rate the importance of the following issues to you.

Internet Policy Dialogue in Liberia

1. On Internet development, access and use, please rate the importance of the following issues to you.

| | Very Concerned | Concerned | Somewhat concerned | Not concerned | Not aware of issue |
|--|----------------|-----------|--------------------|---------------|--------------------|
| Access to the Internet: How concerned are you about access to speedy, affordable, quality broadband across Liberia? | 70 | 70 | 70 | 70 | 70 |
| Internet services provider (ISP) neutrality: How concerned are you about ISPs blocking or slowing Internet traffic related to specific applications or services? | 70 | 70 | 70 | 70 | 70 |
| Critical Internet Resources: How concerned are you about issues such as the domain name system: domain names; Internet protocol addresses, the root servers, technical standards, etc? | 70 | 70 | 70 | 70 | 70 |
| Privacy: Are you concerned about control over online access to personal information? | 70 | 70 | 70 | 70 | 70 |
| Security: Are you concerned about the security and trustworthiness of online interactions with other users and institutions; and about the security of the Internet infrastructure itself? | 70 | 70 | 70 | 70 | 70 |
| Internet abuse and misuse: Are you concerned about the prevalence of Spam, fraudulent websites (phishing), etc? | 70 | 70 | 70 | 70 | 70 |
| Intellectual Property Rights (IPRs) in online content: Are you concerned about how IPRs are protected for online content? | 70 | 70 | 70 | 70 | 70 |
| Governance of the Internet: Are you concerned about the adequacy of current institutions and processes for decision making around Internet issues, including but not limited to technical standards? | 70 | 70 | 70 | 70 | 70 |

Internet Policy Dialogue in Liberia

2. Internet literacy: How significant a need is there for public education on issues such as Internet rights, responsibilities, and consequences of online actions?

Very Significant Significant Minor None Not aware of issue

4. Issues of importance to you: Role of the Internet in other areas of public ...

On the role of the Internet as it supports other areas of public policy, please rate the importance of the following issues to you.

1. On the role of the Internet as it supports other areas of public policy, please rate the importance of the following issues to you.

| | Very Significant | Significant | Minor | None | Not aware of issue |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Economic development and Liberian competitiveness: How significant a need is there for public policy that encourages innovation and growth of the Internet economy? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Internet and other public policy issues: How significant a need is there for public policy to guide Internet innovation in health, education, employment, arts and culture, for example? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Internet Policy Dialogue in Liberia

2. On the role of the Internet as it supports other areas of public policy, please rate how significant the following issues are to you.

| | Strongly Agree | Agree | Disagree | Strongly Disagree | Neutral or no opinion |
|--|----------------|-------|----------|-------------------|-----------------------|
| Broadening citizen participation: Do you think that governments could make more use of Internet tools to involve the general public in decision making on matters of public policy? | jñ | jñ | jñ | jñ | jñ |
| Impact of Internet use on social cohesion: Do you think that Liberians should discuss whether increased participation in online communities is supporting or detracting from individual engagement in local neighborhoods and communities? | jñ | jñ | jñ | jñ | jñ |
| Role of Internet and related technologies in environmental stewardship: Do you think that Internet tools should be explored for public monitoring of the environment; for example air quality, water quality, home energy use, mining (legal/illegal), oil exploration, etc? | jñ | jñ | jñ | jñ | jñ |

3. Impact of Internet and related technologies on environment: How concerned are you about e-waste, mining, logging, Carbon dioxide (CO2) emissions of large data centres, generators, factories, etc?

Very Concerned
 Concerned
 Somewhat concerned
 Not concerned
 Not aware of issue

5. Issues of importance to you (continued)

1. Please share any public policy issues missing from the previous two groups of issues.

Issue #1

Issue #2

Issue #3

Internet Policy Dialogue in Liberia

2. There are issues impacting the evolution and use of the Internet in other African countries that are equally relevant and important to us in Liberia (such as having affordable and reliable access). Do you think it important that Liberians engage with other West/Africans in dialogue on these issues as well?

Yes

No

Don't know

6. Institutions and processes for supporting a public dialogue

1. Name up to three Liberian organizations or institutions through which you feel you can discuss your opinions and concerns regarding Internet policy.

#1

#2

#3

2. Name up to three organizations or institutions outside of Liberia through which you feel you can discuss your opinions and concerns regarding Internet policy.

#1

#2

#3

3. Who should have predominant responsibility for the evolution of the Internet in Liberia?

Government

Private sector (including Internet service providers)

Technical developers

Users

Shared responsibility among all of the above

4. Would you like a Liberians mechanism to discuss Internet policy and decision making?

Yes

No

Maybe

Internet Policy Dialogue in Liberia

5. What might that mechanism consist of?

- Blog
- E-forum
- Annual In person event
- All of the above
- Other (please specify)

6. Should a Nigerian forum attract

- Only the Internet "technical" community (applications, standards, infrastructure and service providers)
- A broader community of users representing all walks of life in Liberia

7. Broader community of users

1. Which of the following kinds of stakeholders do you think should also be encouraged to participate?

- Arts, culture and entertainment organizations
- Consumers organizations
- Business
- Not-for-profit
- Public policy organizations
- Environmental organizations
- Faith based organizations
- International development and cooperation organizations
- Media
- All of the above

8. Outreach

1. Please share any stakeholders you feel are missing from your previous selection.

- #1
- #2
- #3

Internet Policy Dialogue in Liberia

2. How should the forum attract all the stakeholder groups you've identified?

3. Should this forum share Liberian perspectives on the evolution of the Internet with other similar forums, nationally, regionally and those being established in other countries and with the United Nations Internet Governance Forum (IGF)?

Yes

No

Not sure

4. How did you learn about this survey?

OSIWA

FOSSFA

Panos

APC

AfriNIC

ECOWAS

The International Institute for Sustainable Development (IISD)

Other (please specify)

5. Any other comments.

9. Thank you for participating

These partners (OSIWA, APC, FOSSFA, ECOWAS, AfriNIC, Panos) are undertaking this survey in conjunction with the International Institute for Sustainable Development (IISD). If you have any questions, concerns or problems in responding to this survey, please contact [bakoh\[at\]iisd\[dot\]ca](mailto:bakoh@iisd.ca).

Association for Progressive Communication (APC), Free and Open Source Software Foundation (FOSSFA) and its

Internet Policy Dialogue in Liberia

partners would be providing a parallel discussion forum where respondents are invited to share their opinions regarding the questions posed in this survey, and share their opinions on the need for a mechanism in Liberia to facilitate discussion on Internet policy and decision making. You can join the discussion by sending mail to [waigf-team@lists\[dot\]apc\[dot\]org](mailto:waigf-team@lists.apc.org).

Please assist us with three final profile questions.

1. Age

Under 18 18-34 35-49 50-64 65-over

2. Gender

Male Female

3. Employment status

Unemployed Retired Employed full time Employed part time Homemaker Student Other

4. Which of the following kinds of stakeholders do you consider yourself or organization to be associated with?

- Internet "technical" community (applications, standards, infrastructure and service providers)
- Arts, culture and entertainment organizations
- Consumers organizations
- Business
- Not-for-profit
- Public policy organizations
- Environmental organizations
- Faith based organizations
- Government
- International development and cooperation organizations
- Media
- Individual User

Other (please specify)

10. End of survey