Economic Commission for Africa
Sub-Regional Office for Eastern Africa (SRO-EA)

AD-HOC Experts Group Meeting (AEGM) on

World Summit on the Information Society (WSIS+5); Outcomes and Perspectives for Eastern Africa

Djibouti, Republic of Djibouti
22-23 February 2011

AD-HOC Experts Group Meeting (AEGM) on

World Summit on the Information Society (WSIS+5); Outcomes and Perspectives for Eastern Africa

**Djibouti, Republic of Djibouti
22-23 February 2011**

Table of Contents

List of abbreviations

AISI	African Information Society Initiative
AU	African Union Commission
CAGR	Compound Annual Growth Rate
COMESA	Common Market for Eastern and Southern Africa
EU	European Union
EAC	East African Community
FDI	foreign direct investment
GDP	gross domestic product
HIPSSA	Harmonization of ICT Policies in Sub-Saharan Africa
ICT	information and communication technology
ICT4D	ICT for Development
IT	information technology
ITU	International Telecommunication Union
MDG	Millennium Development Goal
NGO	non-governmental organization
PC	personal computer
PPP	purchasing power parity
PRS	poverty reduction strategy
PRSP	Poverty Reduction Strategy Paper
SIM	subscriber identity module
SME	small and medium sized enterprise
SMS	short message service
UNCITRAL	United Nations Commission on International Trade Law
UNDAF	United Nations Development Assistance Frameworks
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNESCO	United Nations Educational, Scientific c and Cultural Organization
UN-ESCWA	United Nations Economic and Social Commission on Western Asia
UNIDO	United Nations Industrial Development Organization
USF	universal service or access funds
WSIS	World Summit on the Information Society

1. Introduction

Information and Communication Technologies (ICT) are of vital importance for all human societies, and particularly to the African countries that are confronted with multifaceted challenges which range from the most basic needs such as water, health and education, to major problems that threaten Africa in its very foundation. It is an open secret for anyone that at the basis of all knowledge and understanding, it is the "minor information" that serves as the spark that triggers off any action or undertaking: at the level of the school by easy access to universal knowledge but also in the economic area by providing SMI/SME with tools and databases that enable them to more efficiently negotiate their advantages or on the local, regional or even the international market.

The economic importance of the ICT sector and the performance of all other economic sectors contribute to growth and competitiveness. ICTs confer to the digital economy an importance that is higher compared to the economy traditionally operated. Information and Communication Technologies (ICT) can constitute indispensable tools for poverty reduction, stimulation of economic growth and for ensuring the attainment of Millennium Development Goals (MDGs).

In most cases, ICT is considered as the tool that contributes to the attainment of development goals, and not as a distinct sector. Therefore, the mobilization of each and every one to embrace the use of Information and Communication Technologies is an imperative that requires concerted efforts at the global level.

Box 1: Role of Information and Communication Technologies

"We have said it time and again that the role of ICTs in development at the national, regional and continental levels, and particularly in creating wealth, jobs and reducing poverty, has hardly been overemphasised. Disease, illiteracy, poverty and other scourges are tough social challenges that need to be addressed head on if we expect to achieve satisfactory living standards for all. In this regards, ICTS happen to be a powerful instrument to address some of these challenges".

Speech by His Excellency Paul Kagame, President of the Republic of Rwanda at the official opening of the Regional Summit on Investments in ICTs, held at Kigali, Rwanda, 4 and 6 May 2006.

It is in this context and with the view to reducing inequality between the inhabitants of the planet in the area of access to information that the UN organised the World Information Society Summit (WISS) to enable Heads of States and Government to reflect on the challenges of information and communication technologies.

The World Information Society Summit was organised in two phases. The first Summit was held in Geneva from 10th to 12th December 2003 and led to the adoption of a declaration of intent and an Action Plan to be undertaken. The second phase of the Summit was held in Tunis from 16th to 18th November 2005.

Africa is the first region of the world to have a regional structure, namely the African Information Society Initiative (AISI) that was adopted in 1996 by the Ministerial Conference on the ECA economic development plan, which was approved by African Heads of State the same year.

Box 2: The African Information Society Initiative (AISI)

The AISI, a common initiative for Africa aimed at bridging the digital divide, was approved at the Conference of Ministers of the Economic Commission for Africa (ECA) in May 1996 and ratified thereafter at subsequent summits of Heads of State of the Organisation of African Unity, particularly at the G-8 Summit of 1997. A multitude of practical activities have been carried out in the following areas:

- Creating political awareness
- Training and capacity building
- National information and communications infrastructure (NICI) plans
- Development information
- Sector-based applications
- Democratisation of access to the information society.

The continent participated actively in this Summit so as to address challenges related to the information Society. In addition, ECA encouraged African countries to prepare their vision of the WISS through online discussions with all community actors of the information society, through training workshops for the civil society, parliamentarians, media professionals and African universities.

The year 2010 marks the midpoint of the period between the phase of the Tunis WISS (2005) and the year when the targets set by the WISS (2015) must be attained, which year has also been identified as the target for achieving the Millennium Development Goals (MDGs). What stock must the WISS take at the half way mark between 2005 and 2015? It is in this context that the SRO-EA carried out this survey on the progress made in the implementation of major orientations of the Tunis Agenda in the framework of a global assessment, planned for the year 2015.

2. Methodology

This survey is based on the concept of the WISS as well as principles and challenges that are linked to it. The present WISS document will examine the progress made by countries of the Sub Region in the attainment of objectives related to connectivity and the implementation of 11 major directives of the WISS that were defined during the 2005 Tunis Summit. This report will also identify the new challenges and opportunities on the basis of the needs identified in the Sub Region.

The methodology of the survey includes:

- Analysis of documents from various sources;
- Interviews with public authorities in charge of ICT policies, the private sector, the civil society, etc.;
- Follow-up correspondence by email with important actors concerned;
- A survey questionnaire was sent to member States.

3. The WISS Process

The World Information Society Summit (WSIS) is a world forum organised by International Telecommunication Union (ITU). Its objective is to reduce the inequality existing between the inhabitants of the world with regard to access to information through new communication technologies and in particular access to Internet. It adopted a Declaration of Intent and an Action Plan. The first phase of this Summit was held in Geneva, Switzerland, from 10th to 12th December 2003. Its second phase was held in Tunis, from 16th to 18th November 2005.

3.1 Objectives, Goals and Targets of the WISS

The objective of the WISS is to develop common understanding and a common vision of the Information Society and to elaborate a strategic action plan that would enable the implementation of this vision on the basis of concerted development prepared on the ground: Major issues are directly linked to changes that have taken place in the wake of the advent of the Information Society. The WISS offers an exceptional opportunity to all major decision-makers to come together to try to better understand the "digital" revolution and its impacts on the International Community so as:

- To agree on basic principles of the information society at the global level.
- To adopt an action plan to translate the vision into a reality.
- To adopt a new approach of the organisation of the Summit that reflects the rules of the 21st Century multilateral governance.

3.2. The Tunis Summit

The second phase of the Summit, hosted by Tunisia, from 16th to 18th November 2005, was attended by 23,000 participants and was characterised by massive presence of the African continent both at the level of Governments, the civil society and the private sector and media, and at the level of technical experts.

This is a testimony of the interest that the International Community attaches to issues and topics that were to be debated during the Summit. As for the objectives of the Tunis Summit and especially the issue of financing of the reduction of the digital gap between countries in the Northern Hemisphere and countries in the South, the International Community adopted certain measures, which included, in particular, the launching of a 100 dollar laptop computer for children, and the initiative taken by the International Telecommunication Union (ITU) to connect to the Internet network about 800,000 African communities and villages by 2015, in addition to the adoption by the Summit of the principle of the creation of the Digital Solidarity Fund. Concerning management of the Internet, which was the second major objective of the Tunis Summit, it should be noted that a proposal was adopted to establish a Global Forum that will bring together Governments, States, organizations and components of the civil society to discuss the regulation of Internet.

Under the auspices of the UN, this process triggered a debate on the creation of an international framework that will be tasked to reflect on the impacts of the Internet on pub-

lic policies. The Summit enabled the creation of some dynamics in the decision making through increased effective involvement of the civil society. Decisions and recommendations from the Tunis WISS are contained in two documents, namely ''The Tunis Commitment'' and ''The Tunis Agenda''. These documents are currently implemented at the international, regional and local level to institute the foundations of the Information Society.

3.3. Africa's participation

Particularly concerning Africa, the continent was able to, in spite of the diversity of its components; realize the fact that the development of the Information Society was indeed a concrete and current reality and not a remote perspective.

The African proposal on the creation of the digital solidarity Fund, on the way to address gaps and dysfunctions of existing mechanisms to reduce the digital gap was without doubt one of its rare concrete results.

3.4. Major Orientations

The major orientations were defined by the Tunis summit and were coordinated and moderated by International Agencies of the UN System generally specialised in the sector concerned.

Major orientations	Possible Coordinators/Moderators
C1 The role of public institutions in charge of governance and all other stakeholders involved in the promotion of ICT for development	ECOSOC/UNITED NATIONS REGIONAL COMMISSIONS ITU
C2 Information and Communication infrastructure	ITU
C3 Access to information and knowledge	ITU/UNESCO
C4 Capacity building	UNDP/UNESCO/ITU/UNCTAD
C5 Create confidence and security in the utilization of ICT	ITU
C6 Create enabling environment	ITU/UNDP/UNITED NATIONS REGIONAL COMMISSIONS /UNCTAD
C7 ICT Applications 1. e-administration 2. e-commerce 3. e-learning 4. telemedicine 5. e-labour 6. e-ecology 7. e-agriculture 8. e-science	• UNDP/ITU • WTO/UNCTAD/ITU/UPU • UNESCO/ITU/UNIDO • WHO/ITU • OIT/ITU • WHO/OMM/UNEP/UN-Habitat/ITU/ ICAOICAO • FAO/ITU • UNESCO/ITU/UNCTAD
C8 Cultural Diversity and identity, linguistic diversity and local contents	UNESCO
C9 Media	UNESCO
C10 Ethical dimensions of the information society	UNESCO/ECOSOC
C11 International and regional Cooperation	UNITED NATIONS REGIONAL COMMISSIONS/ UNDP/ITU/UNESCO/ECOSOC

3.5 Establishment of an Internet Governance Forum

The Tunis Summit devoted its efforts to the implementation of the Geneva Declaration and to enhance discussions in the area of more efficient governance of the Internet, especially through the democratization and an internationalisation of the functioning of ICANN. Therefore, the Internet Governance Forum (IGF) was established. This general objective of the Forum is to search for a multi-partner consensus on the Internet governance.

Every year, the forum hosts individuals and legal entities involved in various sectors in the entire world. The meeting is open to all organizations accredited by the World Information Society Summit (WISS) and to other institutions and people recognized for their expertise and their experience in issues linked to internet governance. The first plenary conference was held in Athens in October 2006 and the fifth meeting was organised in Vilnius (Lithuania) in September 2010.

Table 1 : Action Programme of the Internet Governance Forum, 2006-2010

Thematic Areas	2006	2007	2008	2009	2010
Opening Respect of private life	Opening	Opening -	Promotion of cyber security and confidence	Opening, respect of private life and security	Opening, respect of private life and security
Access Diversity	Access Diversity	Access Diversity	The next Billion	Access and Diversity	Access and Diversity
Essential Internet resources		Essential Internet resources	Management of essential Internet Resources	Management essential Internet des Resources	Management of essential internet resources
New challenges	New challenges	New challenges	Internet in the future	Impact of social networks	Cloud computing
Internet Governance	-	-	-	Internet governance in the light of principles formulated during the world Information Society Summit	Internet governance At the service of development
Achievements	Perspectives	Achievements and Perspectives	Achievements and Perspectives	Achievements and Perspectives	Achievements of Internet Governance and perspectives

The following are the activities that take place during the IGF Workshops: Best Practice Forums, Open Forums and meetings of the Dynamic Coalitions.

The IGF process has been gaining momentum and a number of speakers commented on the valuable outcomes from the Forum and the ever-increasing number of national and regional IGF derived meetings.

IGF has proven to be a great success in creating relationships between members in different areas of society and needs to continue to be refined to create room for broadening the process that enables increased participation and more effective cooperation. The Government of Kenya offered to host the sixth UN-IGF meeting in 2011

4. Access to ICT in East Africa

Important evolutions have been observed in East Africa in the direction towards the edification of the Information society, particularly in the area of infrastructure development, the potentiality of access to technological applications and ownership. This process has been facilitated on the one hand, by the development of mobile services, and of access to Internet on the other.

> ## Box 3: Kenya's Telecom Market to Grow 95 Percent over the Next Five Years
>
> Kenya shows impressive growth rates with significant opportunity. The introduction of new players in the Kenyan mobile market has created strong competition. By the end of 2008, Kenya had more than 15.0 million mobile subscribers, with a mobile penetration rate of 39 percent. The subscriber base is expected to rise to 29.28 million, or 66.7 percent penetration, by year-end 2013. The total revenue of Kenya's telecom market will grow by 42 percent from $1.39 billion in 2008 to $1.98 billion by 2013. Among these, 78 percent of the total revenue to be generated by the mobile sector
>
> Source: Pyramid research

Table 2: Distribution of Fixed Telephone lines in the region

	Fixed telephone lines			Fixed telephone lines per 100 inhabitants		
	(000s)	(000s)	CAGR (%)	(000s)	(000s)	CAGR (%)
	2004	2009	2004-2009	2004	2009	2004-2009
Burundi	27.7	31.5	2.6	0.39	0.38	-0.4
Comoros	15.1	30.8	15.3	2.50	4.55	12.7
DRC	10.5	42.3	32.1	0.02	0.06	28.4
Djibouti	11.1	16.8	8.7	1.40	1.95	6.8
Eritrea	39.3	48.5	4.3	0.91	0.96	0.9
Ethiopia	484.4	915.1	13.6	0.67	1.10	10.7
Kenya	299.3	664.1	17.3	0.86	1.67	14.2
Madagascar	58.7	186.2	26.0	0.34	0.95	22.6
Rwanda	23.0	33.5	7.8	0.26	0.33	5.1
Seychelles	21.3	26.1	4.2	25.81	30.95	3.7
Somalia	100.0	100.0		1.22	1.09	-2.2
Tanzania	148.4	172.9	3.1	0.39	0.40	0.2

Source: ITU World Telecommunication/ICT Indicators Database

The mobile telephone has continued to experience rapid growth in the Sub Region, where the number of subscribers has more than doubled since 2005. In 2009, the penetration of the mobile cellular phone in the Sub Region has exceeded the level of 50 for every

100 inhabitants, to reach 70 for every 100 inhabitants by the end of 2010, according to estimates. Although this percentage remains quite below the average in the developed countries, whose rate of penetration is beyond 100 percent, the rate of progress is still remarkable.

Table 3: Distribution of Mobile Telephone lines in the region

Country	Mobile cellular subscriptions				Ratio of mobile cellular subscriptions to fixed telephone
	(000s)	(000s)	CAGR (%)	per 100 habitants	
	2004	2009	2004-2009	2009	
Burundi	100.6	838.4	52.8	10.10	26.6
Comoros	34.5	128.8	30.2	14.90	7.61
DRC	1'990.7	9'458.6	36.6	14.33	223.5
Djibouti	34.5	128.8	30.2	14.90	7.6
Eritrea	20.0	141.1	47.8	2.78	2.9
Ethiopia	-	14.33	-	107.60	1.6
Kenya	2'546.2	19'364.6	50.0	48.65	29.2
Madagascar	333.9	6'283.8	79.9	32.02	33.8
Rwanda	137.3	2'429.3	77.7	24	72.6
Seychelles	54.4	110.7	15.3	131.36	4.2
Somalia	500.0	641.0	5.1	7.02	6.4
Tanzania	1'942.0	17'469.5	55.2	39.94	101.0
Uganda	1'165.0	9'383.7	51.8	28.69	40.2

Mobile cellular subscriptions: Source: ITU World Telecommunication/ICT Indicators Database

The International Communication Union 2009 Report indicates that Tanzania has the fourth largest number of subscribers in Africa, after Nigeria, South Africa and Kenya. In eight years, the number of subscribers in Tanzania increased from less than 300,000 to more than 14 million, which represents a 25% penetration rate. (At the same time, Kenya had 45.7% of penetration). A report of the International Business Observatory (2009) predicts that the rate of penetration of the mobile telephone in Tanzania will reach 100% by 2013.

The Internet is also particularly significantly growing in Uganda. However, the rate of penetration remains quite low and uneven. By the end 2009, the rate of penetration of the Internet reached 2.98 Percent, whereas it was only 0.01 percent in 2005, an ever increasing number of households are connected to Internet and the broad band is beginning to take ground. According to Global Statistics on the Internet use, Tanzania had 1.3% broadband penetration misses in 2009, goal is reacting very favourably to the new undersea cables of Seacom and EASSy

Table 4:   Internet Usage Statistics for East Africa

EAST AFRICA	Population (2010 Est.)	Internet Users Dec/2000	Internet Users Latest Data (2010)	Penetration (% Population)	User Growth (2000-2010)	% Users in Africa
Burundi	9,863,117	3,000	65,000	0.7 %	2,066.7 %	0.1 %
Comoros	773,407	1,500	24,300	3.1 %	1,520.0 %	0.0 %
Congo, Dem. Rep.	70,916,439	500	365,000	0.5 %	72,900.0 %	0.3 %
Djibouti	740,528	1,400	25,900	3.5 %	1,750.0 %	0.0 %
Eritrea	5,792,984	5,000	250,000	4.3 %	4,900.0 %	0.2 %
Ethiopia	88,013,491	10,000	445,400	0.5 %	4,354.0 %	0.4 %
Kenya	40,046,566	200,000	3,995,500	10.0 %	1,897.8 %	3.6 %
Madagascar	21,281,844	30,000	320,000	1.5 %	966.7 %	0.3 %
Rwanda	11,055,976	5,000	450,000	4.1 %	8,900.0 %	0.4 %
Seychelles	88,340	6,000	33,900	38.4 %	465.0 %	0.0 %
Somalia	10,112,453	200	106,000	1.0 %	52,900.0 %	0.1 %
Tanzania	41,892,895	115,000	676,000	1.6 %	487.8 %	0.6 %
Uganda	33,398,682	40,000	3,200,000	9.6 %	7,900.0 %	2.9 %
TOTAL EAST AFRICA	333,976,722	417,600	9,957,000	2.98 %		8.9 %
NOTES: (1) Africa Internet Statistics were updated for June 30, 2010.						

The mobile telephone and the Internet should currently benefit from the broad band connectivity in Africa, thanks to new investments planned in the area of ICT infrastructure.

5. Connect Africa

Connect Africa, launched in October 2007, was a partnership between multiple stake-holders aiming to mobilize the necessary human, financial and technical resources to correct the disparities with regard to the infrastructure of the ICT. The summit decided to advance the objectives of ICT connectivity to 2012, in order to permit to reach the Millennium Development Goals in 2015 " The attainment and the interconnection of regional information superhighway networks, using the optic fibre, should encourage the process of sub-regional integration by the constitution of a real backbone capable of relaying information at high speed.

A total of $55 billion were committed by stakeholders mostly industrialists, towards the expansion of ICT networks over the next five years.

In response to the commitment from the Summit, a number of projects have been initiated with partners.

Since the "Connect Africa Summit" held in Kigali in October 2007, investments in communications infrastructure alone exceeded eight billion US Dollars. The impact of these investments on Africa has been significant in a number of ways.

- The cost of communications has been reduced by 35% and as a result of this increased investment, reduced costs and expanded coverage and the number of users has increased by over 200%.
- These investments have produced returns of over 40 billion US dollars for the investors.
- These investments have significantly contributed to the expansion of the nations' tax bases, the creation of small and medium enterprises, as well as new jobs.
- This new infrastructure is proving to be a very powerful tool of regional integration as it links individual countries by connecting them to international gateways.

6. Monitoring of Progress Made in the Attainment of Targets of the WSIS

Important evolutions have been observed in Africa in the direction towards the edification of the Information Society, particularly in the development of infrastructure, the potential of ownership and access to technological applications the promotion of policies that stress, the development of technological innovations and innovative services in the development of mobile services and access to Internet.

6.1 Action Line 1: The role of Governments and all stakeholders in the promotion of ICT for the development (C1)

The Action Plan of the WISS indicates that efficient involvement of all stakeholders is crucial for the development of the Information Society and implies their role in all efforts in the area of collaboration and partnership.

ECA continued to help member States that endeavoured to design, formulate and implement national e-strategies. The majority of countries of the Sub Region elaborated plans to implement national ICT strategies, especially national and regional sector plans on the Information Society. Only Somalia has not yet started the process of the development of a policy whereas in August 2009, DRC finalised an ICT sector policy.

In general for most countries, the process has been carried out in the framework of the public/private sector partnership with the involvement of NGO's as well as development partners.

At the sub regional level ICT policies were harmonized (EAC) to define guiding orientations for the market of ICT and to build human and institutional capacity, thanks to the adoption of training measures and knowledge sharing.

Regional Economic Communities (REC) and Intergovernmental Organizations (IGO), supported by specialised international institutions adopted or implemented harmonised policies and regulatory frameworks. However for different countries, the challenge was to integrate the regional frameworks into their national policy, and in their legislative and regulatory agenda.

Burundi: A New ICT development policy that covers a relatively long period from 2010 to 2025 is in the process of being adopted. This new ICT development policy is a logical continuation of another one that was adopted by the Government of Burundi for the period 2007-2011 but whose implementation was delayed due to several circumstances. The new policy covers a relatively long period of 2010 to 2025. The new electronic communications law will be followed by seven draft application decrees whose provisions stipulate

among others universal service, the management of scarce resources and the management of telecommunication networks and services.

The Union of the Comoros: The Government has just elaborated a draft of the new ICT policy that is in the process of being adopted. An organic law governing ICT was adopted in January 2008 and enforced in May 2009. The National ICT Regulatory Authority was established in May 2009. The ICT sector policy in the Comoros must aim at the improvement of the IDI index for the next four years by the improvement of access to communication networks, the liberalization of the sector, promotion of ICT, diversification of services in a competitive environment, through a capacity building policy that is likely to equip the country with the necessary skills in the ICT sector so as to permit the creation of employment and wealth.

Kenya: The Kenya ICT Policy was published by the Ministry of Information and Communications in January 2006 and the Kenya Information and Communications Bill was enacted in February 2006. The vision of the ICT sector is that "Kenya becomes an information and knowledge-based society". Its mission "is to provide information and communication-based solutions and to ensure the availability of efficient, reliable and affordable information communication services countrywide". The overall sector goal of the ICT sector is "to facilitate the provision of equitable and affordable quality information and communication services countrywide ".

Uganda: In Uganda the Government recognized the role of ICT in national development and transformation programmes. During the presentation of the budget for the financial year 2007/2008, ICT was designated a priority sector towards which new resources would be channelled.

Complete liberalization of the telecommunication sector attracted an increased number of investors in this sector. The Government is committed to developing a unifying transmission network of national data which links different regions to the optic fibre cable for the exchange of voice and data with high speed connectivity. This project also includes the connection of all Ministries and Government institutions with the help of the optic fibre technology.

Tanzania: Tanzania has made important progress by adopting a policy and legislative structures that link growth to the development of ICT. In 2003, the Government launched a national ICT policy articulated around a set of intervention areas whose aim is to optimize the use of ICT in the country. The sectors concerned are especially those of ICT strategic leadership, infrastructure, human capital, legal and regulatory framework or universal access to ICT. Tanzania is among the leading African countries that have made considerable progress by choosing to liberalize the ICT sector. Novatec, a major provider of telecommunication solutions based in the United Kingdom, confirms that Tanzania opened its market to a large panel of actors in the public and private sectors. Several bilateral and multilateral agencies interested in finance for development in the ICT sector recognize the viability of the growth potential.

Madagascar: The national ICT policy was developed by the Ministry of Telecommunications, Posts and Communication in collaboration with the United Nations Development Programme (UNDP). The integration of Madagascar into the globalisation process is stated as one of the government's priorities. The vision of the policy is for Madagascar to become a leader in providing high-quality ICT services, which will accelerate the country's economic, social, and cultural development.

Figure 1: Distribution of National ICT strategies
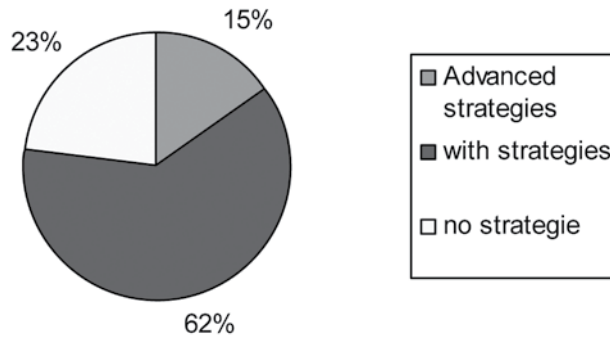
The strategic areas are infrastructure development, promoting content development and applications, capacity-building, and reviewing the institutional arrangements framework. The policy identifies health and education as key sectors. It further identifies the necessity to produce ICT specialists and adjust the education system to meet the requirements of the new generation that utilises ICT facilities. It also proposes to introduce ICTs in all aspects of education and training.

> **Box 4: : Rwanda cited as a « success story » of ICT in East Africa**
>
> The Government of Rwanda is committed to promote the information and communication Technology (ICT) sector, whose aim is move Rwanda from a traditional agriculture-based economy into a knowledge-based economy. ICT can also facilitate rapid growth of foreign direct investment (FDI) enabling global business management along the entire supply-chain through effective information and communication networks. The institutional framework and the ICT strategic areas have been identified and are in effect and have already made several significant achievements towards the development of its ICT to achieve a middle income economy by 2020 and transform its society and economy into an information–rich and knowledge–based society and economy by modernising its key sectors using ICT.
>
> From this strategic focus on ICT, in 1999 the Government adopted a comprehensive plan and policy on ICT. This plan, the National Information and Communication Infrastructure plan and policy (NICI) is to be implemented in five-year phases, 2001-2005, 2005-2010, 2010-2015 and 2015-2020.
>
> NICI II has achieved substantial successes: the National Backbone and Tier 3 Data Centre are about to go live, large numbers of teachers and other groups have been trained in basic computer skills, several government processes have been computerised and are in operation, and a number of individual projects have achieved noteworthy outputs.
>
> Rwanda's National ICT Strategy & Plan (NICI III: 2011-2015) formulation process was officially began in October 2010. A central goal for the NICI-III Plan formulation is to engage Rwanda's population more actively to reflect their real needs and to furnish ownership of the plan and its implementation by the Rwandan.

However, it should be noted that these strategies are often faced with the problem in their implementation, namely: a plethora of objectives and the absence of priorities, the timeframe for implementation, monitoring and evaluation mechanisms and especially necessary financial means to the achievement of actions recommended. In general therefore, little significant progress has been made in the integration of the Sub Region in the Information Society even if some achievements have been made.

6.2 Action Line 2: Information and Communication Infrastructure: Indispensable Basis for an inclusive Information society (C2)

In the Declaration of Principles of the WISS, it is recognized that connectivity plays a central role in the edification of the Information Society.

Eastern Africa possesses major possibilities in the development of a market in the ICT sector. At the political level, there has been commitment to connect African capital cities

and most important towns with broadband infrastructure and to reinforce the connectivity with the rest of the world by 2012. A national and regional plan, are in progress to establish optic fibre networks and radio relay systems. The cost of providing services has been considerably reduced, enabled information and telecommunication technologies to become a mass product.

Map 1: Overview of African national backbone networks (2009)

TE North
2009; 3,100 km
Egypt, France

Caucasus Online Poti-Varna
Late 2008; 1,100 km
Bulgaria, Georgia

IMEWE
2009; 13,000 km
France, Italy, Lebanon, Egypt, Saudi Arabia, United Arab Emirates, Pakistan, India

Middle East North Africa cable system
2009; 3,850 km
Italy, Egypt, Saudi Arabia

The East African Marine System
2010; 4,900 km
Kenya, United Arab Emirates

Eastern African Submarine Cable System
2010; 10,500 km
Sudan, Djibouti, Somalia, Kenya, Tanzania, Madagascar, Mozambique, South Africa

Seacom/Tata TGN-Eurasia
2009; 15,000 km
Seacom: Egypt, Djibouti, India; Tata TGN-Eurasia: Kenya, Tanzania, Madagascar, Mozambique, South Africa

The levels of the capacity of fibres increased 200 times in the last ten years. For example, three submarine optic fibre cables were inaugurated in 2009 and several others should be completed by 2011. The Southern Africa-Eastern Africa optic fibre cable (SEACOM), with a length of 17,000 kilometres was inaugurated in 2009, starting from South Africa, Djibouti, Egypt, Kenya, Mozambique and Tanzania. Uganda and Rwanda, countries without any coastline, are linked to SEACOM by their national backbone infrastructure.

The submarine cable along Eastern Africa and linking Kenya to the United Arab Emirates (TEAMS) was also inaugurated in 2009.

Box 5: The East Africa submarine cable system (EASSY)

With a length of 9900 km, EASSY is a state-of-the-art high speed submarine cable whose objective is to connect about twenty coastal countries and landlocked countries of Eastern and Southern Africa to the rest of the world, thanks to a network of submarine optic fibre cables with broadband and land and relays. In addition, it should be recalled that countries concerned by this project are Djibouti, South Africa, Burundi, Botswana, Eritrea, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Maurice, Mozambique, Uganda, Democratic Republic of Congo, Rwanda, Somalia, Sudan, Swaziland, Tanzania, Zambia and Zimbabwe.

This project, an initiative of the New Partnership for African Development of (NEPAD), whose total cost is estimated at about 300 Million of US Dollars will considerably reduce the cost of telecommunications (2/3), inside Africa and with the rest of the world, which will contribute to the reduction of the digital gap, which gap that has been growing between populations and countries that have access to Internet and others.

A number of Governments (Kenya, Rwanda, Tanzania, Uganda, Burundi, etc.) have either built their own backbone networks or put their existing network assets into an independent agency as in South Africa. In these cases, the Government usually borrows the money to get the national fibre network built and then passes the network assets to another entity to manage.

The Ugandan Government backbone is being built by Huawei with a Chinese loan finance and the first phase is a relatively modest 194 kms, connecting the country's main cities of Kampala, Entebbe, Mukono, Bombo and Jinja. The second phase is a 1,542km network extension that will cover 19 cities including Luwero and Nakasongola.

The Kenyan Government has invested in building a national fibre backbone, referred to as the National Optic Fibre Backbone Infrastructure (NOFBI). The project aims at establishing a national public broadband network with Internet Points of Presence (PoPs) in most district headquarters, including border towns, in order to attract and stimulate private sector participation in the provision of rural telecommunications services.

Rwanda: The physical laying of the optic fibre cable, which includes civil works, laying of ducts and installation of the fibre has been completed also includes cross-border fibre installation at the Uganda and Tanzania borders. The infrastructure will boost access to various broadband services including fast tracking government initiatives like e-Governance, e-Banking, e-Learning, e-Health, and other applications.

Burundi : Backbone System signed in 2010, as a partnership agreement for the installation of an optic fire backbone network that covers the entire territory of Burundi so as to build the capacity of existing submarine optic fibre cables or in the process of being established and to link Burundi with landing points of these cables.

Map 2: Tanzania's Government-built backbone
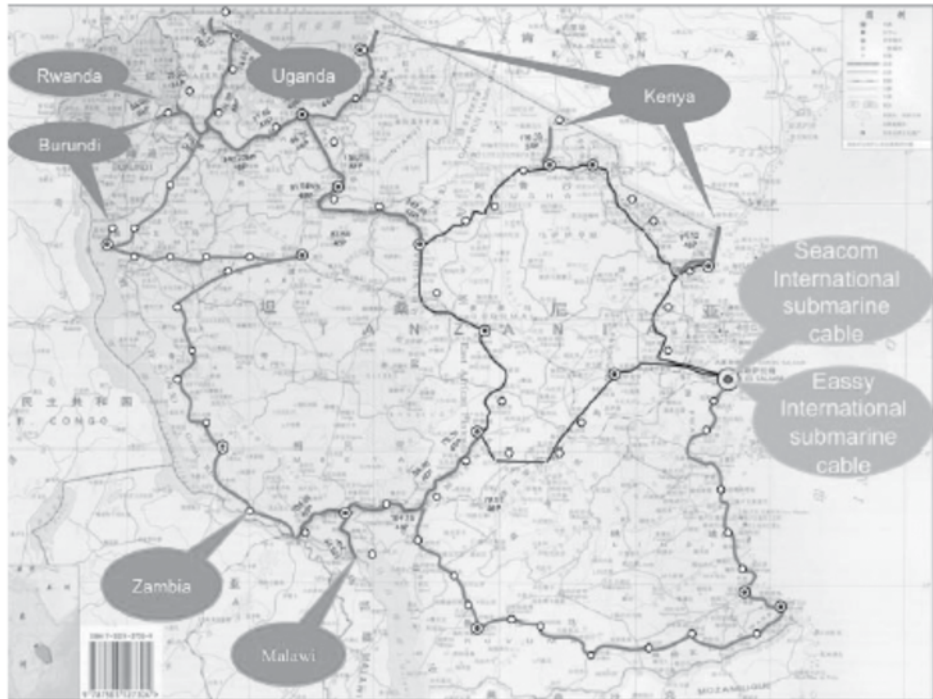
Tanzania is implementing a national backbone project. The roll-out for a national backbone is underway and expected to be ready by 2011. The terrestrial backbone will be critical to a country sharing planned undersea cables, the first of which, SEACOM, reached Dar es Salaam in July 2009.

Several other initiatives especially on the harmonization of ICT policies; the creation of virtual space devoted to thematic initiatives in the area of ICT infrastructure were undertaken in the Sub Region, with the support of ITU and RECs. The development of ICT infrastructure, the liberalization of the telecom sector and the competitiveness between providers has increased strongly the accessibility (voice & internet) and affordability to Households and Individuals by improving the Quality of service.

6.3 Action Line 3: Access to Information and Knowledge (C3)

The WISS Declaration of Principles stresses the commitment to make the "digital gap a digital opportunity for all ".

The majority of the Governments create an enabling policy environment -, affordable prices, delivery of internet services and open access to information. The Governments (Rwanda, Uganda, Kenya) also removed import and value added tax (VAT) on computers to make private purchases more affordable.

The Uganda Government put in place a rural ICT access policy named the Rural Communications Development Policy (RCDP) that provided for a Rural Communications Development Fund (RCDF) through which Government subsidies communication investment in areas that are considered unprofitable if left to free market forces to promote universal access. This support has been provided to establish telephone points, computer training centres and Internet services, universal access to rural communications by both women and men and whether the implementation process took into account gender considerations.

In Tanzania, the Kibengwe Rural Communication Access and Development Centre is a project in Bukoba rural district, Kagera region in Tanzania that is working into application of ICT in typical rural areas.

Several countries developed Multi purpose Community Telecenters. These Community Telecenters are strategically located facilities, providing public access to Information Communication Technology-based services and applications and were developed as a strategy of realizing enhanced Rural Community Access.

Box 6: 1000 Telecenter Rwanda

Rwanda Telecentre in Network (RTN) collaboration with ECA and others partners has decided to take the lead of eliminating the digital gap and promoting digital opportunities in rural Rwanda by creating 1,000 Teleservice centers by the year 2015.This will be possible by implementing a business model that was successfully implemented by one of local telecentres (Nyamata Telecentre) Centre since 2004 in Eastern province of Rwanda. This model is unique in a sense that more emphasis is put on local content and services rather than ICT infrastructure. The core idea is to enable ICT access point to move from traditional oriented services to a wide range of online services.

Each Teleservice centre will be operated by a village based Entrepreneur or community based cooperative and will able to deliver a wide range of public and private services such as Agriculture, e-government, Banking, insurance, health, e-learning, rural business process outsourcing, media services etc...The aim of Teleservice centers project is not only to bridge the digital divide but also is to narrow the "delivery gap" among government, business and social services.

While the Teleservice project will allow rural people to obtain all information and services at their doorstep, the unemployment problem of the country will also be addressed to a large extent because at least 3,000 people will get full-time job.

Source Rwanda Telecentre network

Since 2006, UNECA has been implementing a UN project entitled "knowledge networks through ICT access points for disadvantaged communities" jointly with the United Nations Regional Commissions, with ESCWA as the lead agency. The main goal of the project is to empower poor and disadvantaged communities through the transformation of existing ICT access points in selected countries around the world into knowledge hubs of global knowledge networks.

Rural telephone systems, Internet centres and microfinance programmes for telecommunication equipment stimulate the adoption of the ICT in groups with low income. They also participate in the promotion of the digital era. Open source programmes and software platforms enabled mass users, especially schools, Higher learning institutions as well as community training centres to access computer knowledge.

6.4 Action line 6: Capacity Building (C4)

The WISS Action Plan stipulates that "Each and everyone should have necessary skills to fully make use of the Information Society"

A certain number of countries adopted concrete measures to provide teachers with skills that are necessary for the teaching of ICT and their use. The percentage of teachers who have acquired qualifications in ICT is estimated between zero and 6% in countries where these statistical data are available.

In Ethiopia the building of capacities constitutes the cornerstone of the process of development of the information society.

Kenya integrated ICT in school curricula and established networks in the education system for sharing educational resources. The Government through the Ministry of Education established an examination posting site with the following address: www.education.go.ke . This has enabled many Kenyans access examination results with ease regardless of time and place. The site is providing a platform for sending of exam results to mobile phones online. The Government established an Education Learning Centre at Kenya Institute of Education through WB support. EMIS LAN has been laid in all Districts and Provincial Education Offices with a maximum of 22 computers to be connected at each site.

In Uganda all universities and institutions of higher learning have been offering ICT programmes.

Tanzania has more cybercafés than all other Sub-Saharan countries, i.e. more than 1,000 according to the Government. In Dar es Salaam and in other major or medium towns, cybercafés are found on all streets, which is evidence of the popularity of the Internet network in the country.

Concerning e-Learning in schools and universities, the national ICT strategy enabled certain school institutions to have computer laboratories and multimedia equipment which allowed them access to e-Learning programmes. Lessons via Internet and class lessons on business practice are offered at the Tanzania Global Distance Learning Centre (TGDLC). This centre is a member of the Global Distance Learning Network (GDLN) that has a total of 120 communication centres linked between them. Access to online and long distance learning is still limited to urban or private teaching institutions. It is hoped that the spreading of telecentres in rural areas will accelerate the emergence of e-Learning in schools located in remote areas.

Other projects are underway, namely: Tanzania after Tomorrow (www.tbtschools.org), the generalization of ICT in Teacher Training Colleges (www.teachers.or.tz), Education Management Information System (EMMIS) (http://moe.go.tz/moevt_programmes.html), and the Internet site for Tanzania Teaching Service (www.tanedu.org).

According to a recent survey, the increasing need in training teachers constitutes a major challenge. Efforts have been deployed to develop the local content, mainly in Kiswahili.

Rwanda possesses an ICT Park, a national computer centre and a telemedicine network that links hospitals and universities with the view to transforming and improving health services in poorly served regions. This training centre targets high-level leaders, entrepreneurs, employees in the public sector and private enterprises, but also students who pursue specialised studies in ICT.

The use of ICT for education in Djibouti is incorporated in the future policy of the country. The use of ICT in the Mathematics subject constitutes the first stage because the level of human skills is very low.

Box 7: Industrialization in Ethiopia, Mozambique and Tanzania

Mozambique (the Eduardo Mondlane University) and the Mozambique Information and Communication Technology Institute (MICTI), in collaboration with Ethiopia (the University of Addis Ababa) and Tanzania (University of Dar Es Salaam), is leading one of the four thematic research networks established in the framework of ARN, the "Industrialisation of ICTs in Africa". Development of human resources both in ICT and entrepreneurship development were identified as crucial and should be implemented through creation of Centers of Excellence on ICT education and in-house software applications development. The Mozambique Center of excellence will be used for the development of "flagship projects" for future ICT entrepreneurs to be incubated within the MICTI Technology and Business Incubator.

The MICTI training centre still in development has received pledges and support from several partners; as examples MICTI received a full set of equipment for networking composed by routers, switches and firewalls and two technicians were trained as trainers in China.

Regional policies in the area of the ICT have been harmonized to define guidelines and orientations for the ICT market and to build human and institutional capacity, thanks to the adoption of training measures and knowledge sharing.

The Nepad-E-schools initiative: ICT Human Resource Development through the NEPAD e- schools Initiative. The overall aim of the Initiative is to harness ICT technology for the improvement of the quality of teaching and learning in African primary and secondary schools, whereby young Africans graduate from these schools with ICT skills and knowledge that will enable them to participate confidently and effectively in the global information society and knowledge economy.

The world capacity building initiative was launched in 2007 by ITU, in collaboration with InfoDev and the World Bank. This initiative included activities in the area of targeted customer-centred capacity building, i.e. persons responsible for the elaboration of policies and regulations in developing countries and least developed countries.

6.5 Action Line 5: Building Confidence and Promoting Security in the Use of ICT (C5)

The WISS Declaration of Principles stipulates that "To promote the climate of confidence, especially y thanks to security of information and to security of networks, to approval procedures and the protection of private life and the consumer is a prerequisite to the development of the Information Society and building confidence among ICT users ".

With the evolution of Internet, the promotion of cyber security and the protection of essential information infrastructure are fundamental for the security of every country, and for each country's social and economic prosperity. Africa is particularly affected by this phenomenon, 2010, since more than a half of 650,000 infected systems in the world are found in developing countries. Indeed, during the last years, the countries of the Sub Region increasingly experienced threats on social network sites, banking security, attacks targeting users, enterprises and applications.

Table 5: ECA Survey on the implementation of WSIS Plan of Action

ICT Security Issue	Addressed in the country ICT policies and plans (%)	Existence of Legislation to enforce this issue (%)
Information security and network security issues	58	12
Education and raising awareness on security and use of ICTs	58	18
Prevention, detection and response to cyber-crime and misuse of ICTs	50	2
Effective investigation and prosecution of misuse of ICTs	43	1
Government to actively promote user education and awareness about online privacy and the means of protecting privacy	47	1

Certain member countries (Rwanda, Ethiopia and Kenya) have expressed genuine interest to improve confidence and security in the use of ICT and deployed efforts with the aim of improving cyber security through the creation of a framework governing cyber security. Other African countries such as Burundi are in the process of elaborating draft legislation on electronic transactions, digital signatures and their authentication, e-crime and e-crime, security of data and the protection of private life, intellectual property rights, electronic taxation, and competitiveness and information management.

Table 6: Availability of E-Transaction Law, E-Signature Law and Infrastructure for the Management of PKI In the Region, 2010

Country	e-transaction law	e-signature law	Management of PKI
Burundi	X	x	X
The Comoros	X	x	X
Djibouti	X	x	X
Eritrea	X	x	X
Ethiopia	✔	✔	X
Kenya	✔	✔	✔
Madagascar	X	x	X
Seychelles	✔	✔	X
DRC	X	x	X
Rwanda	X	x	X
Somalia	X	x	X
Tanzania	✔	✔	X
Uganda	X	✔	X

Tanzania - The Tanzania Law Reform Commission of the Ministry of Justice and Constitutional Affairs proposed separate bills on Cyber crimes, regulation of electronic transactions and e-communications, privacy and data protection and the amendment of the Evidence Act (1967). The Bills are still to be enacted.

Kenya - The Kenya Communications (Amendment) Bill was published in August of 2008. In the same month, the bill went through the first reading in parliament.

Uganda - Draft electronic laws, the E-transaction bill, the Computer Misuse Bill and The Electronic Signature Bill were approved by the Cabinet on 16 January 2008.

At the regional level, in the EAC, efforts are underway to establish the supporting infrastructure such as data centres, PKI, etc. certification authorities, etc. In addition, an EAC Framework for Cyber laws, legislation has been developed.

A working group composed of representatives of Member States as well as COMESA members, the United Nations Economic Commission for Africa (ECA), ITU, the African union, the IOC, the East African Community and regional integration organizations, was put in place during the ITU Regional Forum on cyber security for Eastern and Southern Africa held in 2008. This working group is responsible for monitoring the activities of cyber security in the region, and more precisely for supporting and developing documents related to national strategies.

However, the development and implementation of a national cyber security framework and the protection of essential information infrastructures require a holistic, multidisciplinary approach and multi – partner stakeholders.

6.6 Action line 6: Creating an Enabling Environment (C6)

Governments liberalized telecommunication service markets; investors took advantage of this niche and therefore made ICT more accessible to the populations. This development of ICT enabled operators to provide grouped services (television, Internet, fixed telephone lines) and prepaid services.

Only Ethiopia, Eritrea and Somalia have not yet launched the liberalization of the telecommunication sector.

Three states established independent regulators. In a more general manner, regulators have played a catalytic role in Africa and have had a positive impact on the development of the sector.

A credible and transparent sector framework attracted record levels of private investments and fast spreading of mobile networks in the Sub Region

However, States must double their efforts to adopt an ambitious policy in the installation of a high speed broadband system. As a matter of fact, new technologies can contribute in achieving the Millennium Goals, for example telemedicine and e-learning.

Table 7: Level of Competition in the region

Country	Local services	Domestic fixed long dist	International fixed long dist	Wireless local loop	Data	DSL	Cable modem	VSAT	Leased lines	Fixed Wireless Broadband	Mobile	Paging	Cable TV	Fixed sat	Mobile sat	GMPCS	IMT 2000	Internet services	International gateways
Burundi	C	C	C	C	C	C	...	C	C	...	C	C	C	...	C	C	C	C	...
Congo (Dem. Rep.)	...	...	...	C	C	...	...	C	...	C	...	...	C	C	C	C	C	C	C
				2002	2002			2002		2002			2002	2002	2002	2002	2002	2002	2002
Eritrea	M	M	M	M	P	...	...	P	M	M	P	...	M	M	P	...	...	P	M
Ethiopia	M	M	M	M	M	M	...	M	M	M	M	...	...	M	...	...	M	M	M
Kenya	C	C	C	C	C	C	C	C	C	C	C	...	C	C	C	C	C	C	C
	2004	2004	2004	2004	2004	2004	2004	2004	2004	2004	1999		2004	2004	2004	2004	2004	1999	2004
Madagascar	...	C	C	C	C	C	...	C	C	...	C	...	...	...	...	C	...	C	...
Rwanda	P	P	P	...	C	P	...	C	P	...	P	...	...	P	C	...	...	C	P
	2004	2004	2004		2001	2004		2001	2004		2004			2004	2001			2001	
Seychelles	P	P	C	...	P	M	M	P	P	P	P	...	M	...	...	...	M	C	C
	1998	1998			1998			1998	1998	2004	1998								
Tanzania	M	M	M	M	C	C	...	C	M	...	C	C	...	...	...	...	...	C	M
Uganda	C	C	C	C	C	C	C	C	C	C	C	...	...	C	C	C	C	C	C
	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006	2006		2006	2006	2006	2006	2006	2006	2006

(1) - 2009 data; (2) - pre-2009 data
Note: This table reflects what is legally permissible; therefore it may not reflect the actual number of operators in the market.
M - Monopoly; P - Partial competition; C - Full competition; ... - Not available
Date: year when partial or full competition was introduced
Source: ITU World Telecommunication Regulatory Database 2009

Figure 2: Revenue for Governments: License fees & Taxes
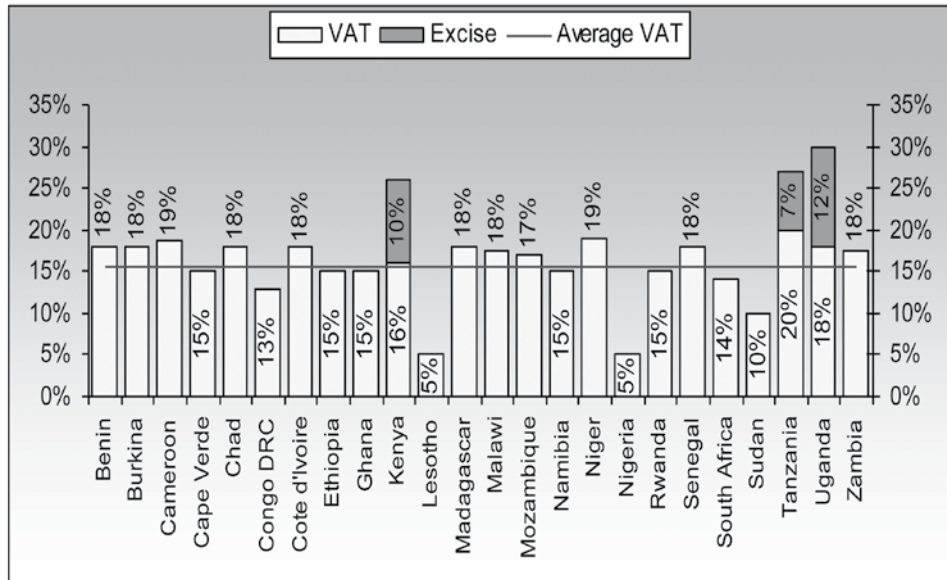
Source: AICD

With regard to universal access, Uganda was among the first African countries to develop a policy on universal access to telecommunications. For the funding : 1% of all sectors participants including telecoms operators, the postal service, courier, ISP. This fund for the development of rural communications enabled the rates of tele-density to increase from 12% to 22% in only two years.

6.7 Action Line 7: ICT Applications and their Contribution in all Sectors (C7)

The WISS Action Plan identified eight sectors through which the use of ICT can increase a country's socioeconomic advantages.

ICT applications and services, such as e-government and e-commerce, are the functional elements that realize the regional integration agenda. Within EAC, efforts in these area fall into two broad categories (Creation of the enabling environment, Actual investments in e-government and e-commerce applications). EAC e-Government Policy & Strategy was developed and adopted in 2006 .At the national levels, the EAC governments are investing in various e-government applications e.g. electronic payment systems, e-immigration, etc.

However, disparities have been identified from the analysis of the 2010 statistics of the United Nations Index of "e-Government" (The UN Global E-Government Readiness Survey) that measures the level of maturity of electronic governance in a country or a given region. In its evaluation, the "2010 UN Global E-Government " is based on the degree

of application of Information and Communication technologies (ICT) by public administrations of countries in a manner that is likely to make their services more accessible to every citizen but also to develop their internal functioning. The UN index is established on the basis of several criteria. These criteria are essentially, related to the degree of the use of Internet, telecommunication infrastructure and the level of human resources.

Table 8 : E-government development in Eastern Africa

Country or territory	E-government development index value			World e-government development ranking		
	2010	2008	2005	2010	2008	2005
Burundi	0.2014	0.1788	0.1639	174	174	166
Comoros	0.2327	0.1896	0.1974	160	170	155
Djibouti	0.2059	0.2279	0.2381	157	170	149
Eritrea	0.1859	0.1965	0.1849	175	169	157
Ethiopia	0.2033	0.1857	0.1360	172	172	171
Kenya	0.3338	0.3474	0.3298	124	122	122
Madagascar	0.2890	0.3065	0.2641	139	135	148
Seychelles	0.41179	0.4942	0.4884	104	69	63
DRC						
Rwanda	0.2749	02941	0.253	148	141	140
Somalia						
Tanzania	0.2926	0.2929	0.3020	143	137	127
Uganda	0.2810	0.3133		142	133	133

With regard to Eastern Africa, the index on the maturity of electronic governance varies between 0.1859 for Eritrea and 0.41179 for the Seychelles on the global and international scale of the «E-Government Readiness Index".

These levels correspond to low maturity and are characterised by quite important delays at the level of infrastructure development. It should be noted that Ethiopia made tremendous progress at the world scale in terms of this index with a remarkable evolution during the last 5 years rising from 0.136 in 2005 to 0.203 in 2010.

Kenya (0.3338) and the Seychelles (0.4179) continue to lead the region, though both countries register lower rankings in the 2010 Seychelles has the best infrastructure and education indices, which explains its high ranking in the region.

Notwithstanding the overall low scores of the e-government development index in the region, some countries have managed to improve their Web presence either in national portals or ministry websites. The websites of most ministries in the region provide basic information, but e-services are generally not available

Kenya's national portal received the highest score in the region, followed by Madagascar.

Ethiopia registered the third highest online service score in the region, whilst its infrastructure and education indices hindered it from scoring higher in the e-government development index.

The World Bank's push for African governments to increase the deployment of e-governance services through broadband connectivity in public and private institutions. In East Africa, Rwanda, Burundi and Kenya have already benefited from this initiative. In Rwanda the World Bank supports online administration applications to improve efficiency and transparency. Considerable progress has been made to promote e - government solutions. For instance, a large number of Governmental agencies arranges have digitalised their information systems so as to increase their efficiency.

Tanzania has launched integrated HR and Payroll systems covering about 280,000 public servants, reducing ghost workers and improving control and accuracy. The government has embraced e-governance as a major driving force behind efficient and effective business transactions in government departments, particularly in financial procedures and making the government machinery more transparent to the public.

With effect from 2010, Djibouti intended to launch E-government, a project that covering the use of information and Communication technologies (NICT) by public administrations so as to make public services "more accessible" to their users and to improve their internal functioning. In its first phase, the project plans the interconnection of different ministries by an optic fibre link and the creation of a Data Centre, which is a data processing centre for hosting computer servers as well as the evaluation of needs in network infrastructure. At its completion, this project should enable Djiboutian users to have on line and under the electronic address "djibouti.dj", all or atomist all services that can be provided to them by their administration.

Table 9: Core ICT Indicators in Public Administration (Case study Rwanda)

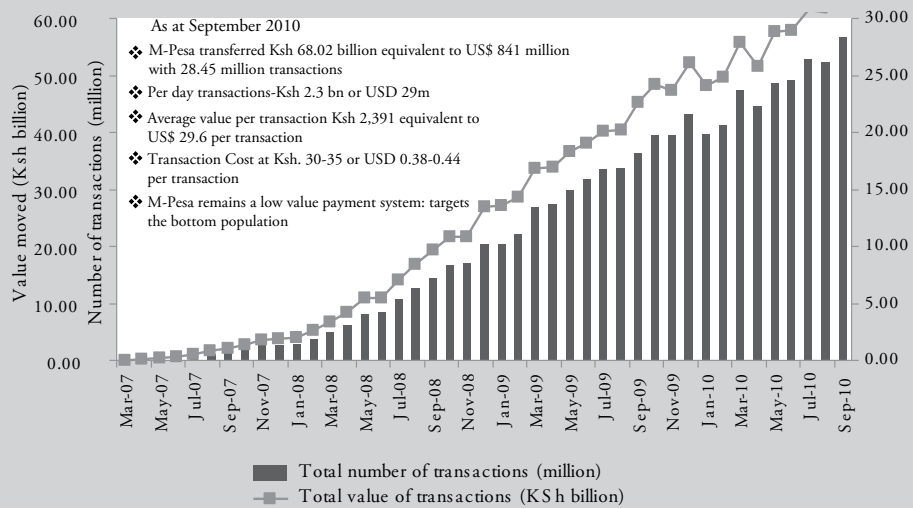| Core ICT Indicators in Public Administration	Scan ICT 2006 (%)	RDB/IT 2010 (%)
with access to electricity	62.4	78.6
with access to telephone	56.1	92.4
using computers	60.2	72.8
staff using computers regularly	59.4	88.2
with access to internet	52.4	72.2
with website	12.6	28.9

The socio-political instability in several countries, illiteracy and the digital lag/gap constitute in certain countries of the Sub Region a major obstacle to the development of electronic administration.

However, the sub region has not remained behind as a technological resource producer for sharing information. Indeed more and more online contents in several languages have since 2005 been developed.

Despite the regulatory vacuum in the area of banking services provided by mobile telephone operators, mobile money transfer projects on P2P provided by mobile telephone operators are on the increase in Eastern Africa.

M - Pesa in Kenya (a service provided by *Safaricom* and Vodafone) today has 4 Million subscribers. The service will facilitate the transfer of money from Western Union counters, which will organize the receipt of funds in its branches in the United Kingdom, to mobile subscribers of *Safaricom* in Kenya. The client will be able to receive the funds locally and either get cash in the local network, or transfer the money by M- Pesa to another *Safaricom* user. The maximum amount that can be transferred at the international level is £200. M-Pesa has been growing phenomenally, with the subscriber base reaching 10 Million in mid 2010. M-Pesa provides employment for around 15,000 employees. M-Pesa is driving revenue growth.

Box 9: 11% of Kenya's GDP was shifted trough Safaricom's M-Pesa in 2009 and 20% in 2010

As at September 2010

❖ M-Pesa transferred Ksh 68.02 billion equivalent to US$ 841 million with 28.45 million transactions

❖ Per day transactions-Ksh 2.3 bn or USD 29m

❖ Average value per transaction Ksh 2,391 equivalent to US$ 29.6 per transaction

❖ Transaction Cost at Ksh. 30-35 or USD 0.38-0.44 per transaction

❖ M-Pesa remains a low value payment system: targets the bottom population

Total number of transactions (million)
Total value of transactions (KSh billion)

Kenya's Success with M-PESA M-PESA Usage Trends, 2007-2010
(Source Safaricom)

Following the success that M - Pesa of Safaricom (Vodafone) has experienced, Zain launched a money transfer service via the mobile telephone in East Africa in Kenya, in Uganda and in Tanzania, but also in Madagascar with the local Post office.

Among other initiatives undertaken in the area of applications, the following should be mentioned:

The USHAHIDI software, created in 2008 from Kenya, enables the monitoring of crises in appropriate time, from the point of view of people who experience them. Thanks to this tool, people can use a mobile telephone, an SMS or an e-mail to describe events that they experience or that happen around them. This ICT tool has today been duplicated in Ghana, in South Africa, in the DRC and everywhere in Africa, where the need to communicate on a latent or present crisis is felt.

Rwanda: eSoko, launched in June 2009, provides agricultural market price information; while telemedicine equipment is being installed in two hospitals to link them to the King Faisal Hospital in Kigali.

Kenya: AfriAfya: the African Network for Health Knowledge Management and Communication is comprised of seven of the largest health NGOs in Kenya with the goal of harnessing ICT to improve community health in rural and other marginalized Kenyan

communities. The network provides communities with relevant up-to-date health information through a two-way communication with health-care providers.

Ethiopia: Cyber Ethiopia: The Amharic language has Africa's oldest script, which has been used for written communication since 100 B.C. The Cyber Ethiopia initiative has converted the Amharic script so that it is Web-friendly, responding to the challenge of digital multilingualism and the development of the local script for digital use. The use of the Amharic script on the Internet facilitates Ethiopia's digital inclusion and full participation in the information society.

Kenya: The Ministry of Education has made available the Kenya Certificate of Secondary Education and Kenya Certificate of Primary Education results via SMS in the last three years. As a result, candidates are able to get their results within the same day of their release through their registration number to a designated code within the same.

The Pan African e-Network project, initially launched in Ethiopia, offers online educational functions and telemedicine programmes with the objective to extend ICT infrastructure in rural areas and poorly served remote areas.

With regard to food security and cyber agriculture, two major initiatives have been launched in accordance with this decision: the world FASO Global Programme to bridge the digital gap in Rural Areas (BRDD) and the First Mile Project (FMP) of the International Fund of Agricultural development (IFAD), in Tanzania. The objective of the latter project is to provide the disadvantaged populations in the rural areas at the regional level with access to information and to human resources they need along their production chain, thanks to the use of the mobile telephone, Internet and electronic mail. In 2006, FAO and other organisations created the web portal www.e-agriculture.org, destined to support efforts deployed to strengthen agricultural development and increasing sustainable food security by promoting the use of ICT at the service of rural development.

The NEPAD e-Tourism Programme: It is a new programme of the NEPAD e-Africa Commission. It has several elements:

- African Tourism Portal: This is portal that will have links to all African countries official tourism websites. It will involve upgrading current websites in some countries and developing new ones where they don't exist.
- African Payment Gateway (APG): The APG will be linked to the tourism portal and is aimed at bringing direct revenue into the African Tourism sector. The APG will enable African SME to engage in e-Commerce with every country in the world.

6.8 Action Line 8: Cultural Diversity and Identity, Linguistic Diversity and Local Contents (C8)

The Geneva Plan of Action requests member States to "create policies that support the respect, preservation, promotion and enhancement of cultural and linguistic diversity and cultural heritage within the information society. This includes encouraging governments to design cultural policies to promote the production of cultural, educational and scientific content and the development of local cultural industries suited to the linguistic and cultural context of the users."

Figure 3: overview of action line c8 implementation in the region
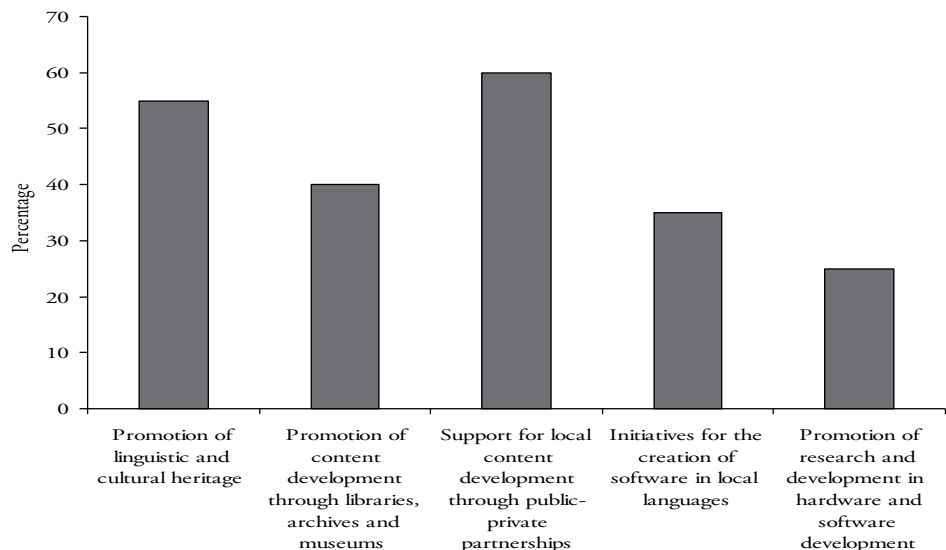
Concerning linguistic diversity on Internet, countries in the Sub Region are actively working with the Internet Corporation for Assigned Names Numbers and (ICANN) to create multilingual domain names, in non Latin characters, including country codes.

6.9 Action Line 9: Media (C9)

Citizens who need to acquire necessary skills for critical analysis of information, for its utilisation and its production so as to become fully-fledged, free and responsible actors of the society of information.

Medias played a remarkable role in the dissemination of claims on electoral results in several countries. Indeed, the population were able to directly monitor provisional results from the counting of votes. Community multimedia centres were established in several countries of the Sub Region (Somalia, Uganda, Kenya, etc.). Several projects in the area or of freedom of speech, media pluralism and community Medias, capacity building through training in journalism were developed. For instance, the following may be cited:

The African Media Information Communication Technology for Development (ICT4D) Network was born under the AISI and WSIS programme and represents a framework which brings together Media professionals and institutions at national, sub-regional and continental levels to discuss and establish policy and strategies for building an inclusive Information Society.

National Media Network: Different ICT4D Media Networks were created at national level and have started implementing their plan of action. These include networks in Burundi, Rwanda, and Kenya which started media campaign within the respective countries. The ICT4D Media campaign aimed at raising awareness on the Information Society in general, e-strategies formulation, implementation and monitoring in each country and demonstrating how ICT can be used as a tool for accelerating MDGs and Poverty Reduction. These campaigns facilitate understanding of the WSIS outcomes and their impact on the development when implemented. Media Networks have played and continue to play a role in uniting the grounds of analysis and in building opinion on the role of ICT for social and economic development.

- A community radio for local communities of Taita and Taveta Districts in Eastern Kenya.
- The network of distribution for all private newspapers in major commercial centres of Rwanda.
- Capacity building for trainers in the media on reporting techniques on biotechnologies and bio fuels in East Africa.

6.10 Action Line 10: Ethical Dimensions of the Information Society (C10)

Ethical issues on the information society were under-developed in most countries; and as the results of the survey showed, few countries (…..) have developed their ICT policies to promote awareness on ethical issues in the use of ICT.

The Academic Community was engaged in research on the ethical dimensions of ICT.

6.11 Action Line11: International and Regional Cooperation (C11)

ICTs have become dynamic engines on which economic systems and global social development are based. These technologies constitute one of the tools that enable the actors to assess the level of Africa to Africa cooperation and partnership in several vital sectors. Several regional initiatives with the aim of implementing the WISS Action Plan (in addition to the ones mentioned elsewhere in the present document) were implemented in the Sub Region. These initiatives are:

- Initiatives of the Regional Economic Communities (REC)
- Initiatives of ATU, ITU
- Initiatives coordinated by UNECA
- Initiatives coordinated by the African Union Commission
- NEPAD Programme
- Initiatives from International partners: World bank, European Union,
- Private initiatives
- Etc.

Among these initiatives, the following can be mentioned:

The 2010-2015 Action Plan of the African Union and NEPAD, which attaches high level priority to the ICT sector. The way development partners favourably welcomed this Action Plan of action and made it a promising cooperation platform means that the countries of the Sub Region will be able to mutually benefit from their expertise. The AU/NEPAD programme is aimed at elaborating an ICT Master Plan and Implementation of concrete projects such as the Creation of Pan African e - Network, the Unified Numbering Project, the Creation of a Pan African TV and Radio Channel.

The COMESA applied strategic orientations in the area of ICT that were approved by the ECA on ICT indicators and online administration, legislation and security.

In the Declaration Olivier Tambo adopted in November 2009, ECA is requested to finalise, in the framework of the initiative "African Society in the information era ", a convention on cyber legislation for adoption by members States by 2012.

The African Regional Action Plan on the Knowledge Economy (ARAPKE): The European Commission approved a funding proposal for a sum of USD 10 million in support of the African Regional Action Plan on the Knowledge Economy (ARAPKE) elaborated by ECA on behalf of the African Union.

In the light of the sensitization to the Information Society and to promote the sharing of examples of the best practices, ECA launched several programmes, including the price of TIGA for the use of ICT in administration, a joint initiative of the ECA and the Canadian Government. Media Prizes awarded by the AISI (African Information Society Initiative),

the African Cyber Apprenticeship Initiative which provides online lessons on the development of ICT policies, and the conference "Science with Africa" in collaboration with the "Intelligence in Science "(ISC) organization.

The SCAN-ICT project is the result of the fruitful cooperation between the United Nations Economic Commission for Africa (ECA) and the International Development Research Centre (IDRC), to achieve an observatory on Information and Communication Technologies in Africa.

The Academy of ICT Essentials for Government Leaders in Africa: ECA launched the Academy of ICT Essentials for Government Leaders, which was jointly developed with UNAPCIT, by training African parliamentarians on the first two modules. Academy curriculum consists of a core ICT for development platform with eight stand-alone modules ranging from basic to more advanced topics of ICT for development. They include: The Linkage between ICT Applications and Meaningful Development; ICT for Development Policy, Process and Governance; e-Government Applications; ICT Trends for Government Leaders; Network and Information Security and Privacy; Internet Governance; ICT Project Management in Theory and Practice; and Developing Diverse Funding Structures or Options for funding ICT4D. The online learning version of the Academy of ICT Essentials for Government Leaders in Africa will be launched in January 2011 with trainees from member States. www.uneca.org/elearnafrica.

East African Internet Governance Forum: Given extraordinary growth of internet everywhere in the world, and particularly in Africa, exchanges and discussions on internet were held at the national level as well as the sub regional level. Several national and regional meetings and initiatives facilitated the exchange of ideas and experiences and they helped the development of a common platform on thematic issues related to the development of Africa and in particular the development of the East Africa Sub Region so as to forge a common position and speak with one single voice during the World Conference on the IGF. At the end of these meetings, a number of recommendations that are common to Eastern Africa were adopted and they will be presented during a meeting on Global Internet Governance Forum.

Harmonization of ICT Policies in Sub-Saharan Africa (or HIPSSA): With the support of the European Union (EU), ITU is conducting work on harmonizing policy and regulations for information and communication technologies (ICT) across Sub-Saharan Africa. This ITU-EU project, estimated at 6 million USD, is known as Harmonization of ICT Policies in Sub-Saharan Africa (or HIPSSA). ITU via the HIPSSA project provided direct support to the AU and NEPAD in the assessment of the current level of harmonization of CT/telecommunications in the different African regional organizations by commissioning three studies:

- A comprehensive review of all regional ICT regulatory harmonization initiatives in Sub- Saharan Africa
- A review of regional harmonization initiatives' legal bases, legal instruments and enforcement mechanisms

- A comparative study based on the analytical orientations identified below including summary tables and a gap analysis

These studies were completed in the end of year 2009 and the report published in January 2010.

Box 10: The Broadband Commission for Digital Development

The Broadband Commission for Digital Development was launched in May 2010 during the WSIS Forum 2010 in Geneva, 5 years after the WSIS, and 10 years after the adoption of the MDGs. Stressing that high-speed, high-capacity broadband connections to the Internet are an essential element in modern society, with wide economic and social benefits, its mission is to promote the adoption of broadband-friendly practice and policies to allow the entire world to take advantage of the benefits from broadband.

The Broadband Commission will seek to demonstrate that expanding broadband access in every country is a key way to accelerate attainment of the MDGs by 2015. The Commission will define practical ways in which countries – at all stages of development – can achieve this, in cooperation with the private sector.

The Commission is led by two co-chairs, H.E. Mr. Paul Kagame, President of Rwanda and Mr. Carlos Slim Helú, Honorary Lifetime Chair of Grupo Carso. The heads of ITU and UNESCO serve as vice-chairs. Other commissioners are from government, private sector, international agencies and civil society and academia. Its outcomes have been presented to United Nations Secretary-General Ban Ki-moon in September 2010 in conjunction with the United Nations MDG Summit in New York.

Source: The Broadband Commission (www.broadbandcommission.org).

ITU has funded the establishment of an African network of excellence to link premier training providers on the continent. This will assist with resource sharing in terms of facilities, expertise and training materials among institutions.

In 2007 ITU launched the Global Cyber security Programme, a framework of international Cyber Security cooperation.

The CTA Telecentres Africa programme will support the global telecentre movement initiatives especially through Telecentre.org and others in promoting the empowerment of local communities to better use ICT.

In this regard, the project will contribute to identifying the key development agenda link to agricultural and rural development sector, and will use the most appropriate platforms and tools to bring local community development issues to the debate. Choices for the policy agenda will be made in dialogue with key partners and stakeholders. Policy support may be provided through conferences bringing together thematic expertise at regional or global level, the collection of policy documents and the provision of information to support regional and national telecentre stakeholders.

COMESA: Development of a Regional ICT Strategy. The COMESA ICT Strategy is intended to serve as a framework for harmonising ICT developments in the COMESA member states and in the region. In line with Article 96 of the COMESA Treaty which mandates the adoption of a common policy as a strategy for the development of the national and regional telecommunications infrastructures from their present state of undercapacity to an integrated and modern telecommunications networks, it aims at transforming COMESA into a sub-region where the effective use and application of ICTs enhances and accelerates economic growth, social development and regional.

EAC ; The East African Community Regional e-Government Document aims at creating a framework for sharing, promoting collaboration on cross-border political and data flow issues to avoid duplication, error, and aggregate resources for the benefit of the Community. It is an action roadmap in Strategic Areas supported by enabling legal environment, Secure Information Infrastructure and adequate human resources. On the policy front, it outlines the agreements and protocols that should be in place to sustain e-government services, applications and contents in a harmonised manner across the region. The policy issues also calls for a review and suitable adaptation of legislation at national and EAC level to ensure interoperability and competitive environment as well as to reduce legal obstacles to the services offered online. The framework deals with a few strategic areas namely: Customs and Immigration Control, e-Parliament, e-Health, e-Banking & e-Procurement, e-Commerce and e-Tourism, Meteorological and Tidal Information.

Table 9: WISS: Mid-term Summary Table: targets, major orientations, indicators proposed and the General Situation

Target of WISS	Revisions proposed concerning the target for monitoring the progress	The most pertinent major orientations of the WISS	Indicators proposed for monitoring the progress*	Degree of progression, 2009**
1. To connecter villages to ICT et create community access points	to connect all villages to ICT to create community access points	C2.Information and communication Infrastructure	Rural population covered by the cellular mobile telephone, ventilation by technology	High
		C3.Accès to information and to knowledge	Households in rural areas owning a telephone, per type of service (land line /mobile, mobile only, land line only	Average
		C4. Capacity building	Households in rural areas with access to internet per type of access(Narrow band, broad band)	Low
			Localities with public Internet access centres per type of access (Narrow band, Broad ban) Rural/ urban ventilation zones	Low
			Place of utilisation of internet by individuals in the course of the last 12 months (Including public Internet access centres) Rural/urban ventilation zones	No comment
2. To connect high learning institutions and secondary schools as well as primary schools to ICT	To connect all Higher learning institutions, secondary and primary schools to ICT	C2.formation and communication infrastructure	Schools with a radio used for teaching purposes	Average
			Schools with a television used for teaching purposes	Average
		C3.Accees to information and knowledge	Schools with access to internet per type of access (Narrow band, brad band)	Low
		C7.E-learning	The rate of computerisation (Number of pupils/ number of computers)	Low

Target of WISS	Revisions proposed concerning the target for monitoring the progress	The most pertinent major orientations of the WISS	Indicators proposed for monitoring the progress*	Degree of progression, 2009**
3. To connect Scientific and Research Centres to ICT	To connect all Scientific and Research Centres to ICT aux ICT	C2.Information and communication Infrastructure de C3.Accès to information and knowledge	Scientific centres and research centres with access to broad band internet	Average
			Existence of a national research and training network (NREN), per capacity of the band width (Mbit/s)	Average
			Number NREN nodes	No comment
			Universities connected to NREN per type of connection (broad band. Narrow band)	Average
			Scientific and research centres connected to NREN per type of connection (Broad band, narrow band)	Average
4. To connect public libraries, cultural centres museums and postal offices and archive services to ICT	To connect all public libraries, all cultural centres, all post offices and archive services to ICT	C3. Access to information and to knowledge C4. Capacity building C8. Cultural diversity and identity , linguistic diversity and local contents	Public libraries with access to broad band internet	Low
			Public libraries with access to public internet	Low
			Public libraries with a web site	Low
			Cultural centres with access to broad band internet	No comment
			Cultural centres with a web site	No comment
			Cultural centres providing public access to internet	No comment
			Museums with access to broad band internet	Average
			Museums with a web site	Average
			Post offices with access to broad band internet	Low
			Post offices providing public access to broad band internet	Low
			Archive services with access to broad band internet	Average
			Archive services with a web site	Low
			Contents of archive services that have been digitalised	No comment
			Digitalized information systems in archive services that are available online	No comment

Target of WISS	Revisions proposed concerning the target for monitoring the progress	The most pertinent major orientations of the WISS	Indicators proposed for monitoring the progress*	Degree of progression, 2009**
To connect health centres and hospitals to ICT	To connect all health centres and hospitals to ICT	C2.Information and communication Infrastructure	Public hospitals with access to internet, per type of access (Broad band, narrow band)	Average
		C7.e-health	Health centres with access to internet per type of access (Broad band, narrow band)	Low
			Public hospitals using computers/Internet for collecting /transmitting information on this or that patient	Low
			Health centres using computers /internet to collect / transmit information on this or that patient	Low
6. To connect all public administrations local and central, and equip them with a web site and an electronic address	To connect all local and central administrations and equip them with a web site and an electronic address	C1.Role of public authorities in charge of governance and all stakeholders involved in the promotion of ICT for development.	Civil servants in the Public Service using internet	No comment
			Civil servants in the Public Service using computers	No comment
		C2.Information and communication I infrastructure de	Public Administrations with access to internet, per type of access (Broad band, narrow band)***	High
			Public Administrations with a web site ***	High
		C3.Accès to information and to knowledge	Public Administrations using enterprise networks (local network, extended network, intranet, extranet)***	No comment
		C4.E-government	Public Administrations providing online services, per type of services (Interactive, transactional, connected) ***	Average
7. To adapt all primary and secondary school programmes so as to identify challenges in the area of the information society, given specific conditions of each country	(No review proposed)	C4.capacity building	Teachers in primary and secondary schools with qualification in the ICT area sector e des ICT	No comment
		C7.E-learning	Teachers who will have received training to teach subjects related to ICT	Average
			Schools with computer assisted teaching	High
			Schools with internet assisted learning	High

Target of WISS	Revisions proposed concerning the target for monitoring the progress	The most pertinent major orientations of the WISS	Indicators proposed for monitoring the progress*	Degree of progression, 2009**
8. To provide all the world population with access to television services and radio broadcasting services	(No review proposed)	C2.Information and Communication infrastructure	Households with a radio set	High
			Households with a television	High
		C3.Accè information and to knowledge C9. Media	Households with a multi-channel television service, per type of service	High
9. To encourage the elaboration of contents and meet specific technical conditions to facilitate the utilisation of all languages of the world on internet	(No review proposed)	C3.Accès to information and to knowledge	Internet sorters per language	Low
		C8.Cultural and identity diversity, linguistic diversity and local contents	web pages web per language	Low
10. To ensure that more than a half of inhabitants of the planet have access to ICT	To ensure that more than a half of the inhabitants of the planet have access to ICT, in particular to broad band internet and use them	C2.Information and communication infrastructure	Subscriptions to cellular mobile telephones for 100 habitants	High
		C3.Accès to information and knowledge	Individuals who have access to the cellular mobile telephone in the last 12 months	High
		C6. To create an enabling environment	Individuals who have used internet(All areas considered) in the last 12 months	High
		C7.ICT applications and their contribution to all sectors	Households with access to Internet per type of access (Narrow band, broad band)	High

7. Challenges and Opportunities

The region is facing a number of challenges; and opportunities are also considerable and the future is promising, including the existence of strong competition in the region. Each member of the East African Community is aiming at becoming an ICT hub in the region. However, the implementation of the WSIS Action Lines requires paying particular attention to certain measures.

Leadership and Transparency: National strategies must be integrated into programmes of the general policy and must be coordinated with different political sectors, especially Poverty Reduction Strategy Programmes. Development partners such as the ECA should increasingly assist countries in the development and implementation of strategic policies to enable public authorities to define new regulatory and legal frameworks. Given the dynamic nature of the telecommunications sector, these policies, legal provisions and regulations require regular review to accommodate new services and a changing business environment.

Enabling Policy and Regulatory Environment: The objective should be to harmonize the legal and regulatory framework governing the Information Society, both in areas of rights and duties of citizens and the creation of a vast Pan-African ICT market that contribute to economic integration of the continent, while taking into account internet governance, both at the African and global perspective. Cyber security, cyber criminality and the preservation of cultural identity must to be at the basis of the implementation of technological and regulatory developments. The RECs should provide support to create harmonised ICT policies and an efficient regulatory environment, which is conducive to massive investments required by ICT infrastructure and applications in the African countries.

Development of Integrated Infrastructures and Access Networks: the priority should be given to the construction of a Pan-African network of high speed optic fibre interconnecting African countries, in addition to the generalization of internet Exchange points (IXP) so as to contribute to the development of inter-African communications by reducing transit expenses linked to international communications with the rest of the world to the bare minimum. Member States should find synergies between the ICT sector and other infrastructure projects, to develop a coherent, balanced and multi-modal approach in the area of infrastructure development where Telecom cables are systematically part and parcel of the energy and transportation sector investments.

Improvement of Rural Areas Connectivity based one the principles of technological neutrality, non discrimination and open access.

Development of contents: Contents should also be considered as a strategic axis since they constitute the natural vehicle for elements that are essential such as culture, information, knowledge, as well as applications and services that respond to the needs of the African society, which in addition constitute a formidable economic wealth for enterprises that develop them and implement them.

Human Resource Development and Increase of Awareness: The issue of skills is essential and a vast training programme for high level skills aiming at training systems, networks and telecom engineers, as well as system developers of all kinds, specialists in charge of regulation, training, telemedicine, electronic commerce, cryptography, etc, should be implemented via regional poles. Member States should consolidate the role of education, especially concerning consistency with needs of the labour market to guarantee the employment of young graduates in the ICT sector. This stage must be completed by major investments in high value-adding service sectors. E-learning should be developed at all levels to increase access to and the quality of education at all levels.

Cyber security: The necessity to harmonize technical and legal legislation, to progress in the fight against cyber criminality and related threats, given that neither the legislation, nor technical solutions are adequate in themselves to initiate partnerships at national, regional and international levels in sectors such as electronic trade, commercial legislation on Internet, etc. Member States should prepare a regional legislative framework on cyber security, as well as a possible model of regional strategy on cyber security. It also recommended creating a group of experts and a regional cooperation system to reflect on issues related to cyber security. This involves the promotion of all forms of partnership (public-private, south-south, and north-south) to promote the implementation of a concerted policy in the fight against cyber criminality and all connected impacts.

Cooperation Mechanism: International and continental cooperation in the Information and communication technology sector cannot be concretized unless special attention is paid to the human potential and to issues related to technology transfer.

In addition, it should be noted that the present preoccupation consists in ensuring the reduction of the digital gap that Africa experiences in comparison to other continents and between its countries. However, efficient cooperation between African countries especially requires real complementarities in the ICT sector and their utilisation, through exchange of information on strategies in the area of the development of this sector and the attainment of common African projects. Development of an ICT market in a partnership and cooperation framework will enable the strengthening of the interconnection to communication and digital information networks

Coordination and Cooperation among Development Agencies: To promote the creation of a framework of concerted policies in the fight against cyber-criminality and all related impacts. At this juncture it is necessary to stress the framework for coordination and harmonization of ICT programme formulation and implementation in the sub region proposed by SRO-EA. The key actors in the coordination mechanism were identified and include the NEPAD Secretariat, RECs, IGOs, ECA and member States.

8.   Conclusion

The WSIS helped to advance efforts to systematically consider ICTs in development programmes. It equally boosted the role of ICTs as a cross-cutting topic to be used in determining strategic priorities for sectoral programmes (health, education, etc…), and as a central component in poverty reduction strategies. It equally revealed to heads of government how ICT scan help to achieve the MDGs. The public authorities and donors therefore opted for an aggressive approach with the aim of encouraging the private sector to set ICT facilities and ease access thereto. Some governments put in place an enabling environment and new forms of partnership to foster growth in the ICT sector, and use ICTs to drive growth in other sectors.

However, despite the substantial inroads made so far, meeting the commitments made at Tunis by 2015 will require more concrete and more realistic financial commitments centred around four types of additional resources, namely: local resources, bilateral and multilateral donors, and private investments. All stakeholders in the sub-region must continue to make realistic commitments and endeavour to meet them. More efforts should be made to optimise synergies between the resources available and to use aid in a strategic manner for it to serve as a catalyst for private investment. The ECA will continue to support efforts at both national and international levels to use ICTs as an instrument of development and foster the cooperation and coordination needed to guarantee success. It will continue to provide invaluable support in several areas, especially in working out cyber strategies, analysing the role and importance of ICTs in social and economic development, capacity building, setting up enabling environments to develop statistical indicators and benchmark data on ICTs as well as developing international standards for information security, privacy and confidentiality.

Generally, it could be ascertained that the continent benefited positively from the WSIS process, which facilitated liberalization and privatization of the sector, which in return opened the continent to an array of new applications, mostly based on combined wireless and fiber optic technologies.

All these activities should contribute to the emergence of a shared vision on the information society that Africa wishes to implement and to provide reference for the elaboration of more inclusive polices.