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Africa and the Knowledge Society

Background Paper
by

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Honourable Ministers,
Executive Secretaries of UN Regional Commissions,
Chief Executive Officers,
Colleagues,
Ladies and Gentlemen,

It gives me great pleasure to participate in this High Level Panel on ICT and the knowledge-based economy, organized on the occasion of the 60th Session of the Economic & Social Commission for Asia and the Pacific (ESCAP).

This event could not have taken place at a better time given the rapid pace in technological innovations through information and communication technology (ICTs) and its profound impacts on society as a whole, and industry and economic sectors in particular. This phenomenon now ensures that knowledge is recognized as the basis for competitive advantage backed by information and intellectual products as raw materials. As we are all aware, a knowledge-based economy (K-Economy) is one in which the creation, distribution and utilization of knowledge perform a predominant role in the generation of wealth. It is this phenomenon and the need to deliberate on its impact that spurred the mobilization of the whole world on the Information Society during the Geneva phase of the World Summit on the Information Society (WSIS).

Furthermore, the setting for this event is very appropriate, as Shanghai is increasingly known for being a center of technological innovation in China and Asia. Among others the Scientific & Technology Museum and the Shanghai Technology Stock Exchange comes to mind but there are many other similar centers. Indeed, Asia is becoming a powerhouse of the knowledge economy and we are all aware of the many significant strides made which other parts of the world can emulate.

Now let me focus on my region, Africa.

Africa's current economic performance is raising hopes for a possible turnaround, compared to the stagnation of previous decades. The new trend is largely credited to policy reforms and better governance taking place in many countries. Nevertheless, this progress is still fragile and may not be sustained if the gap between the information-rich and the information-poor nations is not attended to, and if the foundation of a sustainable Information Society is not consolidated.

A few years ago, Africa embarked on a series of changes long overdue in the telecommunication sector through deregulation and privatization. Such measures were key to expanding the continent's limited and generally poor telecommunication infrastructure. However, the reforms have already yielded significant improvements in access to information and communication. Competition and the introduction of prepaid services have seen the exponential growth of mobile cellular and other wireless technologies in the past few years. Since Uganda in 2001 became the first African country where mobiles outnumber fixed-lines, more than 30 other nations have followed suit. In Morocco, Kenya and Nigeria, mobile subscribers outnumber fixed-line users at an incredible ratio of 6:1. Mauritius has invested heavily in state-of-the-art infrastructure with one of the highest rates of teledensity (27.2%) in Africa.

This was the first step towards Africa's entry into the Information Age. Another step was to put in place national IT policies to advance the Information Society. These efforts have been made possible through the implementation of the African Information Society Initiative (AISI), a work programme of ECA. AISI is a regional framework for Africa's quest to bridge the digital divide that originated

from a resolution of the 22nd meeting of ECA's Conference of African Ministers of Social and Economic Planning in 1996. It was adopted the same year by the Summit of Heads of State and Government of the Organization of African Unity and supported by the then G7+1 as Africa's major ICT initiative in its 1997 Denver Summit.

Africa's commitment to ICT for development has also been demonstrated through the NEPAD Action Plan, where ICTs projects and initiatives have been initiated to speed up sub-regional/regional connectivity and inter-connectivity. In this context, AISI was selected as the guiding framework for coordinating the support of United Nations agencies to NEPAD.

Activities launched to promote the knowledge economy under this regional framework include the development of national e-strategies/policies to deploy, harness and exploit ICTs for socioeconomic development at the local, national and sub-regional levels, including national spatial data. To date, more than 30 countries (out of 53 States) on the continent have embarked on such policies known as National Information and Communication Infrastructure – NICI plans, through the support of ECA.

The NICI development process takes place through a cycle of planning, implementation and regular evaluation of programmes and projects developed according to the needs and priorities of each country. This includes integrated sets of decisions, guidelines, laws, regulations and other mechanisms that direct and shape the production, acquisition and use of ICTs. Below are examples of recent NICI developments¹.

- **Comoros:** The policy documents are still at the draft stages and will be presented to the Government and stakeholders for review, comments and adoption in May 2004. This will be followed by validation workshops and a donor conference to facilitate implementation.
- **Ghana:** The policy entitled '*The Ghana ICT for Accelerated Development (ICT4AD) Policy*' was published in December 2003 with a foreword by the President of the country and adopted by Parliament in March 2004. As part of implementing its national e-strategy aimed at transforming the country into a knowledge economy, Ghana's Ministries of Communication and Trade Industries launched a Multimedia Centre to respond to the infrastructure needs of the ICT business sector with a fibre optic link to encourage new businesses in the sector and to spread innovation through the establishment of ICT incubators.
- **Mali:** Following a request from the Government of Mali, ECA launched the NICI development process in May 2002 during the African Regional Conference for the World Summit on the Information Society (WSIS). The Government is finalizing the policy documents for presentation and adoption by various stakeholders.
- **Malawi:** The Government is reviewing the ICT policy that will be presented to Parliament and then to the Cabinet by June 2004.
- **Niger:** The NICI process in Niger culminated in January 2004 with the adoption of the NICI Plan by the Cabinet during a workshop chaired by the Prime Minister. The process was done through a series of nation-wide consultations and preparation of several sectoral documents to support development of the NICI Plan. After adoption of the Plan by Cabinet, the Prime Minister of Niger requested ECA to support awareness raising activities among stakeholders.
- **Rwanda:** The President launched The NICI implementation in February 2002. Ministries have started developing sectoral plans out of the main plan. ECA is currently working with the Government on an e-Government strategy.

¹ More detailed information is available at <http://www.uneca.org/disd/ict/>

- **The Gambia:** an e-Government sectoral strategy is being developed as an AISI Pilot e-Government Model. The project focuses primarily on the Department of State for Finance and Economic Affairs, the Office of The President, Health, Education and Local Government sectors to facilitate the sharing of financial and economic management data and information between these priority sectors.

As a result of the work of AISI, many governments have begun to realize the importance of utilizing ICTs as a means for improving government services in Africa. In anticipation of this phenomenon, ECA launched an electronic dialogue on e-governance² aimed at providing insights into trends in e-governance programmes on the continent in 2002. Discussions revealed that this field is at an early stage in most countries, hampered mostly by low levels of e-readiness and limited political will. However, there were some experiences from selected countries, such as The Gambia, Ghana and Rwanda that deserved to be better known. A survey conducted by the ECA in June 2002 identified about 706 government websites in Africa and showed that e-government was indeed taking root in the region. Analysis of the sites shows that Morocco, Egypt, Nigeria, Kenya, Mozambique, Mauritius and South Africa have the highest number of websites. South Africa leads the group with 138 sites. Also, countries with the highest government sites have a large number of Internet users. Clearly, a critical mass of Internet users is needed to increase the effectiveness of e-government in Africa.

As well as its work on policies, a number of countries have started to assess their e-readiness as well as the impact of the Information Society. Since 2001 through the IDRC/ECA SCAN-ICT project, six countries have been measuring progress in several key sectors of the economy such as trade & commerce, tourism, governance, education, and health, as well as the possibilities of employment creation in a constantly changing world. As SCAN is derived from AISI, it is premised on the fact that to achieve social and economic development goals, improvements and expansion are required in the implementation and utilisation of ICTs. Therefore, the project aims to build the capacity of Africans to collect and manage the kind of information and data that supports and engineers ICT growth and investment. To-date, Baseline studies have been undertaken in Ethiopia, Ghana, Morocco, Mozambique, Uganda and Senegal and more countries have been identified for similar activities. The Ghana and Uganda baseline studies formed the basis for the national ICT policies of those countries. Indicators are also being developed in line with major development initiatives and priorities, such as the Millennium Development Goals (MDGs) and Poverty Reduction Strategies Programmes (PRSP). Given the importance of such an initiative it is also reassuring to see that benchmarking and assessing progress and impact are now being considered by the international community through the United Nations ICT Task Force (UN ICT TF) and strongly recommended in the WSIS Action Plan.

Let me now dwell on some important lessons learnt after 8 years of implementing the AISI.

Political will

Progressive e-policies and strategies at national level demonstrate that political will and leadership are fundamental. They are pre-requisites to the launch of the process and critical for the translation of the approved policies into relevant and feasible actions plans. President Kagame is part and parcel of the process that aims to move Rwanda from agricultural-led to knowledge society. He is leading by example and decided to become a computer literate himself. President Chissano and Prime Minister Pascoal Mocumbi are at the forefront of ICT policy in Mozambique. These and a number of other examples show that the ICT policy process could succeed only through strong political leadership as well as institutional support.

² <http://www.bellanet.org/lyris/helper/index.cfm?fuseaction=Visit&listname=aisi-l>

Education and Capacity building

Education and capacity building have been identified as a prerequisite in creating an Information Society and ultimately a Knowledge Economy. The continent needs to strive to ensure the literacy and e-literacy of its population, with the development of an adequate skilled workforce. A knowledge economy requires knowledge workers. Human resource development is key yet many countries suffer from lack of experts and expertise to develop and support relevant applications and systems. Without a sustained effort to train citizens and workers in key ICT skills, this may hamper progress made in other areas. In response to this the African Learning Network (ALN) was formed during the first African Development Forum (ADF 1³). ALN consists of three pillars:

- **SchoolNet Africa (SNA)** was conceived to facilitate networking among African schools at the national and regional levels. It is the first African-led, African-based non-government organisations (NGO) that operate across the continent in 31 countries to improve education access, quality and efficiency through the use of information and communication technologies (ICTs) in African schools.
- **OOSYNet** is a youth networking initiative that addresses the needs of Out-Of-School Youth (OOSY) at both national and regional levels. This influenced the programme of IMFUNDO of the UK, in a project for street children in Ethiopia, in which ECA is a partner.
- **VarsityNet** intends to facilitate the networking among African universities and research institutes for information sharing, content creation and collaborative research. Under the framework of VarsityNet of the ALN, ECA is building Research and Development capacity of higher education institutions to develop and diffuse ICTs content and applications. This initiative is bringing the public sector into partnership with the private sector for synergies and innovation that is urgently needed in Africa. It was realized that the participation and contributions of African academia in the development, implementation and evaluation of the Information Society needed to be boosted as they can play a leading role in the knowledge economy. Activities are:
 - *The Addis Ababa University, Ethiopia* is undertaking a pilot research application in the area of e-government and the use of the Amharic local language of Ethiopia for a web-based, multilingual and multi-alphabet, customizable document exchange platform that can be used by local and central government offices.
 - *The Inter-University Council of East Africa (IUCEA)* in collaboration with the Universities of Nairobi (Kenya), Makerere (Uganda), Dar-es-Salaam (Tanzania) and the Jomo Kenyatta University of Science and Technology (Kenya) are developing applications that support the International Fellowships Programme (IFP) and the Inter-University Students Exchange Programme for East Africa. This project is managed by IUCEA on behalf of the East African Community.

Awareness-raising

As the issue of ICTs for Development is relatively new in Africa, it requires outreach and dissemination of information to publicise achievements, best practices and experiences. In awareness-raising ECA targets a broad spectrum of stakeholders and offer various training workshops through the Information Technology Centre for Africa (ITCA). Capacity-building activities have been organized for parliamentarians, academia, media, women and other relevant stakeholders. At the same time, the Commission maintains a series of regular on-line discussions

³ African Development Forum is an initiative led by the Economic Commission for Africa (ECA) to set up an Africa-driven development agenda. It is designed as a process of initiating dialogue, building consensus, and mobilizing partnerships on emerging issues among Africa's stakeholders.

with key stakeholders such as academia, Civil Society, media, youth and the African Diaspora on their perspectives and views on trends and issues affecting the continent in this area. Other sensitisation activities include:

- **IConnect Africa**⁴ - a quarterly web, paper and email service that aims to raise awareness in the wider African development community regarding the possibilities offered by ICTs in development. It is produced by ECA and the Netherlands-based International Institute for Communication and Development (IICD) and reports on ICT4D activities in Africa. It is funded by the United Kingdom Department for International Development (DFID), THE Netherlands Ministry of Foreign Affairs, and Department for International Development Cooperation (DGIS) and the Swiss Agency for Development Cooperation (SDC).
- **PICTA Bulletin**⁵ - a monthly publication that provides information on activities of members in the Partnership for ICTs in Africa (PICTA), as well as news on ICT-related activities in Africa.
- **AISI Radio Series** - aimed at creating greater awareness on the information society, serving as a tool for media practitioners, especially radio broadcasters to engage various groups in debating the role of ICTs in the development process. The programme was made possible with funding from the Africa Region of the World Bank. While two of the programmes provide an overview of the information society in Africa, the other three are based on the state of ICTs in Ghana, Mali and Uganda. Two additional programmes on Senegal and Benin are being finalised. "ICTs in Mali", one of the four programmes in the AISI Radio Series, was broadcast by the English Language Service of Radio Netherlands, and was a special edition in their weekly development programme, A Good Life. The programme will also be made available through Radio Netherlands' affiliate stations such as World Radio Network (WRN) broadcast worldwide with specific feeds to National Public Radio (NPR) in North America, SAfm, South Africa, Canadian Broadcasting Corporation (CBC), and the Australia Broadcasting Corporation (ABC).
- **The AISI Media Award Programme** launched in 2003 aims to encourage reporting by African journalists on ICT for development issues within the context of the AISI. The Open Society Initiative for Southern Africa (OSISA), the International Development Research Centre (IDRC), and the International Institute for Communication and Development (IICD) have made contributions to the award, which has assisted in kick-starting the process.
- **AISI Briefing papers** aim at sensitising African policy makers about the issues that need to be addressed for achieving Africa's digital inclusion. The first issue addressed policy formulation through the National Information and Communication Infrastructure (NICI) plans. Additional papers are underway on ICTs and governance, and civil society participation in ICT programmes.
- **Websites and e-discussions** - developed to disseminate information, best practices, ICT stories from and within Africa and to exchange ideas on the development of the sector. The websites are being used to document status of e-readiness and national e-strategies at the country level with stakeholders such as Academia, CSOs, Diaspora, Media, Youth, Private Sector, etc. Several lists have been established and new ones created to facilitate the collaborative work of groups involved in the implementation of AISI. So far, they have been instrumental in ensuring a broad-based participation in the WSIS process.

Participatory process

The Information and Knowledge Society and Economy require the involvement of all stakeholders in the formulation and implementation of policies and strategies. For many of our countries this entails a balanced composition of governments, private sector (both local and international), academia, civil

⁴ <http://www.uneca.org/aisi/IConnectAfrica/index.htm>

⁵ <http://www.uneca.org/aisi/picta/PICTAbulletin/index.htm>

society, as well as international development agencies. A participatory process underlined the AISI formulation in 1995, when various stakeholders contributed to establishment of its vision and main objectives. This has been maintained through the African Technical Advisory Committee (ATAC)⁶ that is composed of representatives of the academia, media, CSOs, private sector and the Diaspora and that advises on AISI implementation process and progress. The participatory process was also the basis for the African Regional Preparatory Conference to the WSIS in Bamako, 2002, which was attended by all African countries, most of them at ministerial level. The Bamako 2002 Declaration guided Africa's participation in the first phase of the WSIS Summit, and was used as part of Africa's contribution to the Geneva Declaration and Action Plan. Bamako 2002 Conference elected a multi-stakeholders Bureau to guide and support Africa's participation in the WSIS activities with support from ECA. The Bureau met informally, several times during the various PrepComs to ensure that at each stage Africa's voice and needs *vis a vis* the Information Society were recognized and considered. It organized its first post Geneva meeting in February 2004 in Addis Ababa. In addition to these main activities, events have been organized for specific stakeholders to ensure their full and well-informed contribution as follows:

- **Academia** – visioning/retreat in June 2003 to provide a platform and space for a select group of leading African academics to reflect on the many intellectual issues that they face as they develop strategies for enhancing their role in the African information society.
- **Civil Society** - policy workshop was organized in November 2002 to build knowledge and expertise among civil society organizations to engage in ICT policy processes in Africa. This resulted in a Statement and Plan of Action for African civil society participation in information society development. The African Civil Society Bureau was recomposed recently and held a post Geneva meeting in Tunis in April 2004.
- **Media** – There have been two forums organized for the media to sensitize African media to their role in promoting the Information Society. The first Media Forum was held during the Bamako Regional Conference in May 2002 to deliberate on media concerns in the Information Society. There was a follow-up in May 2003 to review the Bamako recommendations and prepare for the first phase of WSIS. As a result, a large number of African journalists participated in the Geneva Summit.

Partnership mechanisms

As a regional agency working in this area, ECA realizes the importance of partnerships in advancing Africa's Information Society and the knowledge economy. Several collaborative strategies such include:

- **The Partnership for Information and Communications Technologies in Africa (PICTA)**⁷ - an informal group of donors and executing agencies committed to improving information exchange and collaboration around ICT activities in Africa. It is a forum for donor/executing agencies' collaboration within the framework of the AISI. It has been contributing to the AISI implementation since 1998.
- **The African Stakeholders Network of the UN ICT – Task Force**⁸ was set up in January 2002 as a result of a meeting organized by the Economic Commission for Africa (ECA) with support from the UN ICT Task Force secretariat. The consultative meeting brought together over 60 representatives from governments, development agencies, donors, private sector, civil society and non-governmental organizations. From Africa's point of view it is mainly intended to link existing African activities and initiatives with the newly established UN ICT Task Force. The main mandate of the ASN is to develop a network relevant to Africa's needs and in line with the

⁶ <http://www.uneca.org/aisi/atac.htm>

⁷ <http://www.uneca.org/aisi/picta/>

⁸ <http://www.unicttaskforce.org/regional/africa/main.asp>

mandate of the Task Force and its Working Groups; share information on major African activities and initiatives through mailing lists, web sites, country profiles; sensitise and mobilize major actors to ensure African ownership and support from partners; share information, and encourage membership when relevant and organize special events; assist in linking the network with African and international initiatives

- **The Global Knowledge Partnership⁹ (GKP)** is a "network of networks" with a diverse membership base comprising public, private and not-for profit organizations from both developed and developing countries. The Partnership was born as a result of the preparatory process of the 1997 Global Knowledge Conference in Canada, hosted by the World Bank and the Government of Canada. At present there are 45 members. For 2001-2003, the chair for the committee is the Government of Switzerland, represented by the Swiss Agency for Development and Cooperation (SDC), and the secretariat is hosted by the Government of Malaysia, represented by the National Information Technology Council (NITC). ECA is a member of the Network and sits on its Executive Committee.

Among various aspects of partnership is the need to seek other forms of *financing mechanisms* and investment opportunities to support the emergence of the knowledge economy in the developing world. Whilst existing partnership mechanisms can be strengthened, new and alternative forms of investments must be sought and encouraged, particularly in Africa. Indeed this has been identified as a critical issue by WSIS and is supposed to be addressed in the lead up to Tunis.

Regional cooperation

Regional cooperation is as an important component for promoting sustainable development and an instrument in itself for promoting integration between countries. Through ICTs economic integration can occur at an accelerated pace, as well as support the harmonization of policies for investment in the ICT sectors of African states. Such measures can make Africa a much more attractive market. Therefore, innovative mechanisms are needed to address the challenges of building the information society at the regional level. These include:

- Harmonizing national ICT policies and plans
- Building a regional infrastructure/backbone
- Adoption of regional information society strategies at the Regional Economic Communities (RECs) level
- International and regional cooperation in information society development.

The Way Forward

Social and economic development challenges and resource limitations have increased the need for prioritisation of ICT intervention in key sectors in Africa. The areas of priority in Africa include:

- Improving governance and public sector effectiveness through concerted use of ICTs by government and meeting public sector reforms;
- Meeting the challenges of health systems management, healthy life, HIV/AIDS, health knowledge;
- Increasing the capacities of small and medium enterprises to benefit from growing electronic business;
- Improving ICT use in all aspects of education, learning and research with focus on youth, lifelong and distance learning; and
- Harnessing ICTs for improving the situation of agriculture, food security and environment in Africa

⁹ <http://www.globalknowledge.org>

Human and institutional capacity development remains one of the chronic problems in the region. The challenges include:

- Lack of expertise in policy analysis (defining and implementing national policies, participating in global decision making, etc.);
- Inadequacy in information management, policy and regulatory framework development and enforcement of regulation by institutions;
- Fragmentation of ICT related programmes at national level due to competition among agencies and institutions;
- Lack of negotiation skills particularly at the international levels; and
- Lack of reliable and sustainable institutional capacities resilient to the changes of government and global needs.

Furthermore, technical and financial assistance are needed at various levels. These include:

- Provision of knowledge as to what steps to take in developing inclusive national and sectoral policies;
- Providing guidance and resources to overall ICT policy formulation and e-strategy development process particularly in translation of policies to actions;
- Financing the implementation of large and small catalytic programmes and projects;
- Supporting countries in mobilization of internal and external resources;
- Maintaining partnerships for sustainable ICT development; and
- Monitoring and evaluation of progress.

Conclusion

As we promote knowledge-based initiatives in our respective regions of the world, ECA would like to urge for greater collaboration and cooperation among the UN Regional Commissions and other sister agencies. This will foster a spirit of sharing knowledge, promote best practices and identify common areas of interest that can assist us to work together and inter-regionally. Since the first phase of WSIS, the UN Regional Commissions have identified areas of collaboration, which offer exciting new opportunities for us all in the build up to the second phase of the WSIS in Tunis 2005.

ECA is willing and ready to work with its sister commissions to promote comparative learning in this area and would welcome suggestions as to the best way forward.

We extend our most heartfelt congratulations to ESCAP on the occasion of its 60th Session. ECA has a great deal to learn from your experience and looks forward to increased sharing of information and knowledge, especially in the area of assessing and measuring the impact of the K-Economy.

I thank you for your kind attention.