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Submissions from entities in the United Nations system and elsewhere on their efforts in 2011 to implement the outcome of the WSIS

Submission by

ECA

This submission was prepared as an input to the report of the UN Secretary-General on "Progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels" (to the 15th session of the CSTD), in response to the request by the Economic and Social Council, in its resolution 2006/46, to the UN Secretary-General to inform the Commission on Science and Technology for Development on the implementation of the outcomes of the WSIS as part of his annual reporting to the Commission.

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Implementing the WSIS outcomes in Africa - Tunis + 6

1. Executive summary

African countries have made significant progress in the adaptation and utilisation of ICTs to drive their socio-economic development agenda. With over 620 million mobile subscribers, Africa has become the second largest continent in mobile subscriptions in the world, after Asia. With over 43 countries having their national ICT policy in place and most in different phases of implementing their plans, the strong desire in opening up the market and increased investment is evident from recent developments in that most of the African countries are now connected to submarine fibre optic cables, with the latest cables landing on the shores of the continent in 2010, connecting Africa to the rest of the world. Measuring the information society in Africa is getting more focused with the e-government indicators lead and developed by ECA was approved and is being published for wider circulation and application. Some countries have moved to adopt international ICT measurements at national with ECA for example, provided support to Nigeria to this effect. In this regard further studies is underway in five countries (Cameroon, Ethiopia, Gambia, Morocco, Mozambique) to assess ICT policy development and implementation process aimed at taking stock of the existing policy situation as well as assessing and reviewing the process in the context of the respective countries. Moving from policy formulation to implementation, several countries have developed sectoral policies such as e-government, e-education, e-commerce, e-health and e-agriculture plans to integrate ICTs in their socio-economic development processes. In this regard, the issue of cyber-security has been top in the agenda in the last one year both at the national and sub-regional levels. To this effect, a draft convention on cyber-

security prepared by the ECA in collaboration with the African Union Commission is being reviewed through a series of sub-regional consultations with Regional Economic Communities before it is submitted to the African Union Heads of State and Governments for approval in the coming year.

2. Analytical overview

This document will concentrate on the key activities in relation to ECA's direct involvement and participation in selected follow up activities and WSIS action lines at regional level.

2.1 ICT Policies, Plans and Strategies

Benin – the development of Science, Technology and Innovation (STI) policy and plan started in 2010 which is now finalized and submitted to the STI National Task Force and stakeholders for review for subsequent validation.

Burkina Faso – it was one of the first African countries to have completed a NICI plan in 2000 which has further updated and aligned it to the country's PRSP strategy in 2004. The plan's framework includes development of sectoral strategies for the operationalization of the NICI plan. With the assistance of the Finland project, several sectoral strategies have been developed, including e-Government and e-Health in 2010 and e-Services for Rural Development, e-Commerce and e-Education in 2011.

Cote d'Ivoire - ECA has been providing support to the Republic of Côte d'Ivoire to develop its national spatial data infrastructure (NSDI), namely the Plan Géomatique National de la Côte d'Ivoire (PGNCI). The PGNCI is a consensual plan for the management of geospatial data and information in Côte d'Ivoire. The plan will be contained in a document detailing the governance of the production and management of geospatial data and information productions to support the delivery of government and commercial services for the benefit of the citizens of Côte d'Ivoire. Activities stalled in 2011 due to the political crisis in the country are expected to restart next year.

Ethiopia – activity to develop IT security audit framework and capacity development to plan and conduct information system security auditing for the national e-government system of Ethiopia is underway. So far, initial drafts of the planning and methodology as well as detailed questionnaires which support the planning and audit function has been submitted and the documents are under review. This exercise will be completed by early 2012.

Ghana – supported by ECA, Ghana started to develop a geographic urban service infrastructure including National Street addressing and numbering. In May 2011, the geo-enabled NICI process was launched at a kick-off meeting of the process. Furthermore, a detailed diagnosis of actors, needs and priorities as well as standards and interoperability of the systems is being undertaken for the development of the Policy Framework for Addressing Systems (PFAS) in addition to mainstreaming the geo-information dimensions in the exiting ICT4AD policy of Ghana. Support is also provided to acquire satellite imagery over the Greater Accra to assist in creating and/or revising mapping and building geodatabases.

Mali – Following the adoption of the NICI plan of Mali by the Cabinet in July 2005, the necessary institutional arrangements were being put in place and the ICT market liberalised. In a bid to implement its NICI plan, the Government of Mali has adopted strategies on e-Government, e-Health, and e-Education in Dec 2008. Furthermore, e-Commerce, E-Communication and e-Agriculture strategies have been finalised in 2011. Each strategy defined, among other actions, a Vision, strategic objectives and a five year Action plan. The development of STI policy document in Mali, which was started in 2010 is currently being finalised. The first draft was submitted to STI National Task Force and stakeholders for review.

Mozambique – A scoping study on the challenges and opportunities of mobile based technologies and applications for women entrepreneurs in Mozambique and a prototype of a mobile-based application is under development.

Niger - the Government of Niger has decided to implement the NICI plan through several key sectors such as e-Government, e-Commerce, e-Education and e-Health. The e-Government strategy, supported by ECA was validated in 2008. Development of the e-Commerce, e-Education and e-Health strategies are underway with a draft of the e-Health strategy finalized for review and validation in 2010.

Rwanda - After reviewing the ICT4D process over the period 2000-2010, the Government of Rwanda has designed the way forward after learning from past experiences. The future plan is called the NICI-III for the period 2010-2015. NICI III will build on the foundation laid by NICI I and II by focusing on “services development”. This third phase has been characterised by the active engagement of stakeholders during the development process to ensure ownership during implementation. This has led to the identification of 5 NICI III clusters, which include: skills development, private sector development, community development, e-Government, and cybersecurity which its validation process took place in 2011. This process has reviewed the implementation phase for all the 5 project areas led by the National Steering Committee. The project implementation period will be reduced to 2 years taking into consideration the

technological developments in order to ensure that the plan always implements the up-to-date and technologically relevant solutions.

Zimbabwe – Reviewing the current ICT policy framework and those activities in support of the ICT sectoral strategy development and implementation, especially cyber security and cyber law, e-transaction laws and e-Government policy in Zimbabwe, which will support the creation of an enabling environment for ICT development.

2.2 Measuring the Information Society – Scan-ICT initiative

Through the ongoing Scan-ICT initiative ECA continued to support member States with the aim to enable African countries build their capacity to compile and utilise ICT data based on internationally agreed and comparable ICT indicators. With support from the Government of Finland, ECA launched the second phase of Scan-ICT programme in 2005 and National Statistical Offices (NSOs) from five countries (Cameroon, Gambia, Ghana, Mauritius, and Rwanda) benefited from this support. The second phase of the Cooperation Programme will continue providing support to the named countries while extending the programme to a few new countries focusing on building the capacities of NSOs.

In this regard, ECA facilitated a national Scan-ICT stakeholders' consultation workshop in 2011 in Abuja, Nigeria which inaugurated a National Task Force on Scan-ICT Nigeria to implement monitoring and evaluation of ICT4D activities in Nigeria. A website has been developed for Scan-ICT Nigeria (www.Scanict.org.ng) which will be used for social campaign and information gathering.

2.3 Research and Innovation

Through the ECA-supported Academia Research Network (ARN), research and innovation activities were undertaken in Cameroon, Ethiopia, Mozambique and Tunisia. These activities continued in 2011 with some activities being implemented focusing on African languages and content development in Cameroon.

2.4 Recognizing best practices in ICT Applications

The growth of ICT applications in socio-economic sectors in Africa is evident from the increasing participation in the Technology in Government Awards (TIGA) programme of the ECA. For the first entries to the award in 2007, there were 36 TIGA entries from 17 countries. Two years later, there were 60 entries from 20 countries in 2009. In 2011, 89 entries were received from 24 countries, with over 44 projects short-listed for the Awards. In general, an increase of over 40% in the number of entries is received with

every subsequent TIGA Award. This suggests that there is significant interest and increased use of ICT in delivery of innovative services to the people by African governments. During the next TIGA process in 2013, ECA will be launching a G-Government category or Geospatial Government, which encompasses the use of the Internet and GIS in making the delivery of services more effective by governments. TIGA awards indicate trends to support citizens' access to vital information.

2.5 Building confidence and security in the use of ICTs - Cybersecurity

In recent years, African countries have been putting in place mechanisms for building confidence, trust and security through the e-strategy development process. Although only a few countries have cybersecurity specific laws, most African countries have in their NICI e-strategy plans outlined as one of their objectives, the need to develop the cyber legislation. Included in this category are countries such as Burundi, Cameroon, Chad, DRC, The Gambia, Liberia, Malawi, Mozambique, Niger, Nigeria, and Swaziland.

The results of ECA's survey on the implementation of the WSIS action lines in 2009 and 2011 in Africa show that a number of countries including Benin, Egypt, The Gambia, Ghana, Mauritius, Niger, Nigeria, Senegal and the Sudan indicated that they have cybersecurity laws in place.

At regional level, noteworthy efforts have been deployed in the realm of legal protection. In this regard, the ECA and partner organizations have initiated a comprehensive harmonization project in cooperation with the authorities of UEMOA and ECOWAS and other Regional Economic Communities have followed in the same path at a time when the States are increasingly enacting legislations on cyber security and ICTs in general. With support from ECA, ECOWAS developed three e-legislations, namely:

- Supplementary Act on Electronic Transactions
- Supplementary Act on Personal Data Protection
- Directive on Fighting against Cybercrime

Two of the e-legislation frameworks (i.e. the Electronic Transactions and Personal Data Protection) were adopted by the Heads of States in Feb 2010 in Abuja, Nigeria. The one on Cybercrime is to be presented for adoption at the next Council of Ministers meeting. In terms of implementation of , eight ECOWAS Member States have completed the internalization/ transposition of the Community Acts into their national laws, four have submitted their Bills either to parliament or cabinet and three others were at various stages in the preparation of the Bills.

To move the harmonization of e-legislations from sub-regions to regional level, ECA and the African Union Commission coordinated the development of a regional convention on cyber legislation based on the Continent's needs and which adheres to the legal and regulatory requirements on electronic transactions, cyber security, and personal data protection. The Convention will be tabled at the July 2012 Heads of State and Government Summit.

2.6 Knowledge network through community ICT access points

Continuing on the Development Account – supported initiative between the five regional commissions of the UN, ECA continued to support the Knowledge Network of African Community Telecentres (KNACT) established as a result of this initiative involving eight countries in Africa (Burundi, Ethiopia, Kenya, Rwanda, Tanzania, Uganda, Zambia and Zimbabwe) through capacity building on new tools of for knowledge sharing and networking including the use of social media. This was also marked with the launch in collaboration with the UNESCWA of a global knowledge network portal at www.knowledgenets.net.

2.7 Africa Preparatory Meeting for Global Geospatial Information Management (GGIM)

The Commission has organized the Africa Preparatory Meeting to the Global Geospatial Information Management Initiative (GGIM), in consultation with the member States to discuss the overarching topic of geospatial information governance and to develop the continent needs, prospects and vision for an overall Geoinformation Governance in Africa. During the meeting, ECA has prepared and presented background documents on the various dimensions of geospatial information governance in Africa. The meeting also recalled the importance of the GGIM initiative and endorsed Africa participation to the overall process. The meeting also recommended the development of the African Action Plan on Geospatial Information Management. Currently, development of the Africa action plan is going on with consultations and discussions with stakeholders and experts.

2.8 Stakeholders Consultations Workshop to Revamping ENERAMED Metadata Tool

ECA continues the maintenance of metadata clearinghouse to provide a facility for member States to publish the metadata of their available data holdings. Based on the

request from the government of Ethiopia, to revamp the ENERAMED metadata project, ECA has organized half day stakeholders Workshop to have consultation and discussions with the partner institutions and other key stakeholder organizations from government and private sector in the issue of the ENERAMED metadata revamping.

2.9 Executive seminar on Geoinformation Policy Development at Map Africa 2011 Conference

The main aim of this activity was to promote awareness among decision makers on the African Regional Spatial Data Infrastructure (ARSDI). In 2011, an information kit for policy makers was prepared and the design, development and printing of study material used during the seminar were undertaken which subsequently the region senior executives Seminar on geoinformation policy development was organized during the 2011 African Geo-Spatial Forum held in Nairobi, Kenya, from 6 to 8 September 2011.

2.10 Action week for Global Information Sharing (AGIS'11) to promote Equality through Language and Cultural Diversity

ECA, the Localisation Research Center (LRC) in Ireland, and the Center for the Development of Advanced Computing (C-DAC) in India brought together business people, technology experts, linguists and policy and decision makers in language and technology fields from around the world on 1 and 2 December 2011 in Addis Ababa, Ethiopia to discuss and develop innovative solutions that will allow the world in general and Africa in particular to listen to its diverse voices in their own language. The conference addressed issues among others language and technology policy, language and business opportunities in Africa, human language technologies and language service delivery for development, etc. The event for the first time connected Africa's language industry and policy- and decision-makers with the mainstream localization and translation industry and researchers.

2.11 Internet Governance training and the Internet Governance Forum (IGF)

ECA, in collaboration with Diplo Foundation, has organized a training workshop on e-diplomacy and Internet Governance (IG). The e-Diplomacy training was attended by over 60 participants comprising of African Ambassadors and Head of regional and international organizations based in Addis Ababa. Over 30 officials and professionals from regional and sub-regional institutions of ACP countries participated in the IG training provided an opportunity for the participants to strengthen their overall understanding of IG and to develop diplomatic approach of their country and institutions in the IGF process.

Furthermore, ECA and the African Union Commission in cooperation with the four African sub-regional Internet Governance Forums (Central, East, Southern and West) facilitated a high-level meeting during the IGF 2011 in Nairobi, Kenya and launched the African Internet Governance Forum (AfIGF) on 30 September 2011. The event was coordinated by ECA, which hosts the AfIGF secretariat. The first AfIGF meeting is expected to be held in Cairo, Egypt in July 2012 under financing from ECA and the Egyptian Government in cooperation with other partners. In the meantime, ECA has set up an online discussion list, which will facilitate exchange of ideas on the development of AfIGF.

2.12 Development of Regional Geospatial Databases and Geoinformation Applications and Services

ECA is developing numerous information and knowledge resources, applications and services to improve availability and use of information for development at the national, regional and sub-regional levels.

Development of Regional Geospatial Databases

Several regional geospatial databases are being developed to support regional initiatives. These databases form the core set of data for the African Regional Spatial Data Infrastructure.

Health and Emergency Management Systems: ECA has designed a web-mapping application that aims to set up disaster monitoring, evaluation and response management system to direct response teams to critical and vulnerable areas in Africa, with necessary infrastructure and health information. The system comprises GIS application, with authoritative geodatabases, to support preparedness, planning and operations to deal with medical and health emergencies. The health emergency database with its web-mapping interface is one of the geospatial databases for the African Node of the UN Spatial Data Infrastructure (UNSDI). A prototype application for Ethiopia is currently running in the ECA server to demonstrate the application. (<http://giss.uneca.org/ehealth/>).

Development of Online Applications and Services

ECA continues the development of online applications and services aims at developing and promoting information and knowledge resources, applications and services that improve availability and use of spatially-enabled data for informed decision-making.

GeoNyms Application: In collaboration with the United Nations Group of Experts on Geographical Names (UNGEGN), ECA is developing the GeoNyms application to be used by member states to manage their gazetteers of place names. The application used is an open-sourced free database software tool that can capture, validate and disseminate geographical names of a country. The prototype is available for review and testing by Member States.

Southern Sudan Water Information Clearinghouse: ECA in collaboration with RCMRD are assisting the Government of Southern Sudan, to establish a water information system, based on a GIS. The project includes developing a Water Resources Information Clearing-house that is fully functional with appropriate equipment and infrastructure, and, skilled and qualified staff and personnel. A GIS portal was also developed. All the major technical activities of SSWICH are completed except final reporting and formal hand-over workshop (<http://www.sswich-mwrigoss.org> ; <http://www.sswich-mwrigoss.org/gisportal/>).

2.13 E-learning Courses

ECA through the Information Technology Centre for Africa (ITCA) has since delivered training on ICT Essentials for Government Leaders to African parliamentarians with online versions (www.uneca.org/elearnafrica) of the courses that have been launched in April 2011, during the Internet Governance Training Workshop in Addis Ababa. Currently 99 users are registered and 40 of them are taking the ICT and Meaningful Development Module. Course modules on e-Government Applications, Information and Network Security, and Cyber Legislation are being developed and will be launched soon.



3. Trends and Experiences in Implementing the WSIS at National and Regional level

ECA has undertaken a questionnaire-administered survey to assess the status of implementation of the WSIS action lines in member States in Africa in 2011. Based on responses from 15 countries, the trend shows that there are progressive implementation efforts with increased investment in ICT4D, for example, Kenya spent 2.8% in 2009 and 0.9% in 2010 of its national budget, Mali spent 2.26% of its budget in 2010, Mauritius spent 0.69% in 2010 and Senegal has been spending from 5% of its budget since 2005. The growth of mobile penetration and connection to submarine optical fiber cable networks will enhance access to broadband Internet both wireless and fixed line to enable deployment of applications in key socio-economic sectors. This fiber optic infrastructure access could bridge the current north-south divide in usage in that countries in North Africa (Algeria, Egypt, Libya, Morocco, Tunisia and Western Sahara) which constitute 9 percent of the population of the continent consume 60 percent of the bandwidth i.e. 312 Gigabits and the rest of the continent, only using 40 percent of the bandwidth i.e. 208 Gigabits by end of 2010.

Citizens' access to public information is improving due to the widespread e-government implementation activities in many countries where government portals becoming common interface for both information and service delivery outlets. The level of integration of ICTs in education and schools is increasing in many countries, for example, Burkina Faso from senior schools, Burundi from secondary schools, Congo at all levels, Gambia at higher level and plans to integrate at all levels, in Senegal, ICT education is mandated from primary school, and in Ghana, computers supplied to schools and Internet connection to schools, and adopted online registration for exams, training of teachers, ICT curriculum, distance learning, etc. A number of countries have developed an ICT in education policy such as Burkina Faso, Kenya, Ghana and Mauritius.

A number of countries have cyber-security laws in place and some are in the process of transposing the regional guidelines such as in the CDEAO and UEMOA sub-region into national text/guideline. The move towards adopting a cyber-security convention at a regional level will enable for widespread adoption in the continent.

While e-government is being well adopted, ICT adoption and application development in other sectors still remain very low. In most areas of the WSIS action lines, improvements are observed from 2009 ECA benchmarks.