

**COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)**

**Fourteenth Session  
Geneva, 22 to 27 May 2011**

**Submissions from entities in the United Nations system and elsewhere on their  
efforts in 2010 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 14<sup>th</sup> 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  
2010**

**SUBMISSION FROM THE ECONOMIC COMMISSION FOR AFRICA**

## **Summary**

1. ICTs continue to play an increasingly important role in national, sub-regional and regional development; and African member States are increasingly seeking the support of ECA to develop policies for the use of e-applications in governance, education, health, agriculture, finance and trade through implementation of the WSIS outcomes in the framework of the African Information Society Initiative (AISI). Hence, the activities focused on supporting the formulation and implementation of national, subregional and regional ICT and science and technology policies and strategies, integrating spatial data infrastructure and geoinformation for sustainable development. There are presently 43 African countries with national ICT policies, 4 are in the process of developing an ICT policy; only 6 have not initiated ICT policy development. Top priorities of the ICT for Development strategies in those countries include infrastructure, education, e-government and human resource development. All countries are now connected to submarine fiber optic cables, the latest have landed in 2010, connecting Africa to the rest of the world, including TEAMS, Seacom, Lion, CAB, GLO-1. At the same time most African countries have started implementing inter country connection programmes as witnessed by the connectivity map developed by ECA. Wholesale tariffs which were in 2008 at USD 2 000-10 000 for SAT3 cable and at USD 3,000-5,000 for satellite connection, have now fallen within the range of USD500-1,000. Mobile subscribers have grown from 16 million in 2000 to over 370 million in 2010. Africa has also led innovation in mobile banking and e-services which is booming in several countries.

## **Highlights of key activities**

### **African Committee on WSIS Follow up**

2. The African Committee on WSIS Follow up meets every two years to assess and discuss WSIS outcomes implementation in Africa. It was created as part of ECA's Committee on Development Information, Science and Technology (CODIST), composed of senior officials, academia, private sector and civil society from member States and partner organizations. The African WSIS Committee assessed Tunisia + 3 through a publication prepared by ECA, entitled "Implementing the WSIS Action Lines in Africa: Analysis of Country Reports" and has launched a survey on Tunisia + 5 to be discussed in May 2011 in Addis Ababa.

### **E-strategy development**

3. Supported by the UN and the Government of Finland, the e-strategy development process is one of the key activities to implement the WSIS outcomes. During the period under review, support was provided to ten countries, five of which have since completed the formulation of policies and plans relating to sectoral information and communication infrastructure. These countries include Burkina Faso (e-Government, e-Health, e-Commerce, e-Education, and e-services for rural development strategies), Ethiopia (e-Commerce law), Gambia (e-Government), Mali (e-Commerce, e-Communication and e-Agriculture strategies), and Niger (e-Health strategy). Also,

new cooperation arrangements are in place to enable Burkina Faso, Mali and Niger to develop additional spatially enabled ICT implementation strategies in the various sectors identified by Government, Ghana to step up implementation of its national e-strategy and Rwanda to evaluate its 2<sup>nd</sup> NICI Plan and develop the 3<sup>rd</sup> NICI. Cote d'Ivoire has finalized two studies on the development of its National Spatial Data Infrastructure Strategy, waiting for validation by Government and stakeholders.

4. Another ground breaking initiative launched after the WSIS was the study on m-banking, which resulted to a launch of a book that looked at the exploitation of mobile phones for banking and e-transactions in Senegal, Kenya and South Africa.

## **Activities on ICT Measurement**

5. Evaluating and measuring the Information Society is key in assessing evaluation of WSIS outcomes and its impact on member States. In this connection, the objective of the ECA programme on measuring the Information Society is to improve capacities at national level to develop ICT indicators, sustainable data collection, processing and dissemination on ICT indicators supporting the policy process, as well as measuring the impacts on African development. In this regards, ECA continued to operationalize the Scan-ICT initiative supported by the Government of Finland to build the capacities of National Statistical Offices (NSOs) in collecting, analyzing and disseminating ICT statistics.
6. In the framework of Scan-ICT, capacity building activities and development of e-government indicators were carried out in the context of the international Partnership for Measuring ICTs for Development, which was established in 2005 with membership from the five UN Regional Commissions (ECA, ECLAC, ESCAP, ECE, ESCWA) as well as ITU, UNCTAD, UNDESA, UNESCO, World Bank, OECD, and EUROSTAT.

## **Capacity building**

7. In December 2010, ECA, ITU, and UNCTAD jointly organized a two weeks training course based on internationally agreed core ICT indicators for over 25 representatives from 17 Francophone African countries. Participants were drawn from Algeria, Benin, Burkina Faso, Burundi, Cameroon, Comores, Congo, Côte d'Ivoire, Djibouti, Madagascar, Mali, Morocco, Niger, Central African Republic, Senegal, Togo and Tunisia. The course aimed at improving the capacity of producers of official statistics in the francophone African countries to produce reliable and timely statistics and which are internationally comparable statistics on ICT usage in enterprises and on the ICT sector and trade ICT goods. A similar course was organized for Anglophone countries in 2009.

## **Development of e-Government indicators**

8. Comparative e-government indicators enable globally for government organizations, technology producers, and public policy makers improved understanding of their relative standing in terms of utilizing new technologies, identify issues for exchange of best practices, highlight critical bottlenecks. Moreover, in broader terms, e-government indicators allow new perspectives on strategic management of e-government initiatives and policies.
9. In the framework of the international Partnership on Measuring ICT for Development, a Task Group on e-Government (TGEG), coordinated by ECA was established. Members of the Task Group are: ECA (coordinator), ECLAC, ESCAP, ESCWA, ITU, UNCTAD, UNDESA, OECD, EUROSTAT and the World Bank. TGEG has been responsible for developing perspectives on e-government measurement in order to arrive at conceptually clear, methodologically feasible, and statistically sound set of e-government indicators, which also focus on essential features of e-government in the context of development. TGEG has developed a draft framework document to support the development of global e-government indicators, as agreed within the WSIS. In developing the framework, particular attention was paid to putting in place a measurement approach that lends support for the developing countries and their efforts of utilizing e-government for leveraging public service for people and organizations.
10. The list of proposed e-government indicators has been presented and discussed at several regional meetings and is expected to be finalized in early 2011. The list is composed of a total of eight indicators, including access to and use of ICTs by governments, and online services provided by governments. It will help produce internationally comparable e-government statistics and guide policy makers in making ICT investments and promote administrative efficiency. The presentation also highlighted some of the challenges in collecting such indicators, including capturing the intensity and quality of online services and the definition and comparability of statistical units in terms of national, regional and local government authorities. The list of indicators will be open for comments until end 2010. The TGEG will then produce a final document by mid-2011, including definitions, data collection methods, and model questions. The final list, which countries are encouraged to use to measure e-government developments, will be submitted for approval to the UN Statistical Commission in its 2012 session.

## **Development of geospatial policies and applications**

11. ECA has continued to support the development and implementation of spatial data infrastructures as the appropriate mechanism for the production, management, dissemination and use of spatial data and information products at both regional and national levels. To this regard ECA has supported the provision of necessary tools for member States to exploit Geographic Information Systems (GIS) for socio-economic development and achievement

of the MDGs. A number of activities have been carried out in Burkina Faso, Egypt, Ethiopia, Kenya, Nigeria, South Africa and Senegal for the promotion of spatially enabled policies and applications; development of a central Spatial Data Infrastructure (SDI); use of web 2.0 for the promotion of Participatory GIS; and the adoption of a programme of activities for the Regional Centre for Mapping of Resources for Development (RCMRD) for East and Southern African countries. In line with this, several African countries have started developing sectoral strategies mainstreaming Geographic Information Systems (GIS) to spatially enable the resulting applications. ECA has provided technical and financial assistance for the development of the Southern Sudan Water Information Clearing House (SWICH), which is now operational; and initiated a technical assistance programme to Ghana to develop the National Street Addressing and Numbering System, including the delivery of advisory services, capacity building, advocacy activities, provision of very high resolution geo-referenced satellite imagery covering Greater Accra, technical assistance to elaborate the policy framework to guide and coordinate actions among all stakeholders (including definition of standards for street addressing).

12. New cooperation arrangements are in place to enable Burkina Faso, Mali and Niger to develop additional spatially enabled ICT implementation strategies in the various sectors identified by Government. In implementing its geo information programme, ECA has developed the following applications and data bases: the Geo-information Applications Inventory Tool (GAIT), the Metadata Clearinghouse, the Second Level Administrative Boundaries (SALB) database, the Public-Private-Partnership Projects Database, the Health and Emergency Management Systems for Ethiopia, the Africa Gazetteer on GeoNyms Application and the African Fiber optic connectivity database. In cooperation with the African Union, ECA pursued its effort to develop through the African Reference Frame (AFREF) Project, a unified geodetic reference frame for Africa, as the foundation for accurate Geospatial information, so that maps and other geoinformation products can be represented on the same datum.

### **E-employment project in the Central African sub-region**

13. The e-Employment project was launched in Brazzaville by ECA Sub-Regional Office for Central Africa (SRO-CA) in cooperation with ECA headquarters, as a pilot phase for 12 months. Considering the hosting capability of the centre in Brazzaville and the available number of computers at the site, a group of hundred twenty (120) youth were selected for training on use of ICTs for employment search and also for employability. Four sub-groups of 30 were created based on the level of education for a training period of three (3) months each. The project was extended to the city of Pointe Noire and also is currently being launched in the Republic of Gabon, while a Memorandum of Understanding has been signed between ECA and the Economic Community of Central African States (ECCAS) for implementation on a wider scale in other central African countries from 2011.

## **Knowledge network through ICT access points for disadvantaged communities**

14. Through the UN Development Account, ECA implemented the UNESCWA-led Regional Commissions' initiative '*Knowledge networks through ICT access points for disadvantaged communities project*', which was borne out of the WSIS process. The main goal was 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. The project aimed at increasing the engagement of target beneficiaries in disadvantaged communities (with an emphasis on women) in these knowledge networks. This is done by providing, developing, organising, sharing and disseminating knowledge pertaining to key areas of sustainable development such as employment, education, gender and health. In Africa, ECA initiated and supported the establishment of the Knowledge Network of African Community Telecentres (KNACT) involving over 18 community telecentres and 8 national telecentre networks from Burundi, Ethiopia, Kenya, Rwanda, Tanzania, Uganda, Zambia and Zimbabwe. The regional knowledge network strategy is based on participatory community baseline research, capacity building, ICT infrastructure, content, networking and sustainability. To this end, ECA organised capacity building workshop on knowledge sharing and networking and supported community telecentres to undertake community baseline studies in six countries, Burundi, Ethiopia, Kenya, Rwanda, Tanzania and Uganda. ECA also facilitated knowledge sharing and networking.

## **The Information Technology Centre for Africa (ITCA)**

15. The Information Technology Centre for Africa (ITCA) - [www.uneca.org/itca](http://www.uneca.org/itca) - is AISI's resource center that showcases the role of ICTs in development, promotes networking and carries out research and capacity building on emerging issues on the information society, targeting the African policy makers and practitioners. In the context of the WSIS, ITCA launched the Academy of ICT Essentials for Government Leaders, which was jointly developed with ESCAP's Asian and Pacific Training Centre for ICT (APCIT). The 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. In 2010, training was delivered to African Diplomats accredited to the Southern African Development Community (SADC) in Botswana and to Parliamentarians in Swaziland, Togo and The Gambia. The online learning version ([www.uneca.org/elearnafrica](http://www.uneca.org/elearnafrica)) of the Academy will be launched in February 2011.

## **Regional Economic Communities and the African Union**

16. ECA has provided support to most of the Regional Economic Communities (RECs) and to the African Union in contribution to regional integration through implementation of WSIS outcomes. Assistance on ICT for development to RECs, was done directly by the ECA Headquarters or incorporated into multi-year

programme assistance frameworks and memoranda of understanding between ECA Sub-Regional Offices (SROs) and RECs. Assistance provided can be summarized as follows.

***Economic Community of West African States (ECOWAS)***

17. The following series of guidelines were prepared and adopted either by the Head of States and Governments or by the Ministers in charge of ICT in 2010:

- a. ECOWAS Supplementary Act on personal data protection in West Africa** - Guaranteeing personal data and freedom and at the same time promoting the development of ICTs can only be achieved through a mechanism that combats threats and risks that are inherent to the spread and development of the Knowledge economy. This is particularly important in the West African sub-region where there is a « juridical vacuum » on personal data protection. The guidelines are based on the best practices known to date in the world, including those enacted by the UN General Assembly in 1990, taking into account the specificities of the sub-region. A Data Protection Authority composed of lawyers, ICT experts, parliamentarians and civil society group is proposed for overseeing personal data protection at national level, where examples of Canada and France are highlighted as possible model.
- b. ECOWAS Supplementary Act on electronic transactions in West Africa** Even though electronic transactions are still weak in the West African sub-region, the growth potential is high despite several obstacles associated partly to e-commerce related regulatory texts. In this context, there is need to develop a regulatory framework which suits the legal, cultural, economic and social environment of West Africa. Hence, the Supplementary Act is geared to ensuring security and legal framework for the development of reliable and effective electronic transactions in the sub-region. The Supplementary Act defines the scope of both e-commerce practitioners resident in the West African sub-region and those activities which are governed by international laws. They also describe products amenable to electronic transactions and the corresponding regulation.
- c. ECOWAS draft Directive on fight against cybercrime in West Africa** - The rapid development of ICTs has created a cybercrime phenomenon for which national laws are inadequate as they were established for specific countries and also did not envisage actions in the digital era. Accordingly, there is need for relevant laws against cybercrime in general and money laundering in particular for the West African sub-region. There are regulations in both ECOWAS and the West African Monetary Union (UEMOA) on money laundering. The UEMOA regulation is related to its electronic payment system while that of ECOWAS is geared to physical means. Hence there is need to develop a harmonized legislation for the sub-region taking into account both ECOWAS and UEMOA regulations. The draft directive on cybercrime is geared to the modernization of instruments for fighting cybercrime, through elaboration of relevant new texts related to ICTs



and adaptation of some of the existing national laws to suit technological development trends.

### ***Union of Maghreb Arab (UMA)***

- d. Workshop on Harmonization of Cyber security in North Africa** - The objective of the workshop was to facilitate exchange of experiences and information on cyber crime legislation, between North Africa countries, West Africa, Central Africa, Arab Region and Europe. It contributed to increase confidence and security in the information Society and the Knowledge economy in North Africa and helped member States update their legislation as recommended by the WSIS.

### ***Southern African Development Community (SADC)***

- e. E-SADC Strategy** - ECA provided technical assistance for the development of an e-SADC Strategy Framework, approved by the Ministers of ICT in May 2010. The framework aims to harness ICT for socio-economic development and regional integration. The next step will be the development and roll out of a plan to implement strategy activities including the launching of e-applications (e-government, e-commerce) and trade in IT services, etc.

## **African Union**

### ***The Summit of Heads of State and Government of the African Union***

- 18. ECA provided substantive support to the Summit, which was held in Addis Ababa, Ethiopia from 31 January to 2 February 2010, on the theme “Information and Communication Technologies in Africa: Challenges and Prospects for Development”. The Summit adopted a Declaration related to future ICT4D activities on the continent.

### ***The African Convention on Cyber security and e-Transactions***

- 19. The draft African Convention on Cyber security and e-Transactions is a response to the Declaration of the African Union Heads of State and Government of February 2010. Its objective is to harmonize e-legislation related to e-transactions development, personal data protection, cyber security promotion and fight against cyber-crime. It aims at defining the objectives and major orientations of the information society in Africa, and strengthening existing legislation in member States and RECs on the information society.
- 20. The draft African Convention determines the security rules, which are essential for creating a secure digital space to tackle the various security obstacles preventing the

development of electronic transactions in Africa. The draft convention lays the foundation for cyber ethics at the African Union level by underlining the main principles in the various e-security domains. Also it highlights the foundations of e-transactions, establishes a mechanism to combat the abusive use of confidential personal data, which may be breached through its collection, processing, transmission, storing and usage. Also, the draft African Convention defines the major orientations for prosecuting criminal offenses and combating cyber crime. Capitalizing on African and international experience, it would promote reforms related to e-legislation in member States and RECs. The draft Convention was submitted to African ICT ministerial meeting held in Abuja in September 2010 and is expected to be reviewed through regional and sub-regional workshops organized by ECA and the African Union in cooperation with key partners.

## **Science, Technology and Innovation (STI) activities**

21. Recognizing the significance of nurturing and harnessing science, technology and innovation for development, a number of African countries are benefiting from ECA's support to develop their Science, Technology and Innovation (STI) Policy and Plans. In Mali, the draft Science, Technology and Innovation (STI) Policy document has been developed and is currently being reviewed; in Benin, the Government has finalized a study, waiting for validation, to assess the STI strengths, weaknesses, opportunities and threats towards the development of the country's STI Policy and Plans. Also ECA led a number of other initiatives to assist member States to promote the use of STI to achieve sustainable socio-economic development. These initiatives deliver policy research and analysis as well as outreach and advocacy through conferences.
22. ECA developed the Afro guide for the establishment of commonly accepted African and international standards for the promotion of ethics and good clinical ethics through the Access to Scientific Knowledge in Africa (ASKIA) initiative which was set up to support and promote access to scientific knowledge by African scientists, decision makers, students and researchers. ECA has launched the Africa Science to Business Challenge (ASBC) which offers opportunities for African entrepreneurs to learn how to transform their ideas into businesses; the African Science and Technology Endowment Fund (ASTIEF) which seeks to invest in bankable R&D outputs that are likely to make a commercial and social return to investment; and the African Technology Development and Transfer Network which supports training programmes, sharing of experiences and expertise and mentoring/coaching of emerging inventors and start-ups. ECA has also supported and housed the African Network for Drugs and Diagnostics Innovation (ANDI) Secretariat which is a WHO initiative aimed at promoting and sustaining African-led health product innovation that addresses African public health needs through the assembly of research networks, and build capacity to support human and economic development.
23. ECA and the African Union in collaboration with the Government of Finland, UNESCO and their partners organized the second Science with Africa conference

(SWA II) from 23 to 25 June 2010. The theme of SWA II was, “Science, Innovation and Entrepreneurship” whose main focus was to identify policies, measures and mechanisms that are required to accelerate the Africa’s economic growth and sustainable development through science, innovation and entrepreneurship. More than 500 scientists, engineers, technologists, inventors, entrepreneurs, policy-and decision makers, journalists and students from 56 countries (41 African countries and 15 from other continents) were in attendance. Conference delegates represented governments of some African countries, intergovernmental, regional and international organizations, business communities, Africa’s public and private tertiary education and research institutions, and development partners.

## **The Stakeholders supported activities**

24. ECA undertook research, networking and multi-stakeholder partnerships for the development of an inclusive, development oriented information society, as advocated by the WSIS as follows.

- f. **Model for Rural Electronic Schools in African Languages (ERELA), Cameroon** - ECA provided support to rural schools in Cameroon through a project known as the Electronic Rural Schools in African Languages (ERELA) Initiative, launched in collaboration with the National Association of Cameroonian Languages Committee (NACALCO). A computer-based linguistic model, which is being piloted, was developed based on local languages in rural schools. Three training manuals in local languages for supervisors, teachers and students, were developed; and specialized software in local languages has been installed in the schools. As a result of this initiative, rural school children in Cameroon will have access to computers as well as be able to use them in their own local languages. One thousand students are targeted to benefit from this initiative.
- g. **M-health R&D outputs application** - Adequate and reliable health and demographic information is lacking in Africa. As a result ECA launched research on use of mobile technology to collect and disseminate health data. In this connection, an SMS based Mobile Health and Demographic Data Reporting and Communication System (MHeDReCS) was piloted in the Butajira district, 130 km south of Addis Ababa, Ethiopia. It is based on the “Butajira Rural Health Program”, BRHP, centred on the Butajira Demographic Surveillance System (DSS). The DSS population is currently estimated at 40,000 (year 2000). The general objective of the project was to design and develop a mobile phone based application to handle communication and reporting of health and demographic data in the Butajira Rural Health Program. The pilot phase has been completed in 2010 and the prototype application was installed at ECA’s facilities for demonstration purposes, and also presented at the 2nd International Conference on M4D - Mobile Communication Technology for Development (M4D 2010) held in November 2010 in Kampala, Uganda.

- h. **ICT for socioeconomic impact indicators, Tunisia** - The Academia Research Network (ARN) Working group on "measuring the information society" conducted, during the period 2006-2010 a study whose main objectives were to elaborate a comprehensive set of measurement indicators (penetration, usage and impact indicators) and to develop user's manual as well as appropriate survey questionnaires in order to support the practitioners in their measurement tasks. As a result the Team proposed two global economic impact set of indicators and one social impact set of indicators. Next stage for the Impact Indicators Research activities includes: (i) assist member States in developing a methodological guide for data collection and analysis; (ii) provide support to Scan-ICT countries in collecting data based on the socioeconomic impact indicators proposed by the ARN group; and (iii) collaborate with international partners to select a core list.
- i. **Parliaments and Parliamentarians and the WSIS** - As recognized by the WSIS, Parliaments and Parliamentarians represent the best opportunities for all societal forces to be represented at the national level in the policy-making process. Parliamentarians, through enactment of national legislation, good oversight over pro-poor ICT policy and applications, and advocacy for adequate investments in ICT in general, are expected to lay down the fundamentals for inclusive and development oriented information society. It is therefore important to empower Members of Parliament in Africa in the information society. Activities undertaken in this regard included: promotion for the establishment of an ICT Committee in parliaments; capacity building workshops on the information society for Parliamentarians and parliaments staff; and assistance for the development of parliament sectoral ICT strategies and ICT Master Plans for Botswana, Swaziland and Zambia.

## **Conclusion**

25. In 2010, while implementing the WSIS outcomes through support from ECA, several African countries and Regional Economic Communities have shown impressive results in the development of their e-strategies and cyber legislation. Moreover, as part of its commitment to creating and facilitating knowledge sharing on the continent for informed decision-making, ECA continues to partner with African universities and research institutions as well as civil society, youth, media organizations and African Parliaments in implementing the WSIS outcomes, hence paving the way for an inclusive information society. So far, there have been major achievements and progress in capacity building on ICT indicators for National Statistical Offices as well as in empowering parliamentarians and policymakers for their participation in the knowledge economy.