First Session of the Committee on Development Information, Science and Technology

(CODIST)

Address by

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Honourable Ministers and delegates,
Excellencies,
Ladies and Gentlemen

It is indeed with great pleasure that I welcome you to Addis Ababa and to this first Session of the Committee on Development Information, Science and Technology (CODIST), which is one of the seven subsidiary bodies of the ECA. CODIST is entrusted with the task of reviewing issues pertaining to Information and Communications Technology (ICT), Geoinformation, Science and Technology in relation Africa's development challenges. It also provides to assist ECA in determining priorities to be reflected in the work programme of the ICT, Science and Technology Division of ECA.

Let me first of all thank you for this impressive turnout. The high-level participation clearly demonstrates our collective resolve to tackle Africa's developmental challenges head-on using science and technology as a tool. I salute the African Ministers who are here with us today and thank them for their demonstrated commitment to this process.

I advised at the last CODI V meeting in May 2007 that it would be transformed into CODIST in accordance with the outcome of the 2006 repositioning of ECA. This wider mandate reflects the transformation of the former Development Information Services Division into the ICT, Science and Technology Division (ISTD). The role of ISTD is to enhance Africa's participation in the Knowledge Economy through strengthened policy-making in the area of Science, Technology and Innovation. This broader mandate is reflected in the sub-committees on ICTs, Geoinformation and Science and Technology for Development which are an integral part of this session.

The theme, "*Scientific Development, Innovation and the Knowledge Economy*" was chosen to underscore the key role of Science, Technology and Innovation (STI) in helping our member States to cope with the global financial and economic crises, as well as the food, energy and climate change challenges that they face.

The initial financial meltdown in some developed countries has now turned into a global economic crisis, whose multiple effects will impact on Africa. As a coping mechanism and a shield against the onslaught of the global financial crisis, many countries are responding by investing in Science and Technology. Some examples can be drawn from China, India and the United States.

- The Chinese Premier, Wen Jiabao stated in January 2009 that China should move forward some 600 billion yuan ($88 billion) in planned spending on Science and Technology investments to help the country achieve a faster rebound from the global financial crisis.

- In addition, the Indian Premier also announced this year a doubling of India's investment in science from one to two percent of the national income.

- The American Recovery and Reinvestment Act signed into law by President Obama earlier this year includes a $17 billion investment in scientific research, including investments at the National Institutes of Health and the National Science Foundation, among others. Regarding new technologies, the package also includes nearly $40 billion in investments in America's IT network infrastructure (including broadband, health IT and a smarter energy grid) which will create close to a million U.S. jobs, more than half of which will be in small businesses.

These examples should not be lost on Africa and I hope the deliberations conducted over the next three days will address how African countries can use Science and Technology not only to shield themselves from the current crisis, but also to propel their economies to become more competitive for growth.

It is however pleasing to note similar trends coming out of Africa.

- In Ghana, the Council for Scientific and Industrial Research (CSIR) has developed 20 new crop varieties. These include maize, rice, sorghum, groundnuts, soya beans, cowpea, cassava, yam and plantain and the Council has also developed pozzolana cement from local clay as a substitute for clinker which is used for the production of portland cement.

- In South Africa there are plans by South Africa's Department of Science and Technology to invest $7.7 million in a nanotechnology research centre that will house a high-resolution transmission electron microscope. The centre is to be located at the Nelson Mandela Metropolitan University in Port Elizabeth.

- Of course, there is also the Egypt-IBM Nanotechnology Research Centre that was established by the Government of Egypt (represented by the Ministry of Communications and Information Technology and the Ministry of Higher Education and Scientific Research) to develop expertise in nanoscience and nanotechnology.

- The President of Tanzania, H.E. Jakaya Kikwete announced recently that the Tanzanian government will raise public investment in R&D from the current 0.3% to 1% of GDP in the 2009-2010 financial year. Tanzania is the first African country with a high disease burden to significantly increase its health research budgets for which we congratulate it while encouraging other countries to follow suit.

If we optimalize the use and management of Africa's wide range of assets they provide enormous opportunities for science, technology and innovation-driven sustainable growth and development. Indeed, scientific knowledge and its proper use have always been critical ingredients for economic growth and today underpin the concept of the Knowledge Economy which is a multidimensional process involving context, culture, content, mechanisms, infrastructure, and policy. It raises many possibilities for enhancing growth and competitiveness by increasing productivity in all sectors of the economy and by adding value to local raw materials and natural resources but at the same time also carries the risks of marginalization for countries and organizations that do not keep up with its momentum.

Therefore, we in Africa must start relying on science, technology and management to achieve scientific development, pay more attention to resource saving and environmental protection and gradually narrow the development gap on this continent. From a long-term perspective, we should endeavor to build innovation societies by gradually shifting from the export of raw materials and products into that of capital and knowledge.

It is a fact that the economy can only sustain us today, however, science and technology may ensure our tomorrow BUT only education can guarantee us the future.

It is against this background that ECA has boosted its activities in Science and Technology including establishing the ICT, Science and Technology Division. Some of our activities include a "*Science with Africa*" Conference organised by ECA, the African Union and our development partners in March 2008. This well-attended event brought together scientists, researchers, government officials, the private sector and the international community to explore how science, technology and innovation (STI) can be of service to Africa as an engine for accelerated economic growth and poverty reduction.

Honourable Ministers and delegates, distinguished experts, Excellencies, Ladies and Gentlemen

Strengthening Research and Development (R&D) is one of such outcomes of the Science with Africa Conference, and R&D happens to be at the helm of scientific and technological progress and is key to increasing productivity, exploiting growth opportunities in emerging markets and creating knowledge-driven competitive advantage. To this end, Africa needs to invest more in R&D in the creation of innovation.

Nevertheless, developments in many advanced countries are mostly based on knowledge instead of raw materials and natural resources. Due to strong innovative systems, rapid advances in new and emerging technologies, such as ICT, biotechnology, nanotechnology and genomics are dramatically affecting all economic, social, administrative and cultural activities. The impactful technological revolution resulting from these advances is now disrupting all kinds of relationships, transactions and production systems of goods and services.

Furthermore, as a consequence of the ICT explosion that has led to worldwide interdependency and connectivity, globalization and competition have drastically increased and are leading to extensive shifts in world trade patterns and economic relations. Now, even corporate research and development are internationalized. Countries' or companies' competitiveness depends, more than ever, on their ability to access, adapt, utilize and master scientific and technological knowledge for a continuous innovation process.

However, R&D is not the only ingredient in the production of economically useful knowledge or innovative capabilities. It has to be emphasised that innovation also comes from learning, experimentation and re-use of knowledge and not always from the discovery of entirely new technical or scientific principles.

Honourable Ministers, Distinguished Delegates, Ladies and gentlemen

The STI environment will therefore require a strong ICT infrastructure. Despite efforts, significant gaps still remain in Africa's backbone network connectivity. Internet penetration is still very low with only 5.6 percent penetration rate compared to Asia (17.2 percent), Middle East (23.3 percent), and Europe (48.9 percent). Broadband Internet penetration is even much lower with only 1.0 percent penetration rate. The high-speed Internet services that are vital for business, government and consumer applications continue to be either very expensive or unavailable in much of Africa beyond main population centres. Furthermore, many landlocked countries in Sub-Saharan Africa rely on expensive and slow satellite services for Internet access, while capacity on undersea cables, where available, is priced well above the global average. The lack of access to infrastructure inhibits the region from exploiting the potential of ICTs to key sectors that contribute to the economy such as e-commerce, e-health, e-government and e-learning applications.

This is why the Government of Rwanda is to be commended for investments above $100 million in the Information Communication Technology (ICT) industry by end of this year .The big investment priorities include the laying of a fibre optic loop across the country, and the connection of the local fibre to international bandwidth as part of the Government's commitment to create a knowledge based economy by 2020 in Rwanda.

Africa's cell phone connections rose by 15 million subscribers or 6, 6 percent in the third quarter of 2007 with some countries recording a growth rate ranging from 40 to 50 percent during the last three years. This substantial growth has shown that there is tremendous potential for ICT-driven social and economic development throughout Africa. Building on this progress, as never before, African countries have the opportunity to empower marginalized populations and communities with ICTs to reduce poverty thereby improving access to health, education and employment opportunities, particularly in rural and remote areas.

Furthermore, African operators are not just adopting business models developed elsewhere, but are forging their own new models, suited to the African market. Such models include innovative mobile banking, micro-recharging methods and flat-rate pricing models e.g. the M-Pesa in Kenya allowing consumers without bank accounts to deposit, transfer, pay for and withdraw money using their SIM cards.

Technological change, innovation and growing private investment will continue to open new possibilities for extending access to infrastructure and services. The right mix of policies, regulations, investments, incentives and partnerships is needed to expand access and also to empower a range of local actors to contribute innovatively to sustainable solutions.

Honourable Ministers and delegates, distinguished experts

The ECA continues to support countries in the formulation of policies which provide a framework within which ICTs are mainstreamed into the national planning process in order to facilitate the achievement of national and sectoral development priorities and objectives. Prior to the launch of the African Information Society Initiative (AISI) in 1996, only 6 countries had developed national ICT policies and by 1999, 13 countries had commenced the development of

their National Information and Communication Infrastructure (NICI) policies with ECA's assistance. There are now over 35 countries with national ICT policies.

The creation of an enabling environment is one of the key building blocks in the establishment of an Information Society — the World Summit on the Information Society (WSIS) recognized that "to maximize the social, economic and environmental benefits of the Information Society, governments need to create a trustworthy, transparent and non-discriminatory legal, regulatory and policy environment". Recently, ECA undertook a survey to analyse the progress achieved by member States in the implementation of the outcomes of the World Summit for the Information Society. The results of the survey indicated that some countries were on track on some of the areas and others were still way behind. For example, less than 50% of the respondent countries confirmed that they had enacted legislation in relation to key enabling mechanisms for e-commerce such as e-payment, e-currency, digital signature, which are key legal and regulatory mechanisms required for the growth of the knowledge economy.

I hope that member States will continue in efforts to implement their ICT policies as they holistically address to some of the challenges I have cited. We recently celebrated our achievements over the last decade since the adoption of the African Information Society Initiative (AISI) and we now need to look ahead and renew our commitment to creating a knowledge and innovation-based economy in the coming decade.

Honourable Ministers and delegates, Excellencies, Ladies and Gentlemen

There is now an increasing need for geospatial technologies to be adopted by African countries to better manage their natural resources and environment. Geoinformation can be used to create new value and knowledge by leveraging the power of location and analysis in support of strategic decision-making, governance and advanced operations.

ECA continues to support member States develop their national spatial data infrastructures (NSDI), which also enables countries monitor and address some of Africa's current pressing issues – the impact of climate change, water scarcity, energy and food shortages, environmental challenges, disaster management and disease mapping and intervention. The ECA will continue support in the development of regional spatial geo-databases for the priority areas defined by regional initiatives of the African Union, NEPAD and other continental bodies.

Moreover, we all know that the foundation of accurate geospatial information starts with a uniform coordinate reference system. ECA will pursue, in partnership with the African Union Commission, efforts to develop through the African Reference Frame (AFREF) Project, a unified geodetic reference frame for Africa.

This is also exemplified by the establishment of a new Geodetic Reference Network for Ghana to address the rising demand for cost-effective land delivery and management processes in country.The first phase of the renewal of the Geodetic Reference Network (GRN) has been completed with the provision of the basic infrastructure in and around the Golden Triangle of Ghana for using the Global Navigations by Satelite Systems (GNSS) technology. This has also prepared the country to join the proposed continental AFREF led by ECA. In addition, more

countries through support from Trimble, the world leader in the manufacturing of professional Global Positioning Systems who donated equipment for five GPS reference stations to Africa through ECA. The reference stations will form part of the GPS network that will define a uniform African (Geodetic) Reference Frame (AFREF) and the agreed installation sites are Botswana, Niger, Tanzania, DR Congo and Ethiopia.

The Commission continues to collaborate and coordinate its activities in support of Africa's developments in the field of geoinformation with other agencies in UN system, international and regional associations and programmes and other development partners as an important vehicle for mobilizing financial resources and technical know-how. We will strengthen our efforts to develop partnerships with regional and international organizations through contribution and participation to several initiatives on geospatial science and technology at various levels. As part of our commitment to developing geoinformation in the continent, we will provide support to the organization of the Regional Conference of the African Association of Remote Sensing of the Environment (AARSE), in October 2010.

As I alluded to earlier on, education ensures our future and therefore, human resource development is the main factor for economic prosperity and it is important that priority is accorded to investing in human capacity development. The evolving knowledge-based economy has created continuous demand for a highly skilled workforce in the development, use and deployment of STI for socio-economic development, characterized by an ever increasing demand for highly skilled human resources for developing and maintaining a competitive edge in the global market. High-quality S&T education and training is essential to the efficient acquisition, utilization, creation and dissemination of the relevant knowledge and skills and therefore, education and training providers will have to "come to the table" and play a pivotal role in supporting all members of society as they adjust to the new environment of developing a vibrant knowledge-based economy.

Finally, distinguished participants, I do hope that the CODIST sub-committees will among others, address some of these issues from their various perspectives, including how to:

- Draw on the lessons learnt from the global financial crisis and how science and technology can be scaled up in our countries;
- Identify the key constraints facing African decision-maker e.g. innovative financial mechanisms as traditional financial mechanisms have shown their limitations;
- Define the enabling environment needed for the development of Africa's STI system that can enhance private partnerships and accelerate economic growth;
- Develop capacity-building strategies that address the ever-increasing demand for highly skilled human resources;
- Revitalise the AISI through a regional roadmap towards building a knowledge-driven economy; and
- Ensure that National Geospatial Data Infrastructure are integrated in the successful National ICT policies and plans developed so far in member States so as to harness geospatial data infrastructure and technologies for socio-economic development.

I sincerely hope that by the end of this meeting, we will have some concrete recommendations that ECA can incorporate into its programmes and activities and I encourage you to assist in the implementation of the action plans that will emerge out of this meeting.

Finally I would like to once again thank the Honourable Ministers present for their time and commitment towards this meeting, other delegates from member States and the numerous Development Partners and sponsors of the various events and activities including the Governments' of Finland and Canada, USAID, UNAIDs, UNCTAD, Organisation Internationale de la Francophonie, Internet Society, Open Society Initiative for Southern Africa (OSISA), Ethiopian Airlines, Microsoft, Alcatel Lucent, Jupiter and Harmony Hotels, Ethiopian Insurance Corporation, Ernst and Young and our international media partners SABC and Africable.

I thank you again for your attendance to this meeting and wish you fruitful deliberations.