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**Africa Forum on Science, Technology and Innovation (STI) for Youth
Employment, Human Capital Development and Inclusive Growth**

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Your excellences, distinguished delegates, colleagues, ladies and gentlemen,

On behalf of the United Nations Economic Commission for Africa, I wish to express our gratitude to the Government and People of the Republic of Kenya for the hospitality and fantastic facilities

Let me also join my colleagues in welcoming you to the Africa Forum on Science, Technology and Innovation (STI) for Youth Employment, Human Capital Development and Inclusive Growth. There cannot be a better audience to address the issues of science and technology and inclusive economic and social development in Africa than this assembly of distinguished policy makers, scholars, practitioners and industrialists.

It also underscores the importance that UNECA attaches to science and technology as key drivers for economic transformation of the continent from one dependant on the extractive industry to one that is industrialized and prosperous. This years African Development Report focuses on Africa as the emerging pole for global growth. We are not alone in thinking Africa's chances are brighter than they have ever been.

Over a decade ago, The Economist – labelled Africa the Hopeless Continent and last year they conclude that the “Sun Shines Bright”. Frost and Sullivan, one of the top research firms, has just concluded that Africa is the New Growth Frontier. Diversification of economic activities is now driving up to 75% of real GDP expansion and creating a multitude of opportunities across several industries such as agriculture, construction, manufacturing and telecommunications.

This meeting is timely in addressing the role of science and technology in Africa in expanding the opportunities for all and addressing youth unemployment in particular. Technology is already playing a key role in economic growth. Estimates suggest that ICT accounted more than 10% of the GDP of Kenya, Senegal and Tunisia in 2009. ICT services exports now account from more than 15% of the total goods and service exports in Gambia and Guinea. We are sing a similar rise in the exports of chemicals, including pharmaceuticals products.

Ladies and gentlemen,

If Africa has to continue registering positive economic growth, there is a need to address Africa's innovation system. A critical foundation of any innovation system is education. And investing in its youth.

The education system plays a vital role in human capital development, innovation and entrepreneurship. However, the education system, both formal and informal, must embrace the culture of innovation and entrepreneurship. Very minimal resources, if any, are required to encourage primary and secondary school students to develop practical solutions to challenges in their communities.

In Zambia, a national competition is organized each year for secondary school students to develop new and innovative prototypes in all areas of technology and fields of life. Dubbed the Junior Engineers, Technicians and Scientists (JETS) competition, students compete first at the school level, the district level, at the provincial level and finally at the national level. Such competitions cultivate in students enquiry and problem-solving skills and encourage them to address real life challenges.

Universities and technical colleges should also be encouraged to offer entrepreneurship and innovation courses or work closely with the private sector. Increasingly, universities and technical colleges serve as centres for enterprise formation, facilitators of knowledge diffusion and transfer and agents for development (creating jobs and wealth). For this to happen, clear policies are needed to enable tertiary institutions to create research teams that operate as 'quasi-firms'¹, encourages enterprising individuals to work closely with their clients (industry and government) and supports or rewards entrepreneurship.

We are delighted that here in Kenya, a number of universities have established incubators and science parks on their campuses to provide space for enterprising students and researchers to take their products to market. This trend should be encouraged. Even those without such facilities can use innovative model to achieve similar results.

For example, at University of Zimbabwe, students embarked on a project to assist a group of widows and single mothers producing detergents, polishes and waxes,

¹ Many research teams already exist as "semi-private enterprises" that identify opportunities and seek the resources needed to realize them. Often they have a credible research management team, invest in emerging fields of interest and compete for contracts and grants from private and public institution - just like private consultancy firms (see Etzkowitz, 2003).

among others. The students helped the women to register their company, secured a loan to purchase equipment and develop a business strategy. As a result, profits soared 500%.²

Ladies and gentlemen,

Innovations and entrepreneurship does not take place in a vacuum but rather in the society. While there general business environment has improved, innovation financing, tracking and monitoring of innovation remain a challenge. It is for this reason that UNECA developed the African Innovation Framework which identifies some of the key components that have enabled other regions to take advantage of emerging technological niches. The Commission has also established a Science, technology Endowment Fund to support innovators protects their knowledge and commercializes their innovations. We happy to note that countries such as Rwanda, have used our framework to in developing their Science and Technology Endowment Funds. We are happy to support other countries that may be interested in developing their own funds.

Promotion of innovators and entrepreneurs remains a challenge. While many of us may know our emerging runners and new footballers, we have very little knowledge and appreciation of emerging young entrepreneurs and innovators.

On our part, we have teams with the African Innovation Foundation to develop the Innovation Prize for Africa primarily to celebrate African innovators and entrepreneurs and support them in the development of their innovation. This year, the first prize of \$100,000 went to an Egyptian innovator and the second Prize went to an Algerian innovator and entrepreneur. It is our hope that countries could develop even none-cash awards for their innovators.

Ladies and gentlemen,

We are far from attaining equity, later alone equality in the science, technology and engineering fields. This is one area which is predominantly, and sometimes exclusively male. It is important that we encourage female students early to pursue science, engineering and technology careers.

One of the goals of UNECA's Biomedical Engineering initiatives is to encourage female students to pursue engineering. While it seeks to improve the use, maintenance, design and production of medical devices, it has been noted that it

² See Project Clean-up at <http://www.sife.org/ProjectStories/media/africa/pdfProjectCleanUp.pdf>

generally attracts female students. There is no need of trying to find female engineers if we have not trained any.

Ladies and gentlemen,

We are also seeking partnerships to facilitate learning and exchange of experience. UNECA and a Spanish-based Technology Centre for ICTs (CTIC) launched the CREATIC 4AFRICA programme to establish an innovation hub for Africa's youth who are keen to create new ICT-based applications to better their societies. This initiative will support and promote ingenuity and innovation springing from Africa by funding ideas generated and developed by Africans who are familiar with the cultural and socioeconomic challenges of their countries.

In the first phase of the programme young innovators from Angola, Cape Verde, Ethiopia, Mozambique and Senegal will benefit from this scholarship to develop commercially viable applications in a number of areas. It is our hope that new partnerships will be formed here.

Challenges to STI for Youth, Education Employment

1. Governance deficit on the continent. Investments must come from countries, their national allocated budgets and not from 'gifts' or donor-driven. The people that give us aid did not develop like that and we cannot develop with all the aid in the world. We need visionary leaders who have a clear sense of dignity, integrity and sovereignty for our development. If we don't address this it will be to our detriment..
2. Africa's future tied to its youth. For instance, Senegal's political transition will be affected to its response to the youth. Nearly 44% of population under age of 15 like many other African countries, making aspirations of youthful population remain monumental challenge.
3. Also, African youth as evidenced in Arab spring, clamouring for economic improvements and is key to their aspirations. If not addressed the looming potential African spring beckons.
4. Mindset of Africans: politicians, intellectuals, citizens must realise African aspirations can only be addressed by Africans for Africans. With each gift, with each event that are organised for Africa, comes the labour, materials, innovation of those that bear those gifts. What happens to African labour, materials, and innovation? It takes backstage, if not buried by us. Consequently, we minimise our skills, do not benefit from any technology transfer and we stunt local production. In short, we often cut our noses to spite our face.

Let me also invite you to the Third Science with Africa Forum to take place in June 2012. This year's conference will focus on showcasing and profiling government initiatives, R&D institutions, private firms and foundations and individuals that have made significant contributions to innovation and entrepreneurship development in Africa. Science with Africa is co-organized with AU, AfDB and UNESCO, the Government of Finland and other private and public institutions.

On behalf of UNECA, I wish you a successful meeting and look forward to working with you.

Thank you!