Report of the African Regional Preparatory Meeting 2013 Annual Ministerial Review of the Economic and Social Council

Summary

As part of the Annual Ministerial Review of the Economic and Social Council, a regional preparatory meeting on the theme *"Innovation as Enabler for the Achievement of the Millennium Development Goals and Sustainable Development"* was held on 14 March 2013, in Dar es Salaam, United Republic of Tanzania. The 2013 ECOSOC Annual Ministerial Review will focus on the role of science, technology and innovation (STI), and the potential for culture, in promoting sustainable development and achieving the Millennium Development Goals (MDGs). The African Regional Preparatory Meeting was hosted by the Government of Tanzania, in cooperation with the World Intellectual Property Organization (WIPO) and the United Nations Department of Economic and Social Affairs (UNDESA).

The meeting brought together a diverse group of regional stakeholders, including national policy makers and representatives of local governments, multilateral institutions, donors, civil society and the private sector, to identify trends and challenges in STI and discuss policy and targeted interventions for fostering innovation in the region.

Key policy messages

The following key messages emerged from the discussion:

Innovation is a critical enabler for the achievement of the MDGs and sustainable development.

- Greater innovation throughout Africa would be the surest means of overcoming the technological, social, economic and environmental challenges associated with achieving the MDGs.
- The transition to sustainable development will be highly dependent on the use of innovative technologies. STI would also be an effective instrument for ensuring the balanced integration of the three dimensions of sustainable development.
- STI should also form an integral part of the post-2015 development framework.
- Stronger partnerships among stakeholders of all sectors are necessary to promote innovation as a means to achieve the MDGs and sustainable development.

There is a need for Governments to create and nurture an "ecosystem for innovation" – a comprehensive enabling environment for innovation.

- A sound policy framework at the national and regional levels is necessary to fully enable the development of innovative capacities.
- Close collaboration is needed between universities, governments and industries to nurture innovation for increasing productivity in the economy, as well as partnerships between governments, the private sector and civil society.
- Countries should ensure high-quality education and targeted investment in human resources, which are the primary source of innovation in any society.
- Governments should provide financial, fiscal and regulatory incentives for activities which foster development and innovation. These incentives should coincide with appropriate regulatory frameworks and intellectual property rights that foster innovation and development.

Regional measures to facilitate the transfer of ideas can help build capacity and also reduce current imbalances of innovation and development in the African region.

- Regional support measure can include fostering regional linkages and partnerships among different stakeholders to capitalize on cross-border cooperation.
- Young people can be important innovators, yet many young innovators in the African region are not associated with institutions or universities. They must be better integrated in the innovation process.

Cultivating global support for the African efforts to promote science, technology and investment for achieving the MDGs and sustainable development is essential.

- ECOSOC should recognize the needs of African countries and issue a strong call for a coordinated approach to support Africa's endeavours to build innovation infrastructure and the necessary capacities to create domestic technology solutions.
- ECOSOC must emphasize the contribution that STI can make to achieving sustainable development, particularly in the context of the post-2015 development framework.
- ECOSOC could play an important role in galvanizing action for Africa's sustainable development. The ECOSOC Ministerial Declaration to be issued in July should include a strong call for supporting Africa's endeavours to build the innovation infrastructure and the capacity to create domestic technology solutions.

I. Introduction

In July 2013, the United Nations Economic and Social Council (ECOSOC) will hold its seventh Annual Ministerial Review (AMR) in Geneva, Switzerland. The Review will focus on *"Science, technology and innovation, and the potential of culture, for promoting sustainable development and achieving the Millennium Development Goals".*

On 14 March 2013, a Regional Preparatory Meeting for Africa was convened by the United Nations Department of Economic and Social Affairs (UNDESA) and the World Intellectual Property Organization (WIPO) in cooperation with the Japanese Patent Office. It was hosted by the Government of the United Republic of Tanzania.

The meeting brought together a diverse group of nearly 100 regional stakeholders from Governments, civil society, the private sector and UN system to discuss how the promotion of enhanced science, technology and innovation (STI) policies and targeted interventions can further the progress towards the Millennium Development Goals (MDGs) and ensure sustainable development throughout Africa. The meeting provided an important opportunity for African countries to contribute to the AMR, including by sharing best practices and lessons learned over the course of three roundtable discussions.

II. Proceedings of the regional preparatory meeting

A. Welcoming Remarks

The meeting was opened by **Mr. Alberic Kacou, United Nations Resident Coordinator, Tanzania,** who emphasized that science, technology and innovation (STI) can play a critical role in each and every MDG. Focusing on STI also presents an opportunity to follow up on the Rio+20 outcome, which has a significant focus on green technologies. Technological advancements could also be a critical way forward to face the new development challenges in the post-2015 period. In this regard, there is a need for more progress in capacity building on intellectual property (IP) issues for developing countries. He stressed that IP should be regarded as a development issue, and any discussion on innovation must also include IP, which captures the value of innovation and converts ideas into tradable assets.

Mr. Francis Gurry, Director General, World Intellectual Property Organization (WIPO), Geneva, stated that there is widespread consciousness of the importance of innovation. Innovation is a primary component of economic growth, is a source of jobs, increases productivity and brings about improvements in our material lives. There are many policies that go together to create an effective innovation ecosystem. IP is one critical element of this ecosystem. IP brings technology to the market, making accessible a saleable commodity. It can also be a source of controversy because of access issues, such as those advocating for free and open content on the Internet or for more accessible technology for reducing disease and poverty. One of the objectives of IP policy is to find a point of optimum benefit, balancing all the different and competing interests, such as producers, consumers and society as a whole. IP is also closely linked to innovation, which is a key to economic success and a source of solutions to social challenges. Promoting capacities to innovate should be part of the post-2015 development agenda, and development partners should become true beneficiaries of innovation.

Mr. Toshihiro Kose, Director General, Trademark, Design and Administrative Affairs Department, Japan Patent Office, Ministry of the Economy, Trade and Industry, stressed that strong innovation systems are key to development in Africa and achieving the MDGs. He explained the objectives of the WIPO/Japan Funds-in-Trust for Africa and LDCs: to raise people's awareness of the importance of IP systems and the benefits resulting from their effective use; provide assistance for establishing and strengthening IP laws and institutions in the targeted countries; and assist in the development of human resources in sectors working with the administration and utilization of the IP system, while working in close collaboration with regional communities throughout Africa. Other activities of the Fund include holding seminars on human resource development, providing fellowships for future leaders and providing training programmes in Tokyo, Japan to participants from African countries. Mr. Kose also highlighted the opportunity to discuss specific action plans at the upcoming 5th Summit of the Tokyo International Conference on African Development (TICAD V) from June 1st to the 3rd.

B. Opening Session: Science, Technology and Innovation, and the Potential of Culture, for Promoting Sustainable Development and Achieving the Millennium Development Goals (MDGs)

H.E. Mr. Néstor Osorio, President of the United Nations Economic and Social Council (ECOSOC) and Permanent Representative of Colombia to the United Nations, New York, emphasized the importance of innovation in creating healthy, educated and inclusive societies as well as its fundamental role in the three pillars of sustainable development and achieving the MDGs. He acknowledged the rich cultural heritage of Africa as well as the unexploited potential of its people and resources. He also highlighted the importance of ensuring that economic growth coincides with the well-being of current and future generations through actionable sustainable development goals as acknowledged by world leaders at the Rio+20 Conference. Innovation in Africa has resulted in the improvement of many people's lives through advances in services, such as the expansion of mobile banking and innovation in public health through collaborative research undertaken between medical institutions and governments. There has been remarkable progress achieved throughout Africa in terms of STI, but there are still many challenges that must be addressed. Greater efforts are needed to build partnerships among the international community to promote and spread sustainable development in Africa. Other challenges can be mitigated through better financial and human resource investments and sharing of best practices and lessons learned. Through its Regional Commission for Africa, ECOSOC supports the implementation of regional policies for technology dissemination and innovation in Africa.

Mr. Wu Hongbo, Under-Secretary-General for Economic and Social Affairs, United Nations, and Secretary-General for the International Conference on Small Island Developing States, highlighted that we have witnessed profound social and economic changes due to science, technology and innovation. Innovations help break down barriers and bridge gaps, such as the impact of mobile technologies in Africa. However, the distribution of infrastructure is not evenly distributed and more needs to be done to increase universal affordable access to modern technologies. Technological progress is an important factor in achieving development goals, including the MDGs, and sustainable development relies on a balanced interface between policy and STI. Green technologies are essential and Energy for All must become a reality. Innovations in the health sector are key to ensuring the proper treatment of illnesses. Food security requires major advancements in the

development and application of agricultural innovation. Education is essential for innovation. Children must be encouraged to create and innovate from a young age. Science education and advancing digital literacy should be an integral part of education curricula. Increased investments and partnerships in research and development are important, along with complementary policy frameworks for developing, financing and marketing innovation. It is important to view innovation as a system, with global, regional, national and sub-national dimensions. Designing policies that integrate these dimensions and are tailored to the specifics of national and local contexts should become an objective of the international community and requires global collaboration.

C. Roundtable Discussion 1: Innovation as Enabler for the Achievement of the Millennium Development Goals and Sustainable Development

The roundtable was moderated by **H.E. Prof. Makame Mbarawa, Minister for Communication, Science and Technology, Dar es Salaam, Tanzania.**

H.E. Mrs. Margaret Kamar, Minister for Higher Education, Science and Technology, Kenya, stated that addressing MDG challenges in Africa will require the development and use of STI. Kenya has adopted a national framework for innovation within its revised Constitution of 2010, which mentions intellectual property for the first time, and within its Vision 2030. The framework includes the creation of public and private universities and research institutions, promotes partnerships and investments in innovation in the private sector, and focuses on the protection of intellectual property. Kenya has also used innovation to address the MDGs and sustainable development. It established the National ST&I Fund in 2008 to fund research and innovation, which has supported prototypes, projects to commercialization and agricultural and ICT-based innovations. Kenya has also created an institution to create specialized innovation centers, finance technological innovations and increase awareness of IP rights. She also noted that there are several young innovators in Kenya who are not necessarily linked to higher education, and support to these innovators is an issue to be addressed.

Prof. Barthelemy Nyasse, Laboratory of Medicinal Chemistry, Faculty of Science, University of Yaoundé, Cameroon, stated that there are many examples in Africa of good intentions to promote innovation. He stated that innovation must be promoted through all sectors in a collaborative manner; however, the necessary frameworks for innovation are not always in place. Additionally, many innovation-related services are provided to those in higher education, yet much innovation comes from people not associated with higher education and he emphasized that this is a problem that has to be fixed. He stated that sometimes there is a lack of leadership for innovation in Africa, which results in a lack of a clear vision priority-setting. In contrast, he cited Kenya and Botswana as good examples of countries with clear priorities. In many other countries the priority is indentified (the "what") but there is a problem of implementation (the "how"). He also highlighted the need for greater synergy between ministries and stakeholders so that they don't operate in isolation, stated that currently in many countries innovation is coming from an unorganized system. In addition to a national policy framework, it is necessary to have regional and international policy networks. He cited the African Network for Driving Design and Innovation, the Forum for Agricultural Research in Africa and the African Adaptation Research Centre (AARC) as good examples of regional networks.

Ms. Padma Gehl Sampath, Chief of the Science and Technology Section, Division on Technology and Logistics Division, UNCTAD, stated that there are three essential elements of STI to address: technology has a public goods dimension, such as access to medicine, food and knowledge; technology and innovation are essential to private enterprise development; and technology and innovation have a critical development dimension regarding narrowing the gaps of social and economic development. She emphasized that a well-functioning innovation ecosystem is not only about agencies and laws, but that incentives are critical. In addressing how innovation can enable development in Africa, three sets of issues are critical: First, the technological divide must be bridged by expanding access to technologies, which includes harnessing IP rights for development goals and promoting inclusive innovation. Second, the structural vulnerabilities of African countries must be reduced through financing for innovation. This financing is imperative, not only from national resources, but also from the international community, and is important for the post-2015 development agenda. Third, collaboration and alliances across and within sectors should be promoted through existing means and partnerships as well as through new means, particularly South-south cooperation. While South-South cooperation is important, the 2012 UNCTAD Technology and Innovation Report argues that the South can complement, but not replace, efforts of developed countries to help address technology and innovation issues in a comprehensive way.

Mr. Jon Gosier, Founder, Appfrica, Uganda, stated that Appfrica was a social enterprise that was started in Uganda in 2008 and now works across 16 African countries, identifying young innovators and providing them support. Appfrica, or "Apps for Africa", is in partnership with several private sector companies, the U.S. Department of State and the World Bank. Appfrica supports the innovative capacities of youths and encourages them to solve problems by creating (mobile) applications to address social problems. He explained that the type of capital that is available matters: the movement of capital from governments can be slow, while from the private sector it is generally quicker. Appfrica works to address this issue by functioning as a for-profit company but with the aim of having a positive social impact. He stated that IP rights are essential. He emphasized, however, that most young innovators and their small companies do not have the means to hire lawyers in multiple countries, limiting their ability to expand in other countries or else limiting their ability to protect their IP rights and interests. It is therefore necessary to facilitate the protection of IP rights.

Participants engaged in a wide-ranging discussion that covered several issues. Some requested more information and clarification regarding the Kenyan example in promoting SDI and the functions of its new National Commission for STI. Others stressed that the lack of an African perspective in research and development and STI frameworks was an issue to be addressed, emphasizing that it was important that African countries set their own priorities and identify sources of resources that allow African countries to address these issues from their own point of view and not from the view of outside donors. While some emphasized that countries lack the necessary resources to establish an enabling environment for STI and need additional resources, others stated that the issue may be more that governments do not prioritize STI. The protection of IP rights was seen as important and efforts must be done to support young innovators, yet it was also recognized that protecting IP rights in the area of software was difficult but not impossible.

Education and training were emphasized by many as being key to promoting STI. Several participants called for reforming current education systems to: give more emphasis to science education, including at a young age; provide more and better incentives to study

science and engineering; develop education and training structures that are less rigid and that better emphasize practical knowledge and applications; and implement more robust and relevant STI training opportunities. It was also recognized that there are many young or "hidden" innovators not associated with universities. It is important to identify such innovators, such as through open innovation competitions, and establish a specific framework to support them that is outside of the university system.

D. Roundtable Discussion 2: Local Knowledge, Innovation and Sustainable Development: Country Case Studies

This roundtable was chaired by **Mr. McLean Sibanda, CEO, The Innovation Hub, South Africa**.

H.E. Prof. Ita-Okon Bassey Ewa, Minister for Science and Technology, Nigeria spoke about Nigeria's national innovation system and its use of the Triple Helix Approach. This model ensures that government, industry, as well as university and research institutions assume some of the capabilities of the other while each maintaining their primary roles and responsibility. He stated that Nigeria had instituted a review of its science, technology and innovation (STI) policy that was approved in 2012. A new legal framework is being developed and the Government has inaugurated the National Research and Innovation Fund (NRIC) with the President as the Chair. The NRIC will be involved in facilitating federal, sectoral, regional, state and local level innovations. He stated that Nigeria's new national system of innovation is targeted at redefining innovations to go beyond R&D but to also facilitate a platform of innovative solutions that lead to inclusive growth for the people. He stressed that the new innovation system also seeks to strengthen entrepreneurship and focus on the key economic drivers that will ensure sustainability, durability and quality. He gave examples of areas where developing technologies are a priority, in particular biotechnology, infrastructure, energy, space, natural medicine, and food science, among others. He also referred to some of the successes Nigeria has achieved such as increasing the level of indigenous knowledge and innovation as reflected by the number of technology incubation centres established as well as number of patents registered.

H.E. Prof. Nadia Zakhary, Minister of Scientific Research, Cairo, Egypt spoke on the importance of scientific research in Egypt and mentioned the increasing number of patents filed in Egypt from 1999 to 2011. She stated that in order to achieve sustainable development in the region, greater interaction is required between businesses, industry, universities and polytechnics. Capacities for selecting, absorbing and integrating the major technological transfers through direct investment should be improved to enable the build up of endogenous scientific and technological strength. She also cautioned against the heavy reliance on government funded research. Another important aspect she touched upon was the need for Egypt to design STI policies and programs that impact more directly on society and the economy. She stated that Egypt's innovation system is built on three pillars; (i) A higher education system; (ii) Research and Development; and (iii) Support from Government and the private sector. She emphasized that current transfer of technology from R&D institutions to the private sector and enterprises is low. She stated that it will be important for Egypt to undertake a number of reforms in the education sector as well as do more to incentivize research and introduce laws that will facilitate the application of scientific research. She also spoke about some of the success stories in Egypt such as the

Molecular Biology Project conducted by the Ministry of Scientific Research and the city of scientific research and technology in Alexandria, among others.

Prof. Mr. Drissa Diallo, National Institute of Public Research Department of Traditional Medicine, Mali spoke on Mali's efforts since 1968 to add value to traditional medicines and be a driver of development. He informed the meeting that at present, the National Institute of Public Research Department of Traditional Medicine employs approximately 40 people that form part of the Ministry of Education and the Ministry of Health. The institute also serves as a postgraduate training center. He stated that Mali has created associations to spur the cultivation of traditional medicinal plants and specialized pharmacies and doctors that are developing improved traditional medicines. He mentioned that the Institute also focuses on the standardization of traditional medicines to improve quality and allow producers to improve the presentation of the medicines which forms part of the process of adding value. To support these activities, the institute benefits from the sale of the medicines, partnerships, as well funding from the government. He also mentioned some of the challenges being faced, in particular the need to improve the products, the need for researchers to benefit from their work and the need to create a more supportive environment for innovation.

Dr. George Owusu Essegby, Director, Science and Technology Policy Research Institute, Council for Scientific and Industrial Research (CSIR), Ghana spoke on the importance of the informal economy as a contributor to GDP and employment in Africa. He cited the case of Ghana where a project is being undertaken to explore innovation in herbal medicines within the informal sector. He referred to some of the initial findings of the project, in particular that public policies are vital to enhance innovation in the informal economy and the need to have a tested analytical framework for promoting innovation in the informal economy as well. He also stressed the importance of appropriation mechanisms to be tailored to country specific contexts.

Participants raised several questions in response to the presentations by the panelists. In particular, several expressed interest in further discussing how knowledge-sharing in the informal sector could be improved. They noted that past experiences had often faltered because of the reluctance of traditional knowledge holders to share their expertise. It was noted that this is a process that necessitates significant commitment over time because it requires trust building and transparency. It also needs to demonstrate the shared benefits of knowledge-sharing in order to elicit cooperation.

Other participants expressed interest in the idea of creating dedicated funding sources for supporting science and innovation but noted that it could be challenging to achieve. Panelists emphasized that prior to creating a fund it is important to have clarity on the issues preventing investment so that funding could be better targeted. It was also noted that while private sector contributes to funds, there are difficulties in collaboration between private sector and the scientific community that go beyond the issue of funding and which need to be addressed. One of the panelists also remarked that there were numerous opportunities for funding from external sources but improving access to this information and understanding of the requirements would be important.

E. Roundtable Discussion 3: Key Policy Messages for the 2013 ECOSOC Annual Ministerial Review

This roundtable was chaired by **Mr. Wu Hongbo, Under-Secretary-General for Economic and Social Affairs, United Nations, and Secretary-General for the International Conference on Small Island Developing States.**

H.E. Prof. Ita-Okon Bassey Ewa, Minister for Science and Technology, Nigeria, presented several items for policy direction. He began by stating that it was important to establish an innovation culture at all levels of government, including linkages between local, national, sub-regional, regional and international groups. This culture should encourage inclusive innovation, seeking to include through linkages and partnerships. It is also important to promote e-science, technology and entrepreneurship, particularly in education, health and research and development. Youth and women should be encouraged in STI, such as through scholarships. Another recommendation is the creation of STI parks and museums to promote STI development and to establish African "Silicon Valleys". Other crucial components include the establishment of STI budgeting and financing frameworks and establishing Technology Promotion Networks to promote intellectual property rights and innovation and national, sub-regional and regional levels. Such networks could be utilized to foster partnerships between continental and multilateral stakeholders. Finally, he also recommended focusing on special projects with clear objectives, such as space, solar technology, water resources and coastal management.

H.E. Ms. Margaret Kamar, Minister for Higher Education, Science and Technology, Kenya, highlighted next steps for an improved regional approach to foster innovation in Africa. She recommended establishing an East African regional innovation fund with assistance from development partners. Existing regional organizations should also be strengthened. Good practices from East Asia, Southeast Asia and the BRIC countries should be identified, learned, adapted and adopted accordingly in African countries. Regional competition should be organized to reward best innovations in the region. Incubation hubs should be developed to nurture innovations through public-private partnerships. National and regional policies should be developed to provide an enabling environment, such as through tax incentives, venture capitalists to engage in innovation and for private sector participation in research. Minister Kamar further recommended that government should increase its spending on research and development to a minimum of 1 per cent of GDP. IP awareness should be spread and incorporated into the education curriculum. Additionally, not only could governments benefit from having IP offices, but higher education institutions could have their own to guide, monitor and apply research developments and provide incentives to attract and retain researchers. Finally, governments should work closely with international partners to enhance capacity and to ease access to scientific and technological information.

H.E. Mr. Bruno Jean Richard ITOUA, Minister, Ministry of Scientific Research and President of AMCOST, Republic of the Congo, overviewed the opportunities and challenges that African countries have faced in their development since independence. Despite its wealth of resources, the African continent has a complex development history which included the challenges of fragile states, cycles of conflict, lack of infrastructure, poverty and debt. During these previous periods, funding for development was inadequate and education and STI were not priorities. Despite continuing challenges, however, stability has been established and Africa is now experiencing increased growth,

development and investment. Yet this good news has not solved all development problems. To continue on a positive path, it is crucial for African countries to identify a fair and inclusive role of innovation for development. Innovation needs to be valued as a pillar of development, which is currently not the case, and innovators need to be encouraged and supported. A significant challenge exists in promoting innovation through higher education in addition to promoting it among those not associated with institutions of higher education, such as those working in small businesses. He emphasized that Africa requires a culture of innovation. Its leaders need to define a vision and integrate it into national and regional STI strategies, and IP needs to be given its due as a major key to a successful culture of innovation and development.

Participants responded with questions regarding the panelists' thoughts on sharing human resource within the African continent. Barriers exist to the sharing of human resources, which also becomes a barrier to innovations sharing. The panelists acknowledged the challenges. One recommendation was to collectively establish a strategy for resource sharing, particularly with regard to sharing experts and their knowledge. It was stressed that training is key and that more resources must be invested into training opportunities and enhancing capacities. Another panelist emphasized that innovation is not exclusive to people holding doctorate or master's degrees – it can be undertaken by anyone. Education systems must be changed appropriately to promote and emphasize innovation, such as through an efficient scholarship system. African countries must be cautioned against competing with respect to the number of PhDs produced – there are serious problems that need innovative solutions, and it is the solutions that need to be encouraged and emphasized. Cooperation on these solutions is needed, not competition. Another panelist emphasized that countries should support each other through the sharing of resources and should make it a priority. African countries should identify their priorities and capacity building needs and then also identify other countries within the African region with whom sharing could take place.

In closing the session, **Mr. Wu Hongbo** reviewed and highlighted some of the key policy messages for the 2013 ECOSOC AMR derived from the many discussions. First, there is a need to create an enabling environment that is conducive for innovation. This requires a sound policy framework at both national and regional levels, closer cross-sector collaboration, high quality education and targeted human resource investment, and financial, fiscal and regulatory incentives with adequate intellectual property rights. Second, innovation is seen as the most important enabler in Africa for the achievement of the MDGs and sustainable development, and enhanced innovation in Africa would be the surest way to overcome the technological, social and economic challenges to the achievement of the MDGs. Third, global support is needed for Africa's efforts to promote STI. ECOSOC should recognize this requirement and call for increased support for building the necessary innovation infrastructure and capacity in Africa. ECOSOC must also emphasize the important contribution that STI can make to achieving sustainable development, particularly in relation to the post-2015 development framework.

F. Closing Session

H.E. Mr. Néstor Osorio, President of the United Nations Economic and Social Council (ECOSOC) and Permanent Representative of Colombia to the United Nations, New York, highlighted a few key points raised at the meeting including: the

relevance of innovation to the achievement of the MDGs, the post-2015 development agenda and sustainable development; Africa's potential and the need to address its limited resources; the role of youth with recognition that not all are associated with institutions or universities; and financing for innovation and defining priorities and establishing clear policies and partnerships between governments, the private sector and civil society. He stated that there are three conditions required for more effective STI systems at a national level: policy frameworks and institutional capacity; financial, fiscal and regulatory incentives along with the establishment of adequate intellectual property rights; and policy measures to promote collaboration and partnerships across a broad range of stakeholders. Regional measures to facilitate the transfer of ideas can help build capacity and reduce current imbalances of innovation and development in the African region. ECOSOC intends to build on this event at the global level to ensure stronger partnerships with Africa to support an effective use of STI for sustainable development. He encouraged participants to remain engaged with the work of ECOSOC beyond this regional meeting and invited them to attend the ECOSOC Annual Ministerial Review in July in Geneva.

Mr. Geoffrey Onyeama, Deputy Director General, Cooperation for Development, World Intellectual Property Organization (WIPO), Geneva, used the example of bilateral and plurilateral trade agreements to illustrate that African countries are at a disadvantage regarding bargaining power. The multi-lateral system and framework, however, offer much more for developing countries, and the large number of developing countries gives them more impact in bargaining power on international agreements. He stated that he was encouraged that in the context of the ECOSOC AMR a multilateral framework for sustainable development is able to at the center of focus the issues of IP and innovation, which is a very important and concrete step. He stated that innovation results in the creativity of the mind reaching the marketplace and that IP makes this possible. He cited several main challenges, such as the importance for African countries to put into place appropriate innovation and IP strategies; putting in place a balanced regulatory framework to create an enabling environment; the institutional framework; capacity building; and the importance of government funding for research and development. He emphasized that it is important that innovation be used as a tool for sustainable development and moving the MDGs forward, and that innovation and IP are placed on the agenda of the global drive to attain sustainable development.

Dr. Hassan Mshinda, Director General of Tanzania Commission for Science and Technology, Tanzania, thanked all the attendees, on behalf of the Government of Tanzania, for participating in the meeting. He emphasized that the most important policy message that came out of the meeting was the importance of establishing an enabling and supportive ecosystem for innovation. He also informed participants of a related meeting to be held in Tanzania 28 June – 1 July, organized by SMART and the Commonwealth on how to leverage technology for socio-economic development. He wished participants a safe journey home and invited them to come back to Tanzania soon.

III. Conclusions and recommendations

- **Enhanced innovation throughout Africa would be the surest means of overcoming the technological, social, economic and environmental challenges associated with achieving the MDGs.**

- **The transition to sustainable development will be highly dependent on the use of innovative technologies. STI would also be an effective instrument for ensuring the balanced integration of the three dimensions of sustainable development.**
- **STI should also form an integral part of the post-2015 development framework.**
- **Stronger partnerships among stakeholders of all sectors are necessary to promote innovation as a means to achieve the MDGs and sustainable development.**
- **A sound policy framework at the national and regional levels is necessary to fully enable the development of innovative capacities.**
- **Close collaboration is needed between universities, governments and industries to nurture innovation for increasing productivity in the economy, as well as partnerships between governments, the private sector and civil society.**
- **Countries should ensure high-quality education and targeted investment in human resources, which are the primary source of innovation in any society.**
- **Governments should provide financial, fiscal and regulatory incentives for activities which foster development and innovation. These incentives should coincide with appropriate regulatory frameworks and intellectual property rights that foster innovation and development.**
- **Regional support measure can include fostering regional linkages and partnerships among different stakeholders to capitalize on cross-border cooperation.**
- **Young people can be important innovators, yet many young innovators in the African region are not associated with institutions or universities. They must be better integrated in the innovation process.**
- **ECOSOC should recognize the needs of African countries and issue a strong call for a coordinated approach to support Africa's endeavours to build innovation infrastructure and the necessary capacities to create domestic technology solutions.**
- **ECOSOC must emphasize the contribution that STI can make to achieving sustainable development, particularly in the context of the post-2015 development framework.**
- **ECOSOC could play an important role in galvanizing action for Africa's sustainable development. The ECOSOC Ministerial Declaration to be issued in July should include a strong call for supporting Africa's endeavours to build the innovation infrastructure and the capacity to create domestic technology solutions.**