
African Science, Technology and Innovation Forum

Marrakech, Morocco, 16 April 2019

Concept note

Empowering people and ensuring inclusiveness and equality

I. Context

1. The Conference of Ministers, in its resolution 960 (LI) of 15 May 2018, called upon the Economic Commission for Africa (ECA), in collaboration with the African Union Commission and other partners, to take all steps necessary to organize on a regular basis a multi-stakeholder forum on science, technology and innovation as an input into the work of the Africa Regional Forum on Sustainable Development. The General Assembly, in its resolution 69/313 of 27 July 2015, endorsed the Addis Ababa Action Agenda of the Third International Conference on Financing for Development, by which the Conference decided to establish the Technology Facilitation Mechanism, to be launched at the United Nations summit for the adoption of the post-2015 development agenda in order to support the Sustainable Development Goals. Two months later, the General Assembly, in its resolution 70/1 of 25 September 2015, adopted the outcome document of the United Nations summit for the post-2015 development agenda: Transforming our world: the 2030 Agenda for Sustainable Development. The Agenda contains the 17 Sustainable Development Goals in which Goal 17 target 8 is to “fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology”.

2. To enable Africa to fully benefit from and inform the ongoing efforts to facilitate technology development in and transfer of technology to developing countries, especially least developed countries, the African Science, Technology and Innovation Forum is intended to serve as a platform to review progress and share experiences in using science, technology and innovation to accelerate the implementation of the 2030 Agenda and Agenda 2063: The Africa We Want, of the African Union. The Forum is also to be used to help Africa generate key messages, and consolidate its positions to inform global, regional and national processes and enhance and expand the participation of a broad range of partners.

3. The first African Science, Technology and Innovation Forum will be held in Marrakech, Morocco, on 16 April 2019. In pursuit of its mandate, the Forum will focus on the role of science, technology and innovation in accelerating efforts to achieve Sustainable Development Goals 4, 8, 10, 13 and 16. These goals are the subject of the fifth session of the Africa Regional Forum on Sustainable Development, to be held in Marrakech, Morocco, from 17 April to 18 April 2019, and of the meeting of the high-level political forum on sustainable development, to be held in New York from 9 to 18 July 2019. It is for this reason that the Science, Technology and Innovation Forum is being held back-to-back with the Africa Regional Forum on Sustainable Development.

4. It may be recalled that, among the 169 targets of the 2030 Agenda for Sustainable Development, 14 targets explicitly refer to technology and many others are related to issues that are often largely discussed in technology terms.¹ These targets can be placed in three broad technology-related categories: technology performance improvement, universal access to sustainable technology, and effective innovation system for sustainable development.

5. Technology is not necessarily inclusive and may even accentuate inequalities among countries based on levels of development; communities in terms of wealth and beliefs; and people in terms of gender, skills and wealth. Concurrently, it can also be used as a vehicle for social and economic inclusion of the marginalized and disadvantaged. In part, science, technology and innovation can open up new opportunities and challenges that may narrow or increase inequalities.

II. Science, technology and innovation in the selected Sustainable Development Goals of the 2019 Africa Regional Forum on Sustainable Development

6. The theme of the Africa Regional Forum on Sustainable Development, “Empowering people and ensuring inclusiveness and equality” will be the basis for the discussions and outcomes of the African Science, Technology and Innovation Forum. There is a general and growing appreciation that existing, new and emerging technologies can be used in Africa to achieve sustainable development in an inclusive and equitable manner. Technologies, such as biotechnology, nanotechnology and material science, and information technology, present the continent with immense opportunities to meet almost all the Sustainable Development Goals. These technologies are leading the rapid evolution of existing technologies, such as robotics and artificial intelligence, and new technologies, such as blockchain and gene drive, and present unique challenges to African countries that have a limited scientific, technological and industrial base.

7. Notwithstanding the wide differences in the level of development among African countries, the African Science, Technology and Innovation Forum can serve as a platform to identify the following:

(a) Effective approaches, mechanisms, strategies and policies for applying science, technology and innovation to development in Africa;

(b) Technological options that will likely have a greater impact on efforts to achieve the Sustainable Development Goals;

(c) Opportunities for scaling up actions to apply science, technology and innovation at the regional, national and local levels;

(d) Potential barriers to applying science, technology and innovation in Africa and ways to overcome them.

8. The following section contains highlights of some of the development opportunities and challenges related to the Sustainable Development Goals under review (Goals 4, 8, 10, 13 and 16) from an African perspective and some of the technological options that are being

¹ United Nations, *Global Sustainable Development Report 2016* (New York, Department of Economic and Social Affairs, 2016).

applied to address those challenges. Despite data limitations, emerging opportunities associated with science, technology and innovation that Africa can take advantage of and some of the barriers that need to be tackled in order to scale up technology diffusion and actions are highlighted. Although all these issues have varying effects on African countries on account of the wide disparities in national scientific, technological and industrial endowment, there are several common and shared interests, such as climate change.

Sustainable Development Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

9. Africa has the highest education exclusion rate among the regions of the world, with about one in five of its young people out of school.² To meet the targets of Sustainable Development Goal 4, Africa needs to find optimal ways to apply science, technology and innovation to expand access to and improve the quality and completion rates of education, with the overall objective to ensure equality in participation in education by all at all ages. Science, technology and innovation can be used to help address some of the key shortcomings in the learning progressions and disparities in learning experiences, especially between rural and urban areas, poor and rich people, males and females and young people and the elderly.

10. Learning technologies are evolving rapidly and present a wide range of opportunities to reduce the costs associated with administration and education management. This is being done through, for example, self-registration and online payments, improved transparency in education, and expanded access to learning, such as through open courses offered by the Massachusetts Institute of Technology or free courses offered by the Open University, and research materials, such as open access journals. Other examples of learning technologies are free tutorials, such as the Dr. Maths mobile mathematics tutoring service, free youtube videos on a range of topics, online courses and other eLearning platforms. The eLearning market was worth approximately \$165 billion in 2015. It is expanding by about 7 per cent annually, and is expected to be valued at \$300 billion by 2025.³ The most rapidly growing markets are Asia (17.3 per cent per year), Eastern Europe (16.9 per cent), Africa (15.2 per cent) and Latin America (14.6 per cent). Africa accounted for only about 0.82 per cent of the global revenue. Learning technologies tend to be cheaper and can be deployed more rapidly. They are also more interactive and flexible than the alternatives and can be complementary to traditional learning and teaching practices. As such, these technologies can be applied to meet the demands of different learners, which varies by age, gender and location or can be families, workers or retirees, and offer them greater choice. The major drawbacks associated with learning technologies are related to infrastructure, such as limited access to the Internet and Internet-enabled devices or electricity, lack of content that is locally relevant and useful; lack of personnel proficient in technical and professional skills for teaching online education systems; and impractical business models that may not be profitable or scalable. In addition, regulatory regimes needed to enable deployment and to scale up learning technological solutions may be inadequate.

² United Nations Educational, Scientific and Cultural Organization, “One in five children, adolescents and youth is out of school”, Fact Sheet No. 48, February 2018. Available at <http://uis.unesco.org/sites/default/files/documents/fs48-one-five-children-adolescents-youth-out-school-2018-en.pdf>.

³ Reuters, “Global e-Learning market 2017 to boom \$275.10 billion value by 2022 at a CAGR of 7.5 per cent”, Orbis Research, 15 June 2017. Available at <https://www.reuters.com/brandfeatures/venture-capital/article?id=11353>.

11. It is important to acknowledge that science, technology and innovation solutions cannot eliminate all the challenges Africa faces to meet Sustainable Development Goal 4. More importantly, the design of any such solutions may need interventions that ensure that science technology and innovation serves as a tool for expanding access to education and improving the quality of education for all, irrespective of gender, race, geographical location or wealth status. In particular, policy attention may be required to narrow the gender gap in the fields of science, technology, engineering and mathematics if equality is to be encouraged and attained.

Sustainable Development Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

12. Science, technology and innovation is one of the key factors advancing sustained economic growth and, in turn, contributing towards efforts aimed at creating employment opportunities and reducing poverty. Importantly, science, technology and innovation plays a significant role in the establishment of new industries and in enhancing the productivity and efficiency of existing ones, which can make available new and high value employment opportunities. Accordingly, science, technology and innovation can contribute towards structural transformation through the reallocation of resources from low to high productivity sectors and diversification away from the production and export of a few primary commodities to the manufacturing and export of finished products. For instance, science, technology and innovation solutions are not only useful for the creation of new companies, such as those involved in computers and mobile phones, but they have also empowered existing companies, such as those in the services sectors covering airports, banks, hospitals, manufacturers, farms and institutions, such as government agencies, and homes. In all these cases, technology is helping to make work more efficient and productive. Overall, the use of science, technology and innovation leads to the creation of high-value and knowledge-intensive jobs, and supports economic and social development. Mobile technology alone is estimated to have resulted in the creation of three million jobs, generated \$110 billion in revenue and contributed \$14 billion to public funding in sub-Saharan Africa in 2017.⁴

13. Efforts are required to ensure that the 290 million people on the continent who are self-employed or work as contributing family members – termed vulnerable employment – that collectively account for about 66 per cent of the labour force⁵ can benefit from science, technology and innovation. Improved agricultural technologies and farming innovations can boost crop yields and livestock, resulting in improved earnings. Irrigation schemes can help to keep farms productive all year round, especially in areas where most of the people are poor. Similarly, the provision of adequate electricity and improved transport systems can enable businesses to operate late into the night, connect rural producers to urban and global markets and reduce the number of hours families spend gathering firewood or costs of taking their produce to markets.

Sustainable Development Goal 10: Reduce inequality within and among countries

14. Inequalities remain problematic in Africa measured in economic, social or political terms. The Human Development Index tracks inequality in education (acquiring skills and knowledge), life expectancy (health and well-being) and incomes (standard of living). Africa is home to 12 of the top 20 countries⁶ displaying high income inequalities, 14 of the top 20

⁴ GSMA, *The Mobile Economy: Sub-Saharan Africa* (London, GSMA, 2018).

⁵ International Labour Organization, *Women and Men in the Informal Economy: A Statistical Picture* – third edition. (Geneva: ILO, 2018).

⁶ Barbados, Belize, Brazil, Cameroon, Central African Republic, Colombia, Comoros, Egypt, Eswatini,

countries⁷ displaying high education inequalities and 19 of the top 20 countries⁸ with high inequalities in life expectancy (HDI Database accessed March 2019 for countries with comparable data). There are noticeable differences among African countries in the three categories, with higher income inequalities being recorded in Southern African countries and higher inequalities in education and life expectancy being recorded in West African countries.

15. Inequalities can be attributed to a number of factors. The African Development Bank contends that about 40 per cent of income inequalities in Africa is the result of differences in opportunities (education, gender, age and geography), and another 25 per cent can be attributed to ethnicity and political governance.⁹ Other factors, such as health and disease, also contribute to income inequality. This is supported by the observation that intergenerational mobility enabled by education and employment accounts for some of the progress.¹⁰ Accordingly, measures to reduce disparities in access to quality services, such as health, education, and employment opportunities for all, especially between rural and urban areas, can reduce inequalities.

16. Among others, measures to increase Internet penetration, mini-grids and grid extension, improved transportation and other logistics services can help integrate rural areas into the global value and production chains. They can also help rural areas benefit from emerging cost-effective alternatives, such as electronic and mobile health technologies, e-learning tools and mobile banking, which potentially can boost access to key services and foster entrepreneurship and innovation in rural communities. The cases of mobile money payments and financial inclusion; agricultural commodity exchanges and their ability to increase farmers' incomes; and use of technology in education in narrowing the gap between boys and girls highlight the potential of science, technology and innovation in reducing all forms of inequalities.

17. As noted earlier, science, technology and innovation can also increase inequalities if the related policies, regulations and legal regimes are inadequate. The increasing cost of telecommunication services, licensing and levies on research and development activities, taxes on modern energy resources and health, and education fees can increase inequalities irrespective of whether they are justified.

Sustainable Development Goal 13: Take urgent action to combat climate change and its impacts

18. There is general consensus that Africa will bear the brunt of climate change, partly because the continent is the least prepared region to cope with and manage the increasing frequency, intensity and duration of droughts, floods, storms and heatwaves among other natural disasters.¹¹ The trail of death and destruction to societies by Cyclone Idai (landfall

Guinea-Bissau, Haiti, Honduras, Lesotho, Namibia, Panama, Paraguay, Rwanda, South Africa, Suriname and Zambia.

⁷ Afghanistan, Benin, Bhutan, Chad, Comoros, Côte d'Ivoire, Djibouti, Ethiopia, Gambia, Guinea, Guinea-Bissau, Liberia, Mali, Nepal, Pakistan, Senegal, Sierra Leone, Sudan, Timor-Leste and Yemen.

⁸ Angola, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Guinea, Guinea-Bissau, Mali, Mauritania, Mozambique, Niger, Nigeria, Pakistan, Sierra Leone, South Sudan and Uganda.

⁹ Abebe Shimeles and Tiguene Nabassaga, "Why is inequality high in Africa", *Journal of African Economies*, vol. 27, No. 1 (2018), pp. 108-126.

¹⁰ Kathleen Beegle and others, *Poverty in a Rising Africa*. (Washington, D.C.: World Bank, 2016).

¹¹ Isabelle Niang and others, "Africa", in *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects – Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, V.R. Barros and others, eds (Cambridge, UK: Cambridge University Press, 2014).

speed = 175 kph¹²) in Malawi, Mozambique and Zimbabwe underscores the continent's vulnerability to natural disasters. As of 21 March 2019, a land area of about 3,000 km² was completely flooded, about 100,000 people were feared to be at risk of hunger and disease, 15,000 needed to be rescued and 300 were confirmed dead in Mozambique and Zimbabwe, and 80,000 were displaced in Malawi. In comparison, the more powerful Hurricane Michael (landfall speed = 249 kph) led to the evacuation of about 370,000 people in Florida in the United States of America and resulted in the deaths of at least 18 people in the immediate aftermath and damages estimated to be \$15 billion. While both the areas hit by the events suffered major losses, differences in preparedness, infrastructure and resources partly explains why so many lives were lost and so many people were placed at risk in Southern Africa.

19. Some experts have warned that 79 of the 86 fast-growing cities in Africa, which include Kampala, Dar-es-Salaam, Abuja, Lagos and Addis Ababa, are extremely vulnerable to climate change effects than cities in developed countries.¹³ Rural communities that primarily depend on rain-fed agricultural systems are particularly vulnerable to the effects of climate change, with yields of maize, rice, wheat and other crops predicted to decline. Technologies and innovative practices for water efficient irrigation systems, hydroponics, drought tolerant and resistance crops and livestock, improved storage and transportation, and use of organic and inorganic fertilizers can be very beneficial in efforts aimed at increasing or at least maintaining yields and reducing post-harvest losses.

20. Water stress is threatening not only agriculture but also power generation, tourism and the hospitality industry, water supply and sanitation, among others. The case of Cape Town highlighted this challenge when the city was on course to become the first major city in the world to run out of water because of a severe drought. Similarly, lower volume of water in Lake Kariba forced Zambia and Zimbabwe to reduce water consumption for electricity generation in 2015 and 2016, resulting in significant economy-wide losses equivalent to 18.8 per cent of the countries' gross domestic product (GDP).^{14 15} Hydropower generation in Kenya in 2017 and in Malawi in 2018 faced a similar situation. This has prompted some of these countries to expand their energy sources and build new power stations in areas with steady rainfalls. Emerging technological innovations can potentially help countries to diversify their energy sources to better deal with the effects of such instances as increased droughts, rising sea levels, floods and high temperatures. Governments may need to find better solutions that can meet the needs of the poor.

¹² Kph standards for "kilometres per hour".

¹³ Verisk Maplecroft, "84 per cent of world's fastest growing cities face 'extreme' climate change risks", 21 November 2018. Available at <https://www.maplecroft.com/insights/analysis/84-of-worlds-fastest-growing-cities-face-extreme-climate-change-risks/>, <https://www.maplecroft.com/insights/analysis/84-of-worlds-fastest-growing-cities-face-extreme-climate-change-risks/>.

¹⁴ Christopher Phiri and others, "Electricity load shedding; an econometric analysis of the productivity of firms in the manufacturing sector in Lusaka", *International Journal of Commerce and Management Research*, vol 2, No. 12 (2015) pp. 151-157.

¹⁵ Paul Samboko and others, "The impact of power rationing on Zambia's Agricultural Sector", Working paper 105, Indaba Agricultural Policy Research Institute. Available at <https://ageconsearch.umn.edu/record/245111/files/wp105.pdf>.

Sustainable Development Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable and inclusive institutions at all levels

21. While no single technological solution can be applied to address peace and security, science, technology and innovation plays an important role in promoting a peaceful environment and justice, and strengthening public institutions. Technology, for instance, is providing the tools required to ensure transparency in elections, enabling social justice to prevail and empowering society to fight corruption, all of which are major sources of exclusion, injustice, and political turmoil. Institutions, including the police, are being empowered by technological innovations. In the case of police, it is making it possible to respond more rapidly to problems, investigate crimes more effectively, efficiently and fairly, and restore order. Technology is aiding peacekeeping missions in restoring peace around the world. An example of this is the use of drones to safely collect data in African peacekeeping missions.

22. Technology itself is not necessarily creating peace, but it can be harnessed to build peace through global connections, sharing of critical information and empowering individuals and societies to avert disasters. For instance, Ushahidi was founded in 2008 to enable individuals to quickly report incidents to authorities through short message services that could be geolocated in the wake of post-electoral conflict in Kenya. Since then, it has been contracted in the United States of America and Haiti to manage and track disasters. In brief, it tags areas where a disaster may be ongoing, which enables authorities and first responders to quickly reach those in need. Ushahidi is now finding more applications even in business. Such technological applications help provide access to and build just, effective and accountable institutions at all levels.

23. Technology is helping to open up the civic space needed to promote participation and inclusion in decision-making aimed at State and nation-building, improved governance, and public service delivery. Information and communications technology (ICT) is increasingly connecting and linking people of all ages, from rural to urban areas, heightening their levels of civic engagement. Innovations in social media are increasingly enabling interaction, exchange and dissemination, helping to open up opportunities for participation for initially excluded and marginalized populations. Ordinary citizens are armed with information and are demanding high standards of ethics, integrity and accountability. They are expecting service with fairness, and responsibility for public services. The #HonestService – #HudumaHalisi¹⁶ Campaign, which was launched on the margins of the thirty-first ordinary session of the Heads of State and Government of the African Union, held in Nouakchott from 25 June to 2 July 2018, is an alternative approach used in the fight against corruption, focusing on the human side of not only complaints, but also compliments. Through this Africa region-wide campaign, ordinary citizens using short message services and their mobile phones are able to report on the quality of public services that they receive. This information is intended to contribute towards building State-citizenry trust through an enhanced social contract.

24. Additionally, the use of Facebook and WhatsApp in the “Jasmine Revolution” perhaps highlights the role of technology in dismantling unequal societies and its limits in building a peaceful environment. Technology-powered individuals brought about political changes in regimes in power that were perpetuating inequalities. It led to the fall of a number of governments and the emergence of new political dispensations.

¹⁶ Translated to “real service” in Kiswahili.

25. Technology, however, is a double-edged sword. The risk that technology may disrupt peace is seen in the successful use of technology by the Islamic State in Iraq and the Levant (ISIL) to build one of the largest and richest terrorist organizations in the world; by pirates in Somalia to track and attack movement of ships; and by governments to monitor and restrict freedoms of expression and assembly. The same can be said on how technology is improving security physically, reducing the costs of maintaining peace through, for example, the use of street cameras and satellites in monitoring large areas of countries and empowering individuals and society to work as a group to maintain peace. The same tools are used to seed fear, for example, through cyber bullying, fake news and extortions. The blazing pace at which technologies are emerging makes it necessary for government and societies to seek ways of harnessing technology for its benefits while minimizing the challenges and threats that it poses.

Sustainable Development Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development¹⁷

26. In order to enhance the use of science, technology and innovation to accelerate the achievement of the Sustainable Development Goals, partnerships between African countries and between Africa and the rest of the world must be strengthened. Partnerships between the public and private sector in Africa and with the rest of the world have helped advance the dissemination of mobile technology, which has connected 444 million inhabitants (unique subscribers or 744 million sim cards), employed three million individuals, generated \$110 billion and contributed \$14 billion to public funding in sub-Saharan Africa in 2017.¹⁸ Such partnerships have also helped medical authorities in Africa to quickly and accurately diagnose and treat such diseases as tuberculosis and HIV/AIDS, and contributed towards raising life expectancy in Africa to 61 years for males and 64 years for females in 2018. Africa and its partners are currently spearheading the global efforts to use biosciences to develop high-impact and cost-effective ways to control malaria.¹⁹

27. There are, however, concerns that Africa is remaining behind in scientific and technological development. Deeper global and regional partnerships are needed to help countries establish the sound technological and industrial base needed to catch up. It may require efforts to scale up existing funding for research, development and innovation,²⁰ and the operationalization of technology development and transfer clauses in multilateral agreements, such as Article 66.2 of the TRIPS Agreement, and increase the number of umbrella bilateral and multilateral science or technology cooperation agreements. For example, the United States has signed more than 50 such umbrella agreements, of which six are with African countries (Algeria, Egypt, Libya, Morocco, South Africa and Tunisia), while the European Union has signed 20²¹ such agreements, but with only five African countries (Algeria, Egypt, Morocco, South Africa and Tunisia). African and developed countries should pursue umbrella agreements in areas of mutual interest to enhance partnerships to build technology capacity to meet the Sustainable Development Goals.

¹⁷ Based on the submission on Partnerships for the Goals.

¹⁸ GSMA, *The Mobile Economy: Sub-Saharan Africa* (London, GSMA, 2018).

¹⁹ James S. Collins and others, "Pathway to deployment of gene drive mosquitoes as a potential biocontrol tool for elimination of malaria in sub-Saharan Africa: recommendations of a scientific working group", *The American Journal of Tropical Medicine and Hygiene*, vol. 98, No. 6, suppl. (2018), pp. 1-49.

²⁰ Robert Tijssen and Erika Kraemer-Mbula, "Research excellence in Africa: policies, perceptions, and performance", *Science and Public Policy*, vol 45, No. 3, (June, 2018), pp. 392-403.

²¹ See https://ec.europa.eu/research/iscp/pdf/policy/st_agreement_ec_euratom.pdf.

28. At the continental level, the African Union adopted the Science, Technology and Innovation Strategy for Africa 2024 in April 2014 to guide the continental initiatives aimed at technology development and transfer. In November 2018, the African Scientific Research and Innovation Council was launched by the African Union Commission and its partners in Abuja, Nigeria. The objective of the Council is to serve as a continental platform for mobilizing research and innovation excellence, providing a sustainable space for promoting dialogue and enabling all key stakeholders to participate in science, technology and innovation activities. Countries also can operationalize science, technology and innovation cooperation clauses in the agreements with objective to establish the different regional economic communities in Africa. They can follow the case of the East African Community, which has established the East African Science and Technology Commission.

29. The Agreement Establishing the African Continental Free Trade Area provides an important vehicle for strengthening intra-Africa partnerships to enhance the application of science, technology and innovation towards achieving the Sustainable Development Goals. In addition to creating a larger market, the Agreement includes components that are very relevant to science, technology and innovation, such as the proposed chapters on investment and intellectual property rights, in which closer cooperation is called for.

30. The Africa-European Union Partnership is investing about 850 million euro (€) (\$950 million) over the period 2014-2020 in activities aimed at promoting well-being and regional integration. Many of these activities involve significant technology development. For example, a €20 million initiative is slated to support intra-African academic mobility. One of the beneficiaries of this initiative is the African Biomedical Engineering Mobility initiative of members of the ECA-inspired African Biomedical Engineering Consortium. The European Union-African Union alliance to promote science and technology cooperation and partnership arrangements remains a vital source of funding and cooperation for technology development and transfer for the continent.

31. Similarly, South-South partnerships are increasing in the areas of science, technology and innovation. One such growing partnership is the Program for China-Africa People-to-People Friendship and Partnership (2018-2020), which includes about 30 initiatives involving many African countries, universities, firms, non-governmental organizations, research and development institutions and United Nations agencies. The partnership supports training and technological consultancy services in many areas, including, among others, rainwater utilization, water resources management, electronic information, transportation and machine manufacturers.

32. At the United Nations, the inter-agency task team on the Technology Facilitation Mechanism, under ECA, is promoting South-South cooperation and encouraging African participation in the Science, Technology and Innovation Forum. One such activity is the ECA initiative on digital identification, digital economy and trade, which is supported by the Indian Software Products Industry Round. In addition, the operationalization of the technology bank for least developed countries has been implemented. The General Assembly officially established the technology bank for least developed countries in 2016. The host agreement with Turkey for the bank was signed in 2017, with the country making a commitment to contribute \$2 million per year for the first five years following the establishment of the bank. Norway contributed about \$1.07 million in 2018 towards the establishment of the bank and Joshua Phoho Setipa of Lesotho became the first Managing Director of the bank in 2018. Research on technology needs of least developed countries is ongoing. Through the bank South-South and North-South triangular partnerships are being facilitated.

III. Objectives

33. The main objective of the African Science, Technology and Innovation Forum is to review and provide policy recommendations on the role of science, technology and innovation in the effort to achieve the Sustainable Development Goals that will be discussed at the forthcoming high-level political forum from an African perspective (Goals 4, 8, 10, 13 and 16). As such, it will look at progress made to date in the implementation of the 2030 Agenda and identify emerging opportunities and challenges. The Forum will make recommendations on actions Africa and the world need to take to accelerate the achievement of the Sustainable Development Goals under review in 2019 and other cross-cutting issues.

IV. Expected outcome

34. The expected outcome of the African Science, Technology and Innovation Forum will be key messages to be used to inform discussions and form part of the outcomes of the Africa Regional Forum on Sustainable Development. The outcome of the Forum will also inform the Economic and Social Council Science, Technology and Innovation Forum, which will take place in May 2019, and African member States and their partners. An analytical policy report will be produced, which will serve as a guiding reference for policymakers and as an input into ECA programme development. It is hoped that the report will inspire inquiry, initiate policy discussion and stimulate new ideas and policies on the pressing issues of the continent.

V. Participation

35. Participation is by invitation and is open to all participants of the Africa Regional Forum on Sustainable Development. Invitations will be extended to selected African ministries responsible for science, technology and innovation; information and communication technologies (ICTs); and education to nominate senior policy experts to attend. Invitations will also be extended to heads of science, technology and innovation institutions, African Union departments, the New Partnership for Africa's Development, regional economic communities, selected academic institutions, United Nations agencies with pertinent mandates, multilateral and bilateral development agencies, and non-governmental organizations and civil society organizations. ECA will sponsor approximately 15 senior policy experts from African countries. Self-sponsored senior experts are welcome.

VI. Format

36. The African Science, Technology and Innovation Forum will follow the format used by the World Economic Forum. Panellists will review the issues in an open discussion led by a moderator. There will be no formal presentations. Panellists will be requested to submit their talking points and notes to the secretariat for the purpose of preparing the report.

VII. Date and venue

37. The African Science, Technology and Innovation Forum will be held in Marrakech, Morocco, on 16 April 2019.

VIII. Contacts

Kasirim Nwuke
Chief, Green Economy and
Innovative Technologies Section
Email: nwuke@un.org

Victor Konde
Scientific Affairs Officer, Green Economy and
Innovative Technologies Section
Email: kondev@un.org
