Economic and Social Council

Economic Commission for Africa
Sixth African Science, Technology and Innovation Forum

Addis Ababa (hybrid), 21 and 22 April 2024

Effective delivery of innovative science and technology solutions to reinforce the 2030 Agenda for Sustainable Development and Agenda 2063: The Africa We Want, of the African Union, and to eradicate poverty in Africa

I. Background and mandate

1.   The collaborative multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals was established pursuant to the 2030 Agenda for Sustainable Development, as part of the Technology Facilitation Mechanism. The multi-stakeholder forum is organized by the United Nations inter-agency task team on science, technology and innovation for the Sustainable Development Goals, with the support of a 10-member group, appointed by the Secretary-General and drawn from the private sector, the scientific community and civil society.

2.   The multi-stakeholder forum is convened once per year, pursuant to paragraph 70 of the 2030 Agenda, to discuss science, technology and innovation cooperation around thematic areas for the implementation of the Sustainable Development Goals. The forum brings together all stakeholders to actively contribute in their area of expertise. The forum also provides a venue for facilitating interaction, matchmaking and the establishment of networks between relevant stakeholders and multi-stakeholder partnerships, in order to identify and examine technology needs and gaps, including in respect of scientific cooperation, innovation and capacity-building.

3.   The African Science, Technology and Innovation Forum was established by the Conference of Ministers, in its resolution 961 (LI) of 15 May 2018, in which it 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 a regular multi-stakeholder forum on science, technology and innovation as an input into the work of the Africa Regional Forum on Sustainable Development.

4.   The first African Science, Technology and Innovation Forum was held in Marrakech, Morocco, on 16 April 2019; the second at Victoria Falls, Zimbabwe, on 24 February 2020; the third in Brazzaville, on 25 and 26 February 2021; the fourth in Kigali, on 1 and 2 March 2022; and the fifth in Niamey, on 27 and 28 February 2023. The sixth Forum is being jointly organized by ECA, the United Nations Educational, Scientific and Cultural Organization, the African Union and the Department of Science and Innovation of the Government of South Africa, with contributions from the African Materials Research Society, the Technology Bank for the Least Developed Countries, the International Atomic Energy Agency, the African Biomedical Engineering Consortium and the European Union.

5.   The Forum has grown into a pre-eminent continental platform for the exploration of complex and cutting-edge issues related to science and technology, showcasing emerging developments in that area, instilling technical and

entrepreneurial skills in young people and forging long-lasting partnerships and alliances. Every year, over 800 representatives of African States, entities of the United Nations system, academia, civil society, the private sector, young people, persons with disabilities and other marginalized groups attend the Forum to share their experiences and forge partnerships.

6.   Since 2020, a youth innovation boot camp has been organized as part of the Forum. Young people from across the continent and beyond participate in the boot camp to collaborate on designing and developing innovative solutions and in learning new technologies, such as rapid prototyping using three-dimensional printing, genomics, robotics, artificial intelligence and nanotechnology. Participants are introduced to entrepreneurship concepts and competencies.

II.   Sixth African Science, Technology and Innovation Forum

7.   The sixth African Science, Technology and Innovation Forum will be held on 21 and 22 April 2024, in Addis Ababa and online. The Forum will review the Sustainable Development Goals selected for the high-level political forum on sustainable development – Goal 1 (no poverty), Goal 2 (zero hunger), Goal 13 (climate action), Goal 16 (peace, justice and strong institutions) and Goal 17 (partnership for the Goals) – and the corresponding goals of Agenda 2063: The Africa We Want, of the African Union.

8.   The theme of the tenth session of the Africa Regional Forum on Sustainable Development will be "Reinforcing the 2030 Agenda for Sustainable Development and Agenda 2063 and eradicating poverty in times of multiple crises: the effective delivery of sustainable, resilient and innovative solutions". As such, the sixth African Science, Technology and Innovation Forum will be held under the theme "Effective delivery of innovative science and technology solutions to reinforce the 2030 Agenda for Sustainable Development and Agenda 2063: The Africa We Want, of the African Union, and to eradicate poverty in Africa". In addition to addressing the Sustainable Development Goals that are to be reviewed and the corresponding goals of Agenda 2063, the Forum will pay particular attention to the role of emerging technologies in achieving shared prosperity.

9.   Africa is off track on Sustainable Development Goal 1 and is unlikely to eradicate poverty by 2030 or even by 2063. For instance, the number of people worldwide living in extreme poverty declined from 1.9 billion in 1990 to 689 million in 2018, while the equivalent figure for sub-Saharan Africa increased from 283 million to 433 million during the same period.[1] ECA estimates that 546 million Africans were living in poverty in 2022;[2] that equates to approximately half of the continental population. It is estimated that, by 2030, about 9 in 10 of the people living in extreme poverty worldwide will live in Africa.[3] The current levels of poverty in the region are unsustainable and may be fuelling the many internal conflicts and accompanying insecurity that undermine the rule of law and respect for human rights on the continent. While no single technology can reduce poverty on its own, science and technology can play an important role in increasing the efficiency of service delivery to the poor, monitoring living conditions, predicting impending crises in crowded or remote areas and informing decision-making during crises.

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[1] United Nations, Statistics Division, "The Sustainable Development Goals report 2021, extended report".

[2] ECA, "Fostering recovery and transformation in Africa to reduce inequalities and vulnerabilities", 2 February 2023.

3 Divyanshi Wadhwa "The number of extremely poor people continues to rise in sub-Saharan Africa", World Bank, 19 September 2018

10.   With regard to ending hunger, estimates of the number of undernourished Africans in early 2023 vary from 278 million[4] to 283 million.[5] Moreover, the sad fact is that about 55 million African children were stunted in 2022.[6]. The Food and Agriculture Organization of the United Nations, the African Union Commission, ECA and the World Food Programme report that the continent is unlikely to meet either the commitment, under the Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods, to end hunger in Africa by 2025 or the targets under Sustainable Development Goal 2 by 2030.[7] Science, technology and innovation can help to address some of the root causes of hunger, such as climate change, low productivity, lack of food storage and limited opportunities for food processing, thereby increasing access to affordable, high-quality and nutritious food.

11.   With respect to the climate action envisaged under Sustainable Development Goal 13, most of the technologies needed in order to follow a low-carbon development pathway are rapidly evolving and maturing, with a great deal of promise for the future. Electric vehicles – from cars to scooters and wheelchairs – have rapidly become more common in recent years and promise to displace the internal combustion engine. In a similar vein, the range of technologies based on solar energy is expanding at pace, from solar panel farms to solar-powered air conditioners, refrigerators and heaters. While the focus is on reducing emissions from fossil fuel-powered systems, the expansion of low-carbon technologies is creating a range of new sectors, industries and products that were not viable in a hydrocarbon-based economy. Africa needs to build its scientific, technological and industrial know-how in order to deploy or fully participate in the emerging renewable energy sector. For instance, the continent would benefit from expanding the use of solar energy because not only is electricity from solar power sources now cheaper than electricity from coal-fired power plants, it is also more flexible, since small-scale solar panels can be deployed to power a single home, school or community, making solar power an ideal solution for bringing electricity to some of the African population, slightly less than half of which lacked access to electricity in 2021.[8]

12.   If Africa can build its scientific and technological base and promote entrepreneurship, it will have the opportunity not only to meet its climate action ambitions but also to build new, greener industries that create jobs and wealth. The continent has an abundance of minerals – such as the copper, cobalt and lithium needed in solar power systems and batteries – that are critical for high-tech, green product innovations, as well as vast potential for generating solar, wind and hydropower, among other forms of renewable energy. Without a commitment to the renewable energy transition, African exports could fall by $150 billion per year amid rapid decarbonization worldwide and declining exports of fossil fuel products. Africa could also lose an additional $25 billion per year if the European Union carbon border adjustment mechanism – which amounts to a tax on the carbon emitted during the process of producing an item imported into the European Union – is fully implemented.[9] Since such measures are likely to become common, Africa will, in

[4] Oxfam, "Over 20 million more people hungry in Africa's 'year of nutrition'", 17 February 2023.

[5] African Development Bank, "Feed Africa Summit: African Development Bank plans to invest $10 billion to make continent the breadbasket of the world", 26 January 2023.

[6] Oxfam, "Over 20 million more people hungry in Africa's 'year of nutrition'", 17 February 2023.

[7] Food and Agriculture Organization of the United Nations, African Union Commission, ECA and World Food Programme, *Africa – Regional Overview of Food Security and Nutrition 2023: Statistics and trends* (Accra, Food and Agriculture Organization of the United Nations, 2023).

[8] World Bank, "Access to electricity (% of population) – sub-Saharan Africa", World Bank Open Data. Available at https://data.worldbank.org/indicator/EG.ELC.ACCS.ZS?locations=ZG (accessed on 10 February 2024).

[9] African Development Bank, "COP28: Africa could lose $25 billion per year as new EU carbon tax comes into effect, warns African Development Bank's Adesina", 6 December 2023.

addition to bearing the brunt of the impact of climate change, face major trade barriers.

13.   This narrative can be changed, provided that Africa breaks into new and emerging sectors and industries. In Viet Nam, for example, a generous feed-in tariff has helped to massively expand domestic solar power generation and, meanwhile, the Government has fostered competition in the country's energy market and offered substantial tax breaks to new companies generating solar power to feed into the national grid. As a result, some 11 per cent of Vietnamese electricity demand was met by solar power in 2022, saving the country around $1.7 billion in potential fossil fuel imports.[10] In a similar vein, the electric vehicle manufacturer VinFast, which is based in Viet Nam, grew rapidly between 2018 and 2023 to a market capitalization of some $191 billion, making it the third-largest vehicle manufacturer in the world by that measure, behind only Tesla and Toyota; the company has ambitions to expand further, with manufacturing plants planned in India[11] and the United States of America.[12] Several African countries could, by determinedly taking appropriate measures, foster similar growth in new industries.

14.   In terms of peace, justice and strong institutions, which are the subject of Sustainable Development Goal 16, Africa ranks poorly in all indices related to such areas as democracy, political tolerance, transparency, corruption, the inclusion of women and young people in governance, and human rights. Science, technology and innovation could make a positive difference in many of these areas. For instance, the use of blockchain could improve transparency, reduce corruption and reduce costs; another example is that social media can give voice to the voiceless. However, technology can also be abused, with serious consequences. Social media and artificial intelligence have become tools for the dissemination of misinformation and disinformation that could seed division to undermine peace, while also encouraging discrimination and other criminal behaviour. One example of technology having both positive and negative effects is that, while the Internet kept people working and socially connected during the lockdowns imposed in response to the coronavirus disease (COVID-19) pandemic, it also fuelled conspiracy theories about COVID-19 that had dire consequences.[13]

15.   For this reason, it is important to pay particular attention to building and promoting effective, accountable, inclusive and, thus, trustworthy institutions that are responsible for science, technology and innovation. Trust in science is easily undermined when leading scientific institutions are perceived as using science in a way that is partisan or self-interested, or when scientists tell lies or engage in personal attacks on colleagues. The experience of the COVID-19 pandemic highlighted how some policymakers sought to instrumentalize science to support given decisions, which, in turn, encouraged many people to turn to social media for information. Perhaps owing to a willingness to challenge the views of such policymakers, including Heads of State and Government, such institutions as the World Health Organization and the Centers for Disease Control and Prevention of the United States and some individuals, for instance the former Director of the United States National Institute of Allergy and Infectious Diseases, Anthony Fauci, became trusted voices.[14]

16.   The institutions that are responsible for science, technology and innovation also need to be inclusive. Currently, only a third of African researchers are women,

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[10] Rapid Transition Alliance, "Viet Nam's rapid rise to becoming a solar-powered State", 25 January 2023.

[11] Vin Group, "VinFast to build integrated electric vehicle facility in Tamil Nadu, India", 6 January 2024.

[12] Takafumi Hotta, "Vietnam's VinFast now world's No. 3 automaker as market cap surges", Nikkei Asia, 29 August 2023.

[13] Daniel Romer and Kathleen Hall Jamieson, "Conspiracy theories as barriers to controlling the spread of COVID-19 in the U.S.", *Social Science & Medicine*, vol. 263 (October 2020).

[14] Lynn Norment, "Rd. Anthony Fauci: a trusted and dependable voice during COVID-19", Commercial Appeal, 7 October 2020.

but the proportion varies significantly from one country to the next. Of the 23 States that submitted research and development data for *African Innovation Outlook III*, women made up 10 per cent or fewer of the researchers in 4, between 11 and 20 per cent in 5 and between 21 and 30 per cent in 7; in just 7 of the countries were more than 30 per cent of researchers women. In a similar vein, people under 35 years of age accounted for more than 50 per cent of researchers in just 3 of the 12 countries for which data disaggregated by age were available.[15]

17.   The Forum will explore certain emerging technologies and their business models, with a focus on their potential to make a meaningful impact on successful implementation of the 2030 Agenda. It will also provide a platform for identifying and examining technology needs and institutional voids; showcasing innovative solutions, policymaking tools and methodologies; and launching partnerships and initiatives for harnessing and deploying science, technology and innovation to accelerate the attainment of the Sustainable Development Goals and the corresponding goals of Agenda 2063.

III. Theme

18.   The theme of the sixth Forum, "Effective delivery of innovative science and technology solutions to reinforce the 2030 Agenda for Sustainable Development and Agenda 2063: The Africa We Want, of the African Union, and to eradicate poverty in Africa", was chosen with a view to both addressing the above-mentioned Sustainable Development Goals and strengthening capacities and capabilities with regard to science, technology and innovation, so that such capacities and capabilities can serve as effective means of implementing the two agendas. For an African country with scant capacity for research and development, a small base of knowledge-intensive firms and a limited industrial base, success in harnessing science, technology and innovation may depend on numerous factors. The factors include the question of whether economic sectors – such as pharmaceuticals, information and communications technology, and automotive – are driving the development of science, technology and innovation or, conversely, science, technology and innovation are driving economic development through artificial intelligence, chip manufacturing, medical services, bioscience and other cutting-edge sectors.

19.   In that connection, ECA has:

(a)   Supported the design of undergraduate and postgraduate curricula for courses on advanced materials and nanotechnology, artificial intelligence, pharmaceutical chemistry and manufacturing, and biomedical engineering, which are available to all interested universities;

(b)   Launched the Alliance for Entrepreneurial Universities in Africa to encourage innovation and entrepreneurship in knowledge-intensive sectors;

(c)   Launched Origin Research and Innovation Labs, a hub of facilities that serves as a continental platform for problem-solving, scaling up and knowledge generation;

(d)   Published *Science, Technology and Innovation Policy Design and Implementation Guide: Towards a Framework*;

(e)   Joined the Global Pilot Programme on Science, Technology and Innovation for the Sustainable Development Goals Road Maps of the United Nations inter-agency task team on science, technology and innovation for the Sustainable Development Goals.

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[15] African Union Development Agency-New Partnership for Africa's Development, *African Innovation Outlook III, 2019* (Johannesburg, South Africa, 2019).

20.   ECA is also leading the work in such areas as digital identity, digital trade, the digital transformation, cybersecurity and Internet governance. In that connection, ECA has established the African Research Centre for Artificial Intelligence, in the Congo, and is supporting the foundation of the African Centre for Coordination and Research in Cybersecurity, in Togo, and of an African centre of excellence in science, technology, engineering, arts and mathematics, in Rwanda. ECA is helping its members to advance their development of digital transformation strategies and policies, to encourage women to learn digital skills through the Connected African Girls Coding Camp and to bring the African voice to the global stage through the World Summit on the Information Society and the African Internet Governance Forum.

IV.   Objective

21.   The overall objective of the sixth Forum is to conduct the regional follow-up to and review of progress made since the fifth Forum, in order to identify potential mechanisms and measures that countries can deploy to scale up action, facilitate peer-to-peer learning and promote transformative solutions to accelerate the achievement of the Sustainable Development Goals and the goals of Agenda 2063. The mechanisms and measures include:

(a)   Conducting the regional follow-up to and review of the implementation of the key messages and measures recommended at the fifth Forum;

(b)   Providing a platform for peer-to-peer learning and the sharing of experiences, approaches, good practices and lessons learned, in order to accelerate the realization of the aspirations set out in the 2030 Agenda and Agenda 2063;

(c)   Identifying technological opportunities, gaps and challenges, and institutional voids, with a view to driving innovation and development;

(d)   Pinpointing realistic mechanisms for collaboration and matchmaking to strengthen regional and international partnerships and investment in science, technology and innovation and to accelerate implementation of the two agendas;

(e)   Determining means of accelerating the growth of inclusive and accessible science, and of inclusive and accessible education, given that the African Union has designated 2024 the Year of Education and that it also marks the start of the International Decade of Sciences for Sustainable Development, 2024–2033.

V.   Format

22.   The sixth Forum will comprise the following activities, high-level panels and policy dialogues, discussions and showcasing events:

(a)   At least four high-level panels will be organized, involving senior government officials, ministers, heads of entities of the United Nations system and chief executive officers of companies, along with vice-chancellors of universities and heads of research and technology organizations. The interactive panels will be focused on broad and cross-cutting issues and strategic direction, including opportunities and transformative levers, partnerships, commitments, actions and other measures to accelerate implementation;

(b)   At least five panel sessions will be held, during which panellists will address the progress made towards realizing the 2030 Agenda and Agenda 2063, including on the specific Sustainable Development Goals under review by the Africa Regional Forum on Sustainable Development and the high-level political forum on sustainable development. The panels will assess the contribution of science, technology and innovation to the progress already

made and will propose actions that are needed to amplify the impact of science, technology and innovation, as part of efforts to achieve the Sustainable Development Goals. All panel sessions may include presentations on central issues and a discussion in a town hall meeting format, to encourage open interaction;

(c)   Several special sessions and events will be organized by ECA and its partners to provide information to participants in the Forum. They will include a youth boot camp on intellectual property, on standards, ethics and safety in research and on development, innovation and business; an event on the African Union-European Union Innovation Agenda; and a boot camp on science, technology, engineering, arts and mathematics.

VI. Expected outputs

23.   The sixth Forum is expected to generate the following main outputs:

(a)   Report on the sixth Forum, which will inform the Africa Regional Forum on Sustainable Development and the global multi-stakeholder forum in New York;

(b)   Outcome documents of special sessions and events, such as the youth boot camp;

(c)   General guide on special initiatives, such as Origin Research and Innovation Labs and the Alliance for Entrepreneurial Universities in Africa, and on the growth of those initiatives.

VII. Expected outcomes

24.   The sixth Forum is specifically designed to foster collaboration, the diffusion of technology and innovation, and the scaling up of policy and operational efforts to accelerate the contribution of science, technology and innovation to the implementation of the 2030 Agenda. In particular, the chief tangible and intangible outcomes of the Forum are expected to be as follows:

(a)   Establishment of collaborative arrangements and partnerships between African universities and their partners inside and outside Africa;

(b)   Setting up of platforms, in collaboration with partners, for the exchange of information on research, funding, innovation and institutions intended to accelerate technology transfer, collaboration and joint creation among strategic science, technology and innovation partners in Africa;

(c)   Increase in the number of partnerships and in the amount of collaboration, aimed at strengthening institutional arrangements on science, technology and innovation to drive policy implementation and to improve the funding mechanisms that have been established;

(d)   Exploration and sharing of ideas for a mechanism to foster diaspora engagement in Africa.

VIII.   Participants

25.   The meeting will be attended by representatives of African States Members of the United Nations, and also by representatives of the African Union Commission, the African Development Bank, regional economic communities, civil society, business and industry organizations, academic and research institutions, entities of the United Nations system, other international organizations and development partners.

IX. Working languages

26.   The Forum will be conducted in English and French, with simultaneous interpretation in both languages.

X. Dates and venue

27.   The sixth Forum will be held on 21 and 22 April 2024, in Addis Ababa.

XI. Contacts

28.   For enquiries, please contact:

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