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Multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals

Note by the Secretariat

The President of the Economic and Social Council has the honour to transmit to the high-level political forum on sustainable development the Co-Chairs' summary of the multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals, held in person on 7 and 8 May 2025, with a science, technology and innovation forum action day, a special event on artificial intelligence and additional side events held on 6 May. The Co-Chairs of the Forum, the Ambassador and Permanent Representative of Morocco to the United Nations, Omar Hilale, and the Ambassador and Permanent Representative of Finland to the United Nations, Elina Kalkku, were appointed by the President of the Council. The present summary is circulated pursuant to paragraph 123 of the Addis Ababa Action Agenda of the Third International Conference on Financing for Development (General Assembly resolution 69/313, annex) and paragraph 70 of the 2030 Agenda for Sustainable Development (resolution 70/1).

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I. Introduction

1. The present summary reflects the broad discussions held during the 2025 session of the multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals.[1] The summary brings together views articulated through both formal and informal statements provided by representatives of governments, the United Nations system and diverse stakeholders. The views presented do not necessarily represent opinions held or endorsed by the Co-Chairs or the Governments that they represent.

2. Pursuant to General Assembly resolution 70/1, on 7 and 8 May 2025, the President of the Economic and Social Council, Robert Rae, convened the tenth annual science, technology and innovation forum – one component of the Technology Facilitation Mechanism. The forum is a venue for enhancing cooperation in science, technology and innovation around thematic areas pertaining to the implementation of the Sustainable Development Goals. It is mandated to facilitate knowledge-sharing, networking and the establishment of multi-stakeholder partnerships. It identifies technology needs and gaps, promotes scientific cooperation, innovation and capacity-building and examines the impact of rapid technological change on sustainable development.

3. The Ambassador and Permanent Representative of Morocco to the United Nations, Omar Hilale, and the Ambassador and Permanent Representative of Finland to the United Nations, Elina Kalkku, co-chaired the forum. It was jointly organized by the inter-agency task team,[2] which is coordinated by the Department of Economic and Social Affairs and the United Nations Conference on Trade and Development, as well as by the United Nations Group of 10 High-level Representatives of Civil Society, Private Sector and Scientific Community to Promote Science, Technology and Innovation for the Sustainable Development Goals,[3] appointed by the Secretary-General and serviced by the Department of Economic and Social Affairs. Among other things, the 10-Member Group led the thematic sessions and provided an overall background note[4] to support the forum deliberations.

4. The forum was held in person at United Nations Headquarters in New York under the theme “Advancing sustainable, inclusive, and evidence-based science and technology solutions and innovations for the 2030 Agenda and its Sustainable Development Goals for leaving no one behind”.

5. In a high-level opening session, the tenth anniversary of the science, technology and innovation forum was celebrated. The session included a fireside chat during which participants looked back at 10 years of leveraging science, technology and innovation for the Sustainable Development Goals and identified opportunities for the future. This was followed by a ministerial session and four thematic sessions that featured concrete solutions and innovations to support progress across the Goals with a focus on Goals 3 (good health and well-being), 5 (gender equality), 8 (decent work and economic growth), 14 (life below water) and 17 (partnerships for the Goals), which will be reviewed at the July session of the high-level political forum on sustainable development this year. During an evening reception hosted by the Co-Chairs, youth-led innovations in local communities and beyond were showcased.

[1] See https://sdgs.un.org/tfm/STIForum2025.
[2] See https://sdgs.un.org/tfm/interagency-task-team.
[3] See https://sdgs.un.org/tfm/ten-member-group.
[4] Available at https://sdgs.un.org/sites/default/files/2025-04/Background%20note%20for%20the%2010th%20STI%20Forum%202025_0.pdf.

6. Several featured events were held during the week in addition to the formal sessions of the forum. These included a science, technology and innovation forum action day and a special meeting on artificial intelligence convened by the President of the Economic and Social Council. To foster an interactive and dynamic atmosphere, and with the support of the Executive Office of the Secretary-General, professional moderators were engaged, and a new stage was installed in the Economic and Social Council Chamber to support fireside chat-style conversations. That format helped to enrich discussions and promote cross-sectoral engagement.

7. The forum was well attended by scientists, innovators, technology specialists, entrepreneurs and representatives of Governments, the United Nations system, academia, civil society, youth and the private sector. A total of 4 ministers and 15 high-level government officials spoke during the ministerial segment. More than 300 scientists and engineers submitted science-policy briefs to raise attention among policymakers of the latest emerging issues in support of the forum's deliberations. Some 10 young innovators selected from 338 global applications were featured at the forum, demonstrating the power of grass-roots innovation. The official programme of the forum featured 95 speakers, and many more spoke in 54 side events. Including the speakers, there were almost 700 registered stakeholder participants in addition to more than 100 Member State representatives and an estimated 7,500 watching online on United Nations Web TV.

II. Highlights of the science, technology and innovation forum

A. High-level opening and fireside chat

8. At the opening of the forum, the tenth anniversary of the science, technology and innovation forum was celebrated and lessons learned from 10 years of leveraging science, technology and innovation for the Sustainable Development Goals were discussed. The forum featured statements by the President of the Economic and Social Council, the Deputy Secretary-General of the United Nations, Amina Mohammed, the Under-Secretary-General for Economic and Social Affairs, Li Junhua, and Minister Delegate to the Head of Government in charge of Digital Transition and Administrative Reform of Morocco and keynote speaker, Amal El Fallah Seghrouchni. A second keynote address was given by technology investor, founder and Chair of WithSecure Inc. and former Chair of the Board of Directors of Nokia Corporation, Finland, Risto Siilasmaa, in a thematic session on artificial intelligence.

9. In statements, high-level speakers emphasized the critical role of science, technology and innovation as catalysts for achieving the Sustainable Development Goals and implementing the Pact for the Future. They highlighted the forum's evolution over a decade into a core United Nations platform for bridging science and policy and called for special efforts to translate global commitments into concrete implementation on the ground. There was a strong emphasis on national ownership, with governments urged to invest in digital infrastructure, affordable Internet access and public-sector digital literacy, supported by international cooperation. The importance of inclusive innovation was echoed throughout, with calls for greater access to frontier technologies, more support for youth and women innovators and stronger South-South collaboration. Fundamental science, responsible artificial intelligence governance, open science and digital public goods were identified as critical areas for investment and coordinated action. The forum was recognized as a space for overcoming silos and accelerating progress on sustainability, resilience and equal opportunity. The opening marked a pivotal moment of reflection and recommitment, positioning science, technology and innovation as transformative

tools for inclusive and sustainable development in the final stretch towards achieving the Goals by 2030.

10. In a fireside chat, speakers explored progress on and challenges in leveraging science, technology and innovation for sustainable development over the decade since the creation of the Technology Facilitation Mechanism. The chat served to underscore the leadership role of the 10-Member Group in aligning United Nations discourse with scientific and technological advances. Speakers highlighted achievements in clean energy, digital platforms and health technologies while acknowledging ongoing inequalities in access to research infrastructure and innovation capacity. The growing share of scientific output from low- and middle-income countries was noted, reinforcing the need for stronger South-South cooperation and more inclusive global research systems. In the conversation, speakers emphasized the urgency of ethical and governance frameworks for emerging technologies, particularly artificial intelligence, and stressed the importance of protections for privacy and youth rights. They called for co-designed, community-based approaches that harnessed local knowledge and grass-roots innovation. Forward-looking proposals included real-time, artificial intelligence-powered tools to map science, technology and innovation needs, and an expanded role for the Mechanism as a central node in a hub-and-spokes network of partnerships. To advance the Sustainable Development Goals and the Pact for the Future, participants urged bold leadership, reimagined funding strategies and stronger collaboration with young people and civil society.

B. Ministerial session on harnessing science and technology for the effective delivery of sustainable, resilient and innovative solutions

11. A ministerial session was held on the overall theme “Harnessing science and technology for the effective delivery of sustainable, resilient and innovative solutions”, with the following Member States and political group engaging in the general debate: Armenia, Belarus, Cambodia, Colombia Chile, Dominican Republic, Guatemala, Republic of Moldova, Morocco, Nepal, Philippines, Slovenia, Thailand, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, Zimbabwe and the European Union.

12. The forum also heard remarks from the President of the General Assembly, Philémon Yang, a report on the twenty-eighth session of the Commission on Science and Technology for Development by Muhammadou M.O. Kah, and a report on the Technology Facilitation Mechanism by the Assistant Secretary-General for Policy Coordination in the Department of Economic and Social Affairs, Bjørg Sandkjaer. In addition to reports on ambitious national science, technology and innovation policies and initiatives, the following key areas of priority actions emerged.

13. Governments and stakeholders should consider increasing both public and private investment in science, technology and innovation as a foundational strategy to accelerate progress towards the Sustainable Development Goals. Investment needs to be directed toward strengthening digital infrastructure, supporting research and development and advancing frontier technologies such as artificial intelligence, biotechnology and clean energy. The investments should be aligned with national development priorities and designed to be inclusive, results-oriented and sustainable over the long term.

14. Efforts are needed to close the persistent digital and technological divides that prevent equitable access to science, technology and innovation benefits as underscored in the Pact for the Future. This includes expanding affordable and reliable Internet access, building national and local science, technology and innovation capacities and ensuring that rural areas, marginalized groups and least

developed countries are not left behind. Science, technology and innovation initiatives should be designed to empower the most vulnerable and ensure that no one is excluded from the opportunities that technology and innovation can offer.

15. There is a pressing need to establish ethical, transparent and accountable governance frameworks for emerging technologies, particularly artificial intelligence. Science, technology and innovation policies must be grounded in human rights and designed to safeguard data privacy, prevent algorithmic bias and promote trust in digital systems. Open science, academic freedom and scientific integrity should be upheld as core principles to guide the responsible development and application of science, technology and innovation.

16. Education systems must be transformed to support the development of science, technology and innovation competencies, particularly through strengthened science, technology, engineering and mathematics education. Governments should implement gender-responsive policies that support women and girls in those fields, including targeted scholarships, mentorships, and inclusive curricula. Lifelong learning and upskilling programmes are also essential to prepare populations for the evolving demands of digital and green economies.

17. International collaboration is essential for scaling up science, technology and innovation solutions and ensuring that innovation benefits all. Countries should deepen South-South, North-South and triangular cooperation to share knowledge, best practices and technologies. Multilateral platforms such as the Technology Facilitation Mechanism should be strengthened to support capacity-building, policy coherence and inclusive partnerships in science, technology and innovation.

18. Science, technology and innovation should be fully integrated into national development strategies and Sustainable Development Goal implementation frameworks. Countries are encouraged to develop and implement science, technology and innovation for the Goals road maps that reflect local priorities and global commitments. Science, technology and innovation must also be leveraged to advance the goals of the Pact for the Future, helping to build inclusive, resilient and sustainable societies that can respond to emerging challenges and opportunities.

C. Thematic discussions

19. A large part of the forum consisted of “deep-dive” discussions on four themes, key elements of which are summarized in the present section, with a focus on recommendations and solutions.

Making artificial intelligence accessible, inclusive and beneficial for all

20. The forum explored in depth potential pathways to harness artificial intelligence for sustainable development, with a focus on equity, accessibility and human-centred innovation. It was structured in two parts: the first examined global governance and inclusive development strategies, while the second highlighted real-world artificial intelligence solutions across health, work, agriculture and social protection.

21. Artificial intelligence is rapidly emerging as a general-purpose technology with transformative implications across sectors, with its growth outpacing regulatory and governance frameworks. Several speakers noted that advances in generative artificial intelligence and large language models meant that they were approaching, or already matching, human capabilities, raising the possibility of artificial general intelligence being achieved within a short timeframe. This exponential growth has triggered global competition for artificial intelligence dominance, risking further polarization and deepening inequalities. The weaponization of artificial intelligence technologies

and their uneven diffusion may exacerbate geopolitical tensions, and without coordination, many countries, especially in the developing world, risk being left behind.

22. Concerns were raised about the concentration of artificial intelligence development in a few countries and companies, leading to unequal access, limited oversight and growing governance gaps. This centralization risks undermining intellectual property rights, exacerbating inequalities, and reducing global legitimacy in artificial intelligence governance. Ensuring broader participation and transparency in artificial intelligence innovation was seen as critical to promoting equitable benefits and aligning technological advances with the Sustainable Development Goals.

23. The environmental footprint of artificial intelligence – including energy consumption, water and materials usage, and data centre emissions – is growing unsustainably, requiring alignment with climate goals. Concerns were also raised over extractive data practices, the erosion of rights, and embedded social biases in algorithmic systems. The digital divide remains a critical barrier: many communities still lack basic electricity, Internet access and digital literacy, limiting their ability to benefit from artificial intelligence.

24. At the same time, artificial intelligence holds great potential for addressing sustainable development challenges. If ethically governed and inclusively deployed, artificial intelligence can enhance public services, support marginalized populations and create new job opportunities. There is a need for global rules and standards that promote transparency, non-discrimination, explainability and data protection while preserving space for innovation. Human rights, sustainability and the principle of "doing no harm" should anchor artificial intelligence development and deployment, especially in low- and middle-income contexts.

25. Large-scale investments in digital infrastructure, artificial intelligence literacy and local innovation ecosystems are important, particularly in developing countries. International cooperation should include open-source models, data-sharing frameworks and South-South partnerships. Inclusive governance must involve young people, women, Indigenous peoples, persons with disabilities, and small and medium-sized enterprises in co-designing artificial intelligence systems. Policymakers were encouraged to consult engineers and local stakeholders to ensure that artificial intelligence systems were sustainable, safe and context-appropriate.

26. Specific artificial intelligence solutions that are already delivering impact on the ground were showcased, including artificial intelligence-powered aquaculture tools in Sri Lanka, mental health platforms for refugees in Türkiye and vocational upskilling in South Africa. Additional applications were presented in health diagnostics, risk prevention in workplaces, early disease detection, and climate monitoring through satellite and geospatial artificial intelligence. Participants emphasized that local innovations – supported by human-centred design, multilingual interfaces and context-sensitive data – were critical for ensuring that artificial intelligence served people rather than replaced them.

27. Inclusive artificial intelligence requires ethical standards, coordinated governance, investment in social infrastructure and sustained multi-stakeholder dialogue. The role of artificial intelligence in healthcare, public service delivery and labour market transformation was examined alongside challenges such as surveillance, job intensification and regulatory lag. Reference was made to several national and regional initiatives, including artificial intelligence strategies aligned with Sustainable Development Goal road maps, talent development programmes, and innovation hubs supporting women and youth entrepreneurs.

28. Finally, there was a strong call to shift from technology-driven artificial intelligence to demand-driven, human-centred artificial intelligence aligned with the Pact for the Future. Scaling up equitable and inclusive artificial intelligence will require not only technical excellence but also social innovations, global cooperation, and policy frameworks rooted in ethics, equity and sustainability.

Advancing science, technology and innovation for gender equality

29. The forum explored means and ways of ensuring that women and girls can fully and meaningfully participate in and benefit from science, technology and innovation, in alignment with the Pact for the Future. Advancing gender equality in science, technology and innovation is not a peripheral concern but a structural issue requiring systemic change across education, employment, policy and technology development. Gender equality must be embedded in the design and deployment of technology, particularly artificial intelligence, to prevent the amplification of existing inequalities in order to ensure the creation of opportunities.

30. It is important to collect and publish gender-disaggregated data across science, technology and innovation domains to improve transparency, identify gaps and guide evidence-based policymaking. Structural barriers – such as gender stereotypes, unequal caregiving responsibilities and lack of institutional support – continue to limit women's participation and leadership in science, technology, engineering and mathematics fields. These barriers are especially acute during mid- and late-career stages, when career progression often overlaps with child-rearing years.

31. Successful strategies to advance gender equality in science, technology and innovation were shared, including mentorship programmes, community-based learning platforms, digital skills training and national visibility campaigns for women in science, technology, engineering and mathematics. Local, context-sensitive approaches are important, such as culturally tailored technologies to address gender-based violence and educational tools to teach coding and life skills to marginalized girls and young women.

32. There is a need for diverse and inclusive teams in technology development, particularly in artificial intelligence, to mitigate embedded biases in algorithms and data. Independent audits of artificial intelligence systems and responsible innovation practices are recommended to prevent algorithmic discrimination. Robust legal and policy frameworks to support a gender-inclusive digital transformation are key, including setting national targets for women's leadership in science, technology and innovation.

33. Key opportunities include promoting early science, technology, engineering and mathematics education for girls, reshaping social norms around caregiving, and engaging men and boys as allies. Institutional reforms, public-private partnerships and sustained investments are essential for building inclusive digital economies and ensuring that the benefits of technological transformation are equitably shared.

Leveraging science to conserve, restore and sustainably use the ocean and coastal ecosystems

34. The forum explored the role of science, technology and innovation in advancing the conservation, restoration and sustainable use of oceans and coastal ecosystems. It emphasized the ocean's foundational role in supporting all life on Earth and its relevance across the entire Sustainable Development Goal framework, not just Goal 14.

35. Ocean science contributes to climate action, sustainable livelihoods, biodiversity preservation and community resilience, especially in small island developing States and developing coastal regions most affected by marine degradation and climate change.

36. A range of technological and scientific advancements were presented. For example, the microbial carbon pump plays a significant role in long-term carbon sequestration. Innovative local solutions include community-based wave energy modelling, artificial intelligence-assisted maritime safety alerts and biodegradable products made from invasive seaweed. Earth observation tools are increasingly being used for real-time ocean monitoring. Complex satellite and ocean data need to be translated into accessible, context-relevant information for fishers, policymakers and local populations. Similarly, integrating traditional knowledge, gender-inclusive participation and youth training into marine geosciences is vital for building local capacity and promoting equity in science, technology and innovation.

37. Major efforts need to be made to address systemic barriers to data access, financing and governance. In particular, there is a need for interoperable science, technology and innovation systems, investment in digital infrastructure, and science-policy mechanisms that can support ecosystem-based ocean governance. It is important to note that nature-based solutions and locally restored ecosystems are both ecological and economic assets. Financial innovations such as debt-for-nature swaps and blue bonds can be effective tools for funding marine conservation and restoration initiatives.

38. Global scientific collaboration has an essential role in supporting the unique needs and contributions of small island developing States. Despite representing less than 1 per cent of the global population, those States collectively possess 16.1 per cent of the world's exclusive economic zones and are home to over 20 per cent of global marine biodiversity and 40 per cent of the world's coral reefs. This ecological significance underscores the urgent need to enhance science, technology and innovation partnerships with small island developing States to safeguard ocean health and community livelihoods. The States face distinct structural challenges, including limited research and development investment, underdeveloped science, technology and innovation infrastructure, and data gaps, which inhibit their full participation in global science systems. Addressing these constraints requires international support for institutional capacity-building, science, technology and innovation policy development, and digital innovation tailored to local contexts.

39. The forum concluded with calls for much greater multilateral cooperation, South-South collaboration and the establishment of platforms to align space-based technologies with ocean science. Participants also urged the democratization of ocean knowledge, including through artificial intelligence-assisted translation of scientific materials, to make ocean education globally accessible and impactful.

Scaling up science, technology and innovation financing and capacity-building and strengthening research infrastructures for sustainable development

40. The forum explored strategic approaches to scaling up financing and capacity-building for science, technology and innovation in support of the Sustainable Development Goals, with an emphasis on closing persistent funding gaps, enhancing research infrastructures and ensuring alignment with national and global development priorities. The discussion was framed in the context of the Pact for the Future and as a contribution to the Fourth International Conference on Financing for Development.

41. Underinvestment in science, technology and innovation – especially in Africa, where average research and development spending is only 0.5 per cent of gross

domestic product – continues to hinder progress on the Sustainable Development Goals. National commitments to raising science, technology and innovation investment to at least 1 per cent of gross domestic product are needed, and science, technology and innovation financing should also be made more accessible and equitable through international support and co-investment, particularly for developing countries.

42. Public-private-philanthropic partnerships have become increasingly essential for mobilizing resources, de-risking investments and funding mission-driven science, technology and innovation projects. Concrete examples included capacity-building programmes in engineering and digital skills, such as artificial intelligence training for engineers in Kenya funded through a blended model involving trainees, industry and international partners. Initiatives such as research chairs and academic networks can also be effective tools for expanding science, technology and innovation capabilities across Africa and beyond.

43. There is a need to align digital infrastructure investments with physical research facilities to build integrated science, technology and innovation ecosystems. The forum advocated inclusive policy frameworks that support innovation road maps and open knowledge platforms. Investment strategies should prioritize sustainable, modular technologies, circular economy approaches and digital inclusion to reduce inequalities and promote long-term resilience.

44. To ensure participation and benefit-sharing by developing countries, expanded support is needed for national science, technology and innovation for the Sustainable Development Goals road maps, the development of virtual research hubs and the establishment of global standards for access to digital public goods. Collaborative, demand-driven and locally anchored science, technology and innovation solutions – backed by strategic financing – are critical for achieving sustainable development.

D. Special events, side events, young innovators and written contributions to the forum

Special events

Special event of the 10-Member Group on water and a sustainable built environment

45. This special event convened by the 10-Member Group on 7 May highlighted the transformative potential of science, technology and innovation for addressing systemic challenges across water governance, infrastructure and equity. A key focus was on water as a critical and often overlooked cross-cutting enabler of sustainable development. Speakers underscored failures in current governance to account for green and atmospheric water cycles, calling for equitable water resource sharing arrangements and policies to counter the overuse, pollution and commodification of water resources. The built environment was also examined as a major contributor to global emissions, with cement alone responsible for 8 per cent of carbon output. Presenters shared evidence that current technologies – such as limestone calcined clay cement – could significantly cut embodied carbon emissions if coupled with supportive policy and context-sensitive implementation, especially in low-resource settings. Case studies from Brazil and sub-Saharan Africa demonstrated how digital mapping, local material optimization and community-led planning could mitigate the environmental impact of informal construction.

46. Speakers also addressed gender disparities in science, technology and innovation, pointing to structural barriers, biased data systems and lack of inclusive research governance. Recommendations included boosting women's leadership, improving gender-disaggregated data and embedding equity in innovation systems.

47. The discussion concluded with calls for more robust data governance frameworks, open science practices, and equitable data access to support inclusive infrastructure transitions. The 10-Member Group emphasized the urgency of scaling up these innovations and institutional reforms through collaborative platforms and invited participation in its upcoming initiatives.

Special event of the inter-agency task team to celebrate a decade of science, technology and innovation for the Sustainable Development Goals

48. Participants in this special event on 8 May marked the tenth anniversary of the science, technology and innovation forum by reflecting on a decade of progress and charting future directions for science, technology and innovation in sustainable development. Panellists from the inter-agency task team emphasized the forum's achievements while acknowledging persistent gaps in science, technology and innovation access, inclusivity and impact. A major concern raised was the digital divide, with over one third of the global population still offline and $1.6 trillion needed for universal connectivity. Participants stressed that digital access alone was insufficient without corresponding investments in skills, education and inclusive policies. They called for frugal innovation and for engagement with traditional knowledge systems, highlighting their value in addressing localized challenges, particularly in agriculture and rural development. However, many innovations still failed to reach smallholder farmers or reflect the lived realities of marginalized populations.

49. Participants critiqued the traditional science-policy contract, noting the shift of science, technology and innovation funding from governments to the private sector, especially in artificial intelligence and quantum technologies. Panellists called for renewed trust in evidence-based decision-making and stronger integration of social sciences, Indigenous knowledge and engineering into science, technology and innovation strategies. Policy gaps, especially in artificial intelligence governance and enabling environments for science, technology and innovation investment, were identified as critical barriers.

50. Recommendations included re-energizing the science, technology and innovation forum through broader stakeholder engagement, including the private sector, creating dedicated platforms for evidence-sharing and fostering peer learning. The importance of engaging women and girls in science, technology and innovation was underscored, along with a call to explicitly include "engineering" in the science, technology and innovation agenda. Looking ahead, participants urged stronger global-local linkages, systemic and inclusive innovation approaches, and the use of the science, technology and innovation forum as a platform to build trust and prepare for post-2030 development pathways.

Science, technology and innovation forum action day

51. An action day, held on 6 May 2025, preceded the forum, with a high-level focus on implementing the Global Digital Compact through science, technology and innovation. The event brought together policymakers, innovators and civil society leaders to explore inclusive digital cooperation, ethical artificial intelligence governance and equitable access to digital infrastructure. Participants emphasized co-designing digital solutions with communities, protecting youth rights and fostering global partnerships to ensure that digital transformation advances the Sustainable Development Goals and leaves no one behind.

Special meeting of the Economic and Social Council on artificial intelligence

52. At the special meeting on artificial intelligence, held on 6 May 2025, participants examined the potential of artificial intelligence to drive sustainable

development while addressing its risks. They emphasized closing the digital divide through investments in infrastructure, affordable access and digital literacy, particularly in the global South. Equitable access to computing power and locally relevant artificial intelligence solutions were seen as critical. Inclusive artificial intelligence governance frameworks at the national level were viewed as key enablers of responsible innovation aligned with human rights and the Sustainable Development Goals.

53. Participants stressed the importance of co-developing artificial intelligence with marginalized communities to ensure transparency, fairness and cultural relevance. Ethical deployment and international standards were highlighted, along with the need for capacity-building in low- and middle-income countries.

54. Speakers called for increased public-private partnerships and blended finance to scale innovation. The role of the United Nations in enabling inclusive global governance was reaffirmed, with support for operationalizing the Global Digital Compact and establishing an independent international scientific panel on artificial intelligence. There were strong calls for global cooperation and investment in youth-led and inclusive innovation to ensure that artificial intelligence benefits all.

Side events

55. Side events provided an additional significant opportunity for governments and other stakeholders to participate in the forum. Some 54 side events were organized by Technology Facilitation Mechanism partners, including 21 in-person events at United Nations Headquarters, 5 off-site in-person events and 28 virtual events.

56. The side events covered a wide array of interdisciplinary innovations and collaborative strategies aimed at accelerating progress towards the Sustainable Development Goals. Central themes included leveraging artificial intelligence, digital governance and open science to foster inclusive, ethical and sustainable development. Many events were focused on artificial intelligence applications for social good, including in health, education, climate action, agriculture, air quality monitoring, disaster readiness and workplace safety. At some events, the importance of responsible and ethical artificial intelligence, particularly for gender equality and inclusion, was highlighted, and locally grounded innovation ecosystems were emphasized. Digital transformation featured prominently, with events exploring digital empowerment, behavioural insights, virtual worlds and the future of work. Other sessions delved into strengthening bioeconomy systems, green entrepreneurship and open-access science to foster equitable global knowledge exchange. A number of events served to prioritize capacity-building, resource mobilization, and cross-sector partnerships, especially between the public sector, academia, start-ups and international organizations, to scale innovations globally. Several events were youth-led or focused on young people, spotlighting grass-roots innovation, inclusive entrepreneurship and educational reform, particularly for underrepresented groups. In addition, the events highlighted the integration of foresight, spatial finance and digital platforms such as 2030 Connect and STIP Compass to enhance strategic science, technology and innovation planning and cooperation.

57. Organizers included Member States, United Nations system entities, intergovernmental organizations, academia, organized science and engineering communities and a range of civil society and private sector stakeholders, including:

(a) Permanent missions and delegation to the United Nations: Bahamas, Belgium, Brazil, China, Denmark, El Salvador, Finland, Germany, Republic of Korea,

Namibia, Norway, Portugal, Rwanda, Switzerland, United Republic of Tanzania, Zambia and the European Union;

(b) United Nations entities and international organizations: United Nations Development Programme, Department of Economic and Social Affairs (with the Internet Governance Forum), United Nations Conference on Trade and Development, United Nations Educational, Scientific and Cultural Organization, Office for Digital and Emerging Technologies, United Nations Office for Disaster Risk Reduction, United Nations Children's Fund, United Nations Innovation Network, Executive Office of the Secretary-General, Office of the United Nations High Commissioner for Human Rights, World Meteorological Organization, United Nations Futures Lab Network, United Nations University Centre for Policy Research, Global Pulse, United Nations Geospatial Network, Food and Agriculture Organization of the United Nations, International Labour Organization, International Telecommunication Union, Technology Bank for the Least Developed Countries, Department of Global Communications/Dag Hammarskjöld Library, Digital Cooperation Organization, International Fund for Agricultural Development, United Nations International Computing Centre and Organisation for Economic Co-operation and Development;

(c) Science and engineering organizations and universities: World Federation of Engineering Organizations, International Science Council, International Institute for Applied Systems Analysis, Global Science, Technology and Innovation Conference, Institute of Electrical and Electronic Engineers, New York Institute of Technology, Penn State University, Macquarie University, Sri Ramachandra Institute of Higher Education and Research, De Montfort University, Berlin School of Business and Innovation, University of Glasgow, ETH Zurich, Tohoku University, University of São Paulo, Global Centre for Risk and Innovation, Royal Academy of Science International Trust, Council of Global Change, International Association for the Advancement of Innovative Approaches to Global Challenges, International Research Centre on Artificial Intelligence, China Association for Science and Technology, Chinese Preventive Medicine Association, Urban Planning Society of China, Center for AI and Digital Policy, Sydney Institute of Marine Science, Carnegie Mellon University, National Technical University of Athens;

(d) Other non-governmental organizations: Global Partnership Forum, children and youth major group, SERAC-Bangladesh, Young Women for Planetary Health, Hecho por Nosotros, Animaná, Women's Health and Education Center, Apolitical, Hellon, IamtheCODE, Chengdu Zero Carbon Collaborative Innovation Advancement Association, Science for Africa Foundation, Engineering for Change;

(e) Private sector: cBrain, Microsoft AI for Good Lab, XAG, Pairwise, Extreme Tech Challenge, Seeding the Future Foundation, Elsevier, World Digital Technology Academy, IFortis Worldwide, Ricdanic, GZERO Media, Siemens Energy AG, ECCO International, Inc.

Young innovators featured at the forum

58. A total of 10 outstanding innovators from around the globe were selected by the 10-Member Group to showcase their solutions at the forum, following a highly competitive call for innovations organized in collaboration with Engineering for Change. The call elicited over 100 applications spanning every continent.

59. From mental health platforms for refugees in Türkiye to biodegradable sanitary products tackling period poverty in Kenya, the innovations span sectors and Sustainable Development Goals, including health, gender equality, decent work, climate and ocean conservation, and demonstrate how science, technology and innovation are driving impact on the ground.

60. Below is a brief account of the presentations of specific solutions by young innovators featured at the forum.

61. Peace Therapist from Türkiye is a culturally sensitive, artificial intelligence-powered mental health platform supporting over 30,000 refugees and disaster survivors, offering therapy in Arabic, Kurdish, Turkish and English.

62. The training initiative for informal refrigeration and air-conditioning technicians from South Africa is a United Nations Industrial Development Organization-supported programme that formalizes and empowers 400 informal refrigeration and air-conditioning workers (many of them women) while promoting environmental sustainability.

63. Elzian from Sri Lanka is a precision aquaponics and Internet of things solution reaching 60,000 smallholder farmers, enabling smart, sustainable agriculture and aquaculture in coastal communities.

64. Laboratoria from Latin America is a social enterprise closing the gender gap in technology by training women in coding and user experience design, connecting them with jobs in the digital economy.

65. EcoBana from Kenya is an initiative producing biodegradable menstrual pads from banana fibres, reaching 2 million girls and significantly reducing school absenteeism due to period poverty.

66. The Sentinel Forensics sexual assault evidence collection kit from Nigeria is a cost-effective forensic kit improving sexual assault case handling and survivor support, with a 95 per cent evidence preservation success rate across 40 Nigerian centres.

67. HyaPak from Kenya is a green technology innovation turning the invasive water hyacinth into eco-friendly packaging alternatives, removing over 20 hectares of aquatic weed and creating sustainable jobs.

68. Global Cerah from Malaysia is a circular economy model turning organic farm waste into alternative protein and fertilizer, benefiting 5,000 farmers and processing 50,000 tons of agricultural waste to date.

69. Enset starter culture from Ethiopia is a local innovation reducing post-harvest losses of the vital enset crop from 45 per cent to 2 per cent, enhancing food security for over 32,000 people.

70. Alkemio from Argentina is a breakthrough refining technology using organic acid leaching to extract rare earth metals efficiently on-site, building a more sustainable supply chain for critical minerals.

Science-policy briefs

71. In 2025, more than 300 authors – scientists and engineers from academia, non-governmental organizations, the private sector and the United Nations system – submitted science-policy briefs in response to a call for inputs in English and French. In all, 95 briefs successfully passed the peer-review process organized by the inter-agency task team and its partners.

72. In terms of backgrounds, the authors represent a wide array of institutional affiliations based in 17 countries (of which 8 are developing countries) spanning academia, government, international organizations, civil society, think tanks and independent researchers. The majority have affiliations with universities and research institutes, including highly eminent institutions. A significant number also come from United Nations entities and other international organizations. In addition, there was

participation from national science advisory bodies, innovation agencies and policy research institutes, as well as private sector foundations and startups. Several independent researchers and consultants also contributed.

73. In the briefs submitted to the forum, the authors addressed a diverse and pressing range of topics aligned with the 2030 Agenda. A large number of briefs were focused on the opportunities and challenges associated with artificial intelligence, including its role in peacebuilding, urban development, education, health systems and ethical governance. Several authors explored the intersection of artificial intelligence with global equity, proposing frameworks for responsible use, regulation and inclusion, especially in low-resource settings. In other briefs, authors tackled the political and regulatory implications of generative artificial intelligence, small language models and self-adaptive artificial intelligence systems, highlighting emerging risks such as misinformation, intellectual property violations and electoral interference.

74. In the area of health, authors emphasized the potential of artificial intelligence in diagnostics, telemedicine and mental health, while others examined three-dimensional bioprinting, ultrafine particle exposure from aviation, and sustainable health infrastructure. In further submissions, authors reviewed design-based interventions for regenerative environments, resilience-building among health professionals, and bioethics in the metaverse.

75. Contributors also explored climate and environmental issues, including climate justice, ocean and fisheries conservation, sustainable aviation fuels, circular economy solutions such as direct lithium-ion battery recycling, and tidal stream energy. Other energy-related innovations included smart artificial intelligence-driven grids, perovskite solar cells, hybrid solar-biogas systems and policy tools for decarbonization.

76. Several briefs tackled science, technology and innovation capacity-building, with proposals for regional research road maps, biotechnology talent retention in the Philippines, science education reforms, and gender-inclusive science, technology, engineering and mathematics policies. Others addressed social inclusion through microloans, open-access digital textbooks or technologies that enhance rural connectivity, particularly for women and girls.

77. Science-policy interface strengthening, open science governance and the reimagining of science diplomacy in the context of global disruption were also recurring themes. A group of briefs from Brazil was focused on environmental health, urbanization, disease surveillance and educational innovation. Across all topics, the authors emphasized cross-sectoral collaboration, inclusive governance, data-informed decision-making and the critical importance of adapting science, technology and innovation policies to local contexts while maintaining global solidarity and cooperation.

III. Recommendations for consideration

78. Many practical examples were highlighted at the forum, and recommendations for action were proposed by Governments, the United Nations system, scientists, academia, civil society and the private sector. In addition to the wider range of issues outlined in section II, the recommendations set out below may be considered.

A. General and thematic recommendations

79. At the 2025 science, technology and innovation forum, the critical importance of science, technology and innovation in achieving the 2030 Agenda was reaffirmed

and the urgency of aligning science, technology and innovation efforts with the goals of the Pact for the Future and the Global Digital Compact was emphasized. There was consensus that science, technology and innovation must be harnessed in a way that is inclusive, equitable, sustainable and firmly anchored in human rights, ethics and planetary boundaries.

80. Fundamental science was highlighted as the foundation for all technological advancement. It plays a vital role in the training of future generations and in advancing knowledge and enabling innovation, including artificial intelligence. However, science must be explicitly aligned with sustainable development objectives. It provides essential warnings regarding transgressions of planetary boundaries, such as the overuse of the Earth's water, soil and air systems, which could result in irreversible environmental damage. Thus, science, technology and innovation must serve both societal and ecological resilience.

81. While technological innovation is indispensable for human progress, participants warned against the unchecked development of technologies such as artificial intelligence. Concerns were raised about the concentration of artificial intelligence development in a few countries and companies, potentially leading to environmental degradation, violations of intellectual property rights, the displacement of workers, increased inequalities and a lack of governance legitimacy. Artificial intelligence must be governed through multilateral frameworks that ensure environmental sustainability, respect for human rights, social protection, and alignment with the Sustainable Development Goals. Stronger regulatory frameworks, public investment in artificial intelligence for public goods, and capacity-building in developing countries were recommended to balance innovation with societal need.

82. Forum participants emphasized the importance of science, technology and innovation for inclusive economic development, job creation, and equitable access to services such as healthcare and education. They highlighted promising innovations that addressed local challenges, especially in low-resource settings, including artificial intelligence tools for maternal health, clean energy, climate-smart agriculture, and biodegradable materials. The innovations must be scaled up through public-private partnerships, inclusive innovation ecosystems, digital upskilling, and funding models such as blended finance and catalytic capital.

83. Gender inequality in science, technology and innovation remains a critical issue. Participants underscored that, if science, technology and innovation systems remain dominated by men, they will continue to produce male-biased outcomes and technological designs that do not account for women's needs. It was emphasized that gender equality must be the default point of departure for technological solutions, not an add-on to a finished product. Dismantling gender biases must begin from early education and continue through careers, including in leadership positions. Institutions must undergo structural reform to support girls and women in science across all stages of life.

84. Open science, open data and open-source tools were identified as crucial enablers of inclusive knowledge-sharing. Participants called for enhanced global and regional collaboration to improve access to research infrastructure, strengthen foresight and scenario planning capacities and connect local innovation with global knowledge systems. Local and community-based knowledge must be integrated into science, technology and innovation approaches, and grass-roots and citizen science initiatives should be supported alongside high-technology solutions.

85. Encouragingly, the growing authorship of scientific publications by researchers from low- and middle-income countries – now over 50 per cent, up from 10 per cent 25 years ago – reflects increasing inclusivity in global research.

86. Young people, women and those in vulnerable situations must be involved in all aspects of science, technology and innovation development, governance and deployment. Participants recommended more inclusive funding mechanisms, greater transparency and accountability in technology governance and the fostering of demand-driven, human-centred innovation ecosystems.

B. Recommendations for the Technology Facilitation Mechanism

87. The forum strongly reaffirmed the centrality of the Technology Facilitation Mechanism in advancing science, technology and innovation for the Sustainable Development Goals and emphasized that it must be further strengthened in response to the Pact for the Future.

88. Participants emphasized the need to enhance the scientific independence and advisory capacity of the Mechanism. The 10-Member Group was commended for its independent, cross-disciplinary and global expertise and for operating in a highly cost-effective and efficient manner. The Group reaffirmed its commitment to acting as a bridge between scientists, policymakers and stakeholders and to supporting multilateral governance of science, technology and innovation aligned with the Sustainable Development Goals.

89. There was strong support for making the Mechanism more action-oriented, impactful and inclusive. Participants recommended expanding the reach and implementation of science, technology and innovation for Sustainable Development Goal road maps and promoting inclusive digital and physical infrastructure for knowledge-sharing. Capacity-building must be central to the Mechanism's future work, particularly in enabling low- and middle-income countries to contribute to and benefit from global science, technology and innovation ecosystems. This includes strengthening the digital commons, supporting science, technology and innovation networks in the global South and investing in context-specific applications of frontier technologies.

90. The Mechanism should help to ensure responsible technology governance, including for artificial intelligence and emerging technologies, and to promote the development of global public goods. It should support evidence-informed policy, uphold scientific integrity and strengthen institutions. Participants emphasized the need for the Mechanism to promote inter-agency coordination and foster partnerships across sectors to ensure alignment with national development goals.

91. There was a call to embed gender equality in the Mechanism's work and ensure that all Mechanism initiatives are inclusive and intersectional. This includes using disaggregated data, gender-responsive foresight and dedicated support for women in science, technology and innovation.

92. The Mechanism and its components are well placed to lead in following up on the implementation of all science, technology and innovation elements of the Pact for the Future and embed the Global Digital Compact in a wider context. Special efforts and support for its secretariat will be needed over the next five years to 2030.

93. Intergovernmental processes need to be leveraged to mobilize much greater investment in the Mechanism, to scale successful models and to secure political commitment for science, technology and innovation as a key enabler of sustainable development.