

Inputs on STI to Preparatory Process for the 4th UN Conference on Financing for Development (FFD4)

***Submitted by the UN 10-Member-Group of High-level Representatives¹,
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Part 1: Summary of findings and recommendations contained in the co-chairs' summaries of the UN Multi-stakeholder Forums on Science, Technology and Innovation for the SDGs (STI Forums) 2016-2024

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¹ The UN Group of Ten High-level Representatives of Civil Society, Private Sector and Scientific Community to Promote Science, Technology and Innovation for the SDGs (10-Member-Group) is a General Assembly-mandated Group (Addis Ababa Action Agenda and the 2030 Agenda on Sustainable Development). It is a component of the UN Technology Facilitation Mechanism.

1. The STI Forum highlighted many practical examples and proposed recommendations for action by the UN system, Governments, businesses, scientists, academia, civil society and others. The necessity of a multi-stakeholder approach was repeatedly underscored. The UN technology Facilitation Mechanism (TFM) constitutes a new one-UN way of working for the UN system which is entirely new, especially in terms of engaging many STI communities and individual experts that are not typically engaged with the UN.

I. STI for the SDGs

A. Overall considerations

2. Significant progress has been made toward technology solutions that address specific Sustainable Development Goals (SDGs), focusing on managing trade-offs and synergies. However, the next step is to assess high-impact, integrated solutions across SDGs in terms of feasibility and potential. Hundreds of innovators have responded to SDG-related technology innovation calls since 2016, and it is time to scale up these efforts through partnerships. Science shows that meeting minimum needs within safe and just earth system thresholds for water, climate, biosphere requires radical change in societies. The Technology Facilitation Mechanism (TFM) has become a key multi-stakeholder platform within the UN for advancing science, technology, and innovation (STI) for the SDGs. While the online platform is operational at least in a limited form (to share information on science and technology solutions), further support is needed from donors and partners to maximize its potential. Additionally, STI cooperation on climate change requires breaking down disciplinary silos and promoting international partnerships for knowledge-sharing and technology transfer, and dealing with stranded assets and resources. It also requires employing STI to manage synergies and trade-offs across SDGs. The digital divide could hinder these efforts, particularly in addressing climate change and reducing poverty.

3. General Recommendations:

- a) Assess and prioritize high-impact, integrated technology solutions across SDGs.
- b) Scale up environmentally and socially friendly innovations by fostering partnerships and supporting innovators.
- c) Mobilize donor, private sector, and international organization support for the operationalization of the online platform.
- d) Promote STI cooperation on climate change and to realize SDG synergies and manage trade-offs through cross-sector collaboration and knowledge-sharing.
- e) Expand empowerment programs for youth, including women & girls, especially in rural areas, with a focus on entrepreneurship and digital skills training.

B. STI Inclusion and closing the gaps across population groups and countries

4. While progress has been made in science, technology, and innovation (STI) for achieving Sustainable Development Goals (SDGs), barriers such as political will, funding, and conflicts of interest remain. Technology divides have closed for some but also widened for many population groups and country groupings. In particular, as divides in basic access to digital and other technologies have slowly been reduced, access to divides to a multitude of new infrastructures, including those related to AI, have rapidly opened up and widened in most cases.

5. Current STI investments often favor "winner-takes-all" scenarios, leading to unequal distribution of benefits. Equitable access to technologies and knowledge is crucial, and there is a need for decentralized solutions, especially in diagnostics, vaccines, and food security. Young innovators, women and girls, and local, indigenous knowledge play a critical role in sustainable scientific solutions. Women and girls face gender gaps in STEM fields and need gender-responsive education and support. Multi-stakeholder partnerships and public engagement are essential for STI success.

6. Small Island Developing States (SIDS) face significant challenges in developing their science, technology, and innovation (STI) ecosystems, such as low R&D investment, limited financing, and inadequate data. These

nations emphasize demand-driven STI solutions rooted in local experiences and priorities, aiming for a whole-of-society approach to transformation. Additionally, African countries, Least Developed Countries (LDCs), and Landlocked Developing Countries (LLDCs) require urgent support to keep pace with rapid technological advancements and avoid widening gaps in STI benefits.

7. Recommendations to bridge the STI divides across population groups:

- a) Promote Equitable STI Access: Implement policies and regulations that encourage open access to technology, knowledge, and collaboration platforms to ensure broader distribution of STI benefits.
- b) Empower Women in STEM: Close gender gaps in STEM through gender-responsive education and support women's participation in science and innovation.
- c) Foster Inclusiveness: Engage all stakeholders, including local communities, in STI policy and innovation, especially for poverty eradication and food security.
- d) Leverage Low-Cost Technologies: Focus on deploying low-cost technologies to meet local community needs, particularly in agriculture and basic services.
- e) Support Youth and Local Knowledge: Encourage young innovators and integrate indigenous knowledge into sustainable solutions for SDGs.

8. Recommendations to bridge the STI divides across particular country groups:

- a) Enhance International Cooperation: Strengthen support and partnerships for SIDS, African countries, LDCs, and LLDCs to address STI challenges.
- b) Promote Localized Solutions: Focus on demand-driven STI solutions that leverage local expertise and foster community, national, and regional capacities.
- c) Transform SIDS into Digital States: Implement systematic efforts to turn SIDS into "Small Island Digital States."
- d) Bridge the STI Gap: Ensure investments in human and physical capital to narrow the gap between technologically advanced nations and those lagging behind.

9. Specific recommendations by the 10-Member-Group

- a) Science-policy advice on safe and just targets, boundaries and transformations (in follow-up to the Earth Commission's findings), including on minimum access indicators, climate commitments, and just and inclusive energy transitions.
- b) Documenting best practices and develop reliable and fine-grained data on advancing gender equality in STI.

C. STI capacity building and planning

10. International cooperation in science, technology, and innovation (STI) is critical to bridging technology gaps between and within countries and social groups. Governments can facilitate technology transfers by fostering cross-border collaboration, including South-South cooperation. Inclusive planning and partnerships between science communities, academia, private sector, and funders are essential for building strong innovation systems. Multidisciplinary approaches that integrate local and indigenous knowledge are needed to address the cross-cutting nature of STI and the Sustainable Development Goals (SDGs). Collaborations must be built collaboratively and in a balanced way and avoid "helicopter research" which might leave researchers from some regions with little agency. STI roadmaps, which link public and private actions, are strategic tools for policy coherence and optimizing investments. They must be developed at national and subnational levels, incorporating feedback loops for continuous learning, in order to address complex policy challenges (One challenging example is the phasing down of fossil fuel production in line with contextual challenges in different countries). Public-private partnerships play a key role in fostering innovation, and Member States are encouraged to support the Technology Facilitation Mechanism (TFM).

11. General recommendations:

- a) Promote International STI Cooperation: Encourage cross-border collaboration and technology transfer, including South-South cooperation, to close technology gaps. Encourage collaboration among national funders on joint calls for proposals on specific SDGs.
- b) Develop STI Roadmaps: Formulate inclusive, national, and subnational STI roadmaps for SDGs, integrating local knowledge and feedback mechanisms.
- c) Expand Partnerships: Deepen partnerships between science communities, academia, funders, and the private sector to foster innovation.
- d) Align STI with National Planning: Include STI in national SDG planning and monitoring efforts, using Voluntary National Reviews (VNRs) to assess progress and identify opportunities for improvement.
- e) Support TFM: Increase political and financial support for the TFM to strengthen STI systems globally.

12. Specific recommendations by the 10-Member-Group

- a) Building a UN collaborating hub/network for a sustainable and safe Built Environment to support decent living standards. The hub could focus on decarbonizing building materials, provide strategic foresight/roadmaps on infrastructure transformations and materials, provide information on tech options, social and institutional innovations, and help understand synergies and trade-offs, and monitor progress.
- b) Collaborative, global sustainability science centre and training network across geopolitical divides (with demonstration projects at scale in energy, food, climate, biodiversity, health, and sanitation)
- c) Share technologies and skills to solve the basic health issues of water, sanitation, and food security. Prioritize investing in the first 1,000 days of a child's life particularly in the poorest settings within and between countries (providing modern medical and nutritional support for all children before 2030).
- d) Create a One-UN programme on digitalisation and sustainability in support of developing countries.
- e) Develop and implement national STI4SDG roadmaps, as strategic guideposts for all stakeholders. Providing expert support and training on strategic STI governance, regulation, and institutions for STI policy, especially in SIDS, LDCs, and Africa.
- f) Build capacity on national strategic plans for the equitable and affordable phase down of fossil fuels.

D. STI financing, funding and investment

13. Enhanced funding and investment in science, technology, and innovation (STI) are crucial to achieving the Sustainable Development Goals (SDGs). Public research funders need to coordinate globally and collaborate closely with the UN system to amplify their impact beyond 2030. Funding for SDG-focused research should be increased, with governments encouraged to boost spending by 3.7% annually from 2025 to 2029. International cooperation, multi-stakeholder partnerships, and early involvement of national practitioners can improve technology adoption, particularly in developing countries. Investments in education, youth, women, and digital infrastructure are essential for building STI-related competencies and unlocking innovative potential. Public-private partnerships are critical for pursuing business opportunities in STI solutions for the SDGs.

14. General recommendations:

- a) Increase STI Funding: Governments should increase funding for SDG-focused research by 3.7% annually from 2025-2029. Funders should prioritize international collaborations and seek matching funds from the private sector.
- b) Promote Public-Private Partnerships: Encourage partnerships between science communities, academia, and the private sector to scale innovation for SDGs.
- c) Invest in Youth and Women: Prioritize investments in education and platforms for open innovation to foster youth and women entrepreneurs in STI.
- d) Strengthen Infrastructure and Connectivity: Invest in digital infrastructure and connectivity, particularly in rural areas, to bridge divides and support STI development.

- e) Leverage Innovative Financial Instruments: Scale STI solutions through new financial channels such as impact investing, crowdfunding, and diaspora funding, to support sustainable progress toward the SDGs.

15. Specific recommendations by the 10-Member-Group:

- a) Developing innovative ideas and practical partnerships for cooperation on funding R&D for the SDGs. Global governmental research funders to boost spending on SDGs by 20% over the next five years
- b) Collaborative, global sustainability science centre and training network across geopolitical divides (with demonstration projects at scale in energy, food, climate, biodiversity, health, and sanitation). Allocate funds that are commensurate with the challenges, and as significant as other major international science initiatives (e.g., CERN).
- c) Global network of banks of ideas, funds for innovation, and ethical councils for innovation
- d) Create a global fossil fuel and carbon dioxide removal (CDR) fund and market to facilitate the sustainable deployment of CDR technology options and address fossil fuel stranded assets.
- e) Boost global public investment in global public goods to reach (0.2% of GNI) and consider implementing the recommendations of the Expert Working Group on Global Public Investment.

II. Impacts of rapid technological change on the SDGs – AI and other frontier technologies, emerging science issues, pandemics and other disruptors

16. The Technology Facilitation Mechanism (TFM) has made progress in analysing the societal impacts of new technologies, yet further insights and data are needed to prepare for long-term effects, particularly in developing countries. Capacity building in these nations is critical, requiring systematic support and knowledge exchange on public policies and best practices. Governments and stakeholders must act proactively, leveraging technology to align with the 2030 Agenda and ensure no one is left behind. A series of General Assembly resolutions on the impacts of rapid technological change on the SDGs have further guided the work of the TFM.

A. Anticipating, managing and governing AI and frontier technological change for all

17. **AI Ethics and Human Rights:** Ethical use of technologies, especially artificial intelligence (AI), must balance innovation with human rights, following international standards like the UN Charter and the Universal Declaration of Human Rights. The multilateral system is key to establishing norms for cybersecurity, AI regulation, and data governance. Capacity building is necessary to ensure that all stakeholders, especially in developing nations, can engage equitably.

18. **Technology Foresight and Scenarios:** As technology continues to advance rapidly, policymakers must engage with emerging issues, such as the adoption of AI, including generative AI, which shows promise in sectors like healthcare. Governance and regulation are essential to monitor disruptive technologies' effects on SDGs, ensuring transparency and incentivizing sustainable actions. Future scenarios must be explored to prepare for both positive and negative societal impacts from technologies like robotics, gene editing, and big data.

19. **Frontier Technologies and Governance:** The pandemic demonstrated the significant contributions of frontier technologies—AI, big data, and biotechnology—yet access and governance gaps remain. Frontier technologies supported vaccine development, simulations of viral spread, and contact tracing. However, the crisis highlighted the need for a just and inclusive transition to a greener economy, providing opportunities for innovation and new jobs. Furthermore, deficiencies in global governance, ethics, and regulatory frameworks around these technologies were exposed. Data governance challenges, particularly with AI and digital currencies, intensified, raising privacy and security concerns.

20. Recommendations on AI ethics:

- a) **Promote Ethical Use of Technology:** Establish ethical frameworks for the responsible use of AI and other technologies, balancing innovation with human rights protections. Global norms for AI, cybersecurity, and data governance should be led by the multilateral system.
- b) **Address Gaps in Data Governance and Ethics:** Data governance, privacy, and human rights issues must be tackled through fair data policies, transparent algorithms, and ethical standards, particularly for AI, digital currencies, and digital labor platforms.
- c) **Develop Regulatory Frameworks for New Technologies:** Rapid technological advancements, such as AI and digital currencies, require new regulatory frameworks to address ethical dilemmas, security, and inclusivity, and to minimize their environmental footprints. Narrow AI applications, in particular, require oversight to ensure equitable benefits.

21. Recommendations on anticipating and managing technological change:

- a) **Anticipate Technological Impacts:** Foster governance and foresight mechanisms to address the rapid adoption of emerging technologies such as AI, robotics, and gene editing. Policymakers should emphasize transparency, regulation, and sustainability.
- b) **Close the Knowledge Gaps in STI Assessments:** Independent, comprehensive assessments of digitalization and frontier technologies are necessary to support informed decision-making. Science-policy assessments should address knowledge gaps and provide actionable insights.
- c) **Create a Just Transition to a Green Economy:** Governments should engage in social dialogue to manage the shift to a green economy. This transition must prioritize social equity, inclusive job creation, and environmental sustainability.

22. Recommendations on governance, funding, and resilience

- a) **Strengthen STI Governance and Funding:** Institutions responsible for STI must receive more funding and support to build resilience. Public investment in basic research, particularly biotechnology, should be significantly increased, building on lessons from COVID-19 vaccine development.
- b) **Promote International Cooperation on Climate and Resilience:** Digital tools, including AI, should be leveraged to improve climate resilience and disaster preparedness. Governments should adopt best practices for digitalization to enhance AI efficiency and sustainability.
- c) **Upgrade Engineering Standards for Climate Change:** Engineering codes and standards must be updated to address climate change challenges. The global engineering profession, in partnership with the UN, should scale up capacity building and recognize engineering's role in achieving SDGs

B. Building capacity, resourcing and partnerships on AI and other frontier technologies for an inclusive and sustainable future for all

23. **AI for SDGs:** AI has vast potential to accelerate Sustainable Development Goals (SDGs) in sectors like agriculture, healthcare, and education. However, its development must be responsible, protecting privacy and human rights, and minimize environmental impacts. Ongoing discussions and oversight are required to widening inequalities. A holistic approach is needed, incorporating diverse knowledge systems, including indigenous and local perspectives. International cooperation is essential to bridge the technology gap and prevent long-term disadvantages for under-resourced countries.

24. **Productive Capacities, Innovation, and Emerging Technologies:** Building capacity in science, technology, and innovation (STI) is vital for all countries' development. Governments play a key role in fostering innovation, as seen in successful examples worldwide. Global sharing of technologies and experiences through partnerships should be encouraged. Foresight into emerging technologies is essential to understanding their potential societal impacts, both positive and negative.

25. **Digital Innovation and Cooperation:** Universal access to reliable, affordable internet and modern digital infrastructure is critical for fostering innovation and digitalization. Efforts must prioritize building infrastructure for AI services, the Internet of Things (IoT), and digital literacy programs. Digital tools play a crucial role in

promoting sustainable peace, resilience, and addressing climate change. AI can enhance climate modelling, improve disaster preparedness, and strengthen societal resilience. Higher efficiency and safety standards for AI systems are necessary to minimize resource consumption and ensure ethical use.

26. **Lessons from COVID-19:** The COVID-19 pandemic underscored the critical role of STI in global well-being but also revealed weaknesses in the interface between science, policy, and society. Underfunded institutions struggled to meet the crisis's demands, and while digitalization accelerated, it also deepened the technology divide, with 3 billion people still unconnected. Rapid innovation was possible during the pandemic, as seen with vaccine development and biotechnology advances, but pre-pandemic innovation systems were underperforming. Public funding and international cooperation were essential in enabling these advancements, but the benefits must be shared widely.

27. **The Path Forward:** Environmental technologies and digital consumer innovations hold untapped potential to address SDGs, yet gaps in global knowledge and assessments remain. Institutional support for modern innovation systems is insufficient, prompting calls for new networks of ideas, funds for innovation, and updated engineering standards to address climate change. Emerging high-tech innovations from research labs require greater public funding, international collaboration, and updated regulatory frameworks to ensure that they benefit society and align with global priorities. To move forward, governments and stakeholders must focus on long-term sustainable research, ensuring that these innovations are widely accessible and effectively governed for the public good.

28. Recommendations on capacity building and inclusivity

- a) **Strengthen Capacity Building:** Develop programs to enhance the ability of developing countries to assess and respond to the impacts of new technologies. Promote knowledge exchange on public policies and support these efforts through the UN system.
- b) **Expand STI Capacity Globally:** Governments should create incentives to build science, technology, and innovation (STI) capacity, especially in developing countries, and promote the dissemination of technologies via international partnerships.
- c) **Enhance Digital Infrastructure and Literacy:** Ensure universal access to high-quality internet and modern digital infrastructure. Governments should prioritize digital literacy and skills development, particularly for marginalized communities to close the digital divide.
- d) **Expand Digital Inclusion:** Close the digital divide by ensuring access to digital technologies for the 3 billion people currently disconnected. Investments in digital infrastructure and affordable access to digital services should be a priority for governments and international organizations.

29. Recommendations on innovation for sustainable development

- a) **Advance AI for SDGs:** Ensure that AI's development and deployment contribute to SDG progress through responsible data use, human rights protection, and transparency. Promote inclusive discussions on AI and digitalization to manage trade-offs and maximize benefits.
- b) **Promote Sustainable, Mission-Oriented Innovation:** The global effort for COVID-19 vaccine development should be replicated to address neglected global challenges, like tropical diseases. Innovations funded by public investments must be widely accessible to benefit society.
- c) **Scale Up Sustainable Technology Solutions:** Deploy environmentally sustainable frontier technologies like distributed recycling, energy-efficient AI, and marine robotics globally. Greater international support and funding are needed to scale these solutions.

30. Recommendations on fostering international cooperation and collaboration

- a) **Enhance Global Collaboration on Frontier Technologies:** The Technology Facilitation Mechanism (TFM) should encourage global dialogue on the ethical use, regulation, and deployment of frontier technologies like AI, synthetic biology, and big data.
- b) **Foster Global Technology Cooperation:** The international community should pursue "innovation cooperation" initiatives that support joint demonstration projects between companies and public

institutions. More funding should be allocated to basic research and collaboration between universities and industries.

- c) **Support Innovation Networks and Entrepreneurship:** New institutional frameworks should be developed to support innovation systems, including creating networks of “banks of ideas,” funds for innovation, and advisory services. Joint public-private research projects and international cooperation should be encouraged.

31. Specific recommendations by the 10-Member-Group:

- a) Governments to commit to put in place policies, regulations, initiatives, and funding to build the next generation Web 3.0 distributed system and make it work for all by 2027.
- b) Build worldwide capacity for using, developing, and understanding the impacts of generative AI.
- c) Create a One-UN programme on digitalisation and sustainability in support of developing countries.
- d) Track and assess emerging applications and their benefits brought about by the convergence of AI and biotech, especially for agriculture and food security.
- e) Synthetic (technology-enabled) data production to monitor SDG progress in agriculture, built environment, oceans, and on poverty and socio-economic development, leveraging AI, satellite and remote sensing data, among others.

C. Pandemics and other disruptors

32. The COVID-19 pandemic demonstrated the power of science, technology, and innovation (STI) in addressing global crises. However, it also underscored the critical need for public trust in science, which can be built through transparency, education, and policy frameworks that ensure privacy and security. The world faces overlapping challenges, including pandemics, wars, climate change, and food insecurity, which threaten development gains. These disruptions provide an opportunity to rethink development strategies. The pandemic revealed rising inequalities and vulnerabilities, especially among marginalized groups, and highlighted the importance of digital access and literacy, gender equality, and international cooperation. The scientific community had long warned about the risk of global pandemics, and active learning is needed to better prepare for future crises.

33. Recommendations:

- a) **Strengthen Public Trust in Science:** Build trust through transparency, open communication, and investments in education, infrastructure, and science advisory bodies.
- b) **Promote Long-term Planning:** Use scientific knowledge and robust data to prioritize sustainable, inclusive solutions for global crises.
- c) **Harness STI for Resilience:** Leverage the momentum of STI innovations from COVID-19 to advance SDG implementation and bridge the digital divide.
- d) **Ensure Inclusive STI Solutions:** Engage marginalized groups in decision-making and co-design of policies, focusing on vulnerable populations.
- e) **Prepare for Future Pandemics:** Invest in STI systems that are fit for future crises and promote international solidarity based on the principle that "no one is safe unless we are all safe."

III. Recommendations for the TFM and STI Forum

A. Overall approach and components of the TFM

34. The Technology Facilitation Mechanism (TFM) has made significant progress in promoting science-based, solution-oriented, multi-stakeholder approaches to support SDG implementation. However, more resources are required to align the TFM with the ambitions of the 2030 Agenda. The TFM facilitates dialogue and partnership development but needs further integration of diverse knowledge sources and stronger governance models, similar to the Internet Governance Forum. The Interagency Task Team (IATT) has fostered collaboration on STI for

SDGs, but it faces funding challenges. The Secretary-General's 10-Member Group provides valuable scientific and technological advice but requires more support. The TFM should become more action-oriented, with a roadmap guiding its work, including regional and global engagements. Synergies between the TFM, the STI Forum, and other key global platforms need to be strengthened to maximize impact.

35. Recommendations:

- a) **Increase Funding:** Secure more resources to enhance TFM's operations and capacity to support SDG implementation. Implement the GA mandate which calls
- b) **Strengthen Governance:** Use models like the Internet Governance Forum to improve TFM's multi-stakeholder engagement and coordination.
- c) **Enhance Collaboration:** Expand partnerships between public, private, and academic sectors through the IATT and 10-Member Group to address STI challenges.
- d) **Develop a Strategic Roadmap:** Create an annual action-oriented roadmap for the TFM to prioritize and track progress toward STI for SDGs, including regional and global events.
- e) **Improve Synergies:** Strengthen collaboration between the TFM, STI Forum, and other international platforms to scale up effective STI solutions for SDGs.

B. Inclusive TFM and partnerships

36. The Technology Facilitation Mechanism (TFM) plays a crucial role in promoting science-policy collaboration and multi-stakeholder engagement to support the Sustainable Development Goals (SDGs). There is a need for stronger political and financial support to enhance TFM's operations, particularly in improving stakeholder inclusion and participation from developing countries. The TFM should expand its online platform to become a partnership hub for SDG-focused science, technology, and innovation (STI). The forum should also serve as a global platform for networking, matchmaking, and fostering multi-stakeholder partnerships that bring together governments, private sector, academia, and innovators. Additionally, the TFM must improve coordination with existing initiatives and support sector-specific deep dives, such as the successful STI in Africa Day Event, to address regional challenges.

37. Recommendations:

- a) **Increase Support for TFM:** Governments and stakeholders should provide greater political and financial backing to strengthen the TFM's operations, including expanding its online platform and fostering broader participation from developing countries.
- b) **Promote Multi-Stakeholder Collaboration:** Encourage collaboration between governments, the private sector, academia, and innovators to drive STI solutions for the SDGs, using the TFM as a catalyst for partnerships.
- c) **Enhance Networking and Matchmaking:** Continue to facilitate networking and matchmaking within the forum, including open calls for innovations and connecting innovators with early-stage financial support.
- d) **Organize Regional Deep-Dive Events:** Replicate successful initiatives like the STI in Africa Day Event in other regions, in collaboration with UN Regional Commissions, to address regional STI needs.
- e) **Strengthen TFM Coordination:** Foster closer institutional links with global STI forums and initiatives to enhance collaboration and mobilize new partnerships.

C. Capacity building by the TFM

38. The Technology Facilitation Mechanism (TFM) has identified gaps in capacity-building efforts within the United Nations system, particularly in resources, strategic focus, data, and reporting. A mapping of UN STI activities highlights these gaps, which need to be systematically addressed. The global pilot program on STI for SDG roadmaps has been successful, and lessons learned should be shared widely. TFM's efforts, particularly through the inter-agency task team (IATT), continue to support multi-stakeholder STI roadmaps for SDGs in

interested countries. There is a demand for further capacity-building work, particularly in gender and STI, and in scaling up initiatives.

39. Recommendations:

- a) **Close Capacity-Building Gaps:** The UN system and TFM partners should work together to address gaps in resources, data, and strategic focus, with an emphasis on matching solutions to local problems.
- b) **Scale Up STI Roadmaps:** Share lessons from the global pilot program widely and expand the work on multi-stakeholder STI roadmaps in partnership with relevant stakeholders.
- c) **Enhance Collaboration:** Strengthen collaboration across UN agencies, civil society, and the private sector to ensure data, financing, and implementation gaps are filled.
- d) **Optimize TFM Structures:** Review the TFM's start-up phase and refine its working structures to enhance impact, learning from previous achievements.

D. TFM work on analysis and research

40. The Technology Facilitation Mechanism (TFM) is tasked with fostering discussions on emerging technologies and their deployment, financing, and governance. It should raise awareness around the need for standards and regulations, ensuring new technologies are promoted sustainably. The TFM also plays a key role in supporting forward-looking research and foresight on emerging science, technology, and innovation (STI), with regular deliberations at the STI Forum. The Interagency Task Team (IATT) subgroup on emerging technologies focuses on disseminating information on STI trends and their impacts, helping stakeholders stay informed and engaged.

41. Recommendations:

- a) **Facilitate Policy Discussions:** The TFM should continue facilitating discussions on frontier technologies, focusing on governance, financing, and sustainable deployment.
- b) **Promote Standards and Regulations:** Raise awareness about the need for standards and regulations to ensure emerging technologies are environmentally, economically, and socially sustainable.
- c) **Enhance Foresight and Research:** Conduct forward-looking exercises on technological developments, making these discussions a regular feature of the STI Forum.
- d) **Build Partnerships:** Collaborate with universities, innovation incubators, and the private sector to create a network of STI centres that facilitate real-time information exchange between policymakers and technology pioneers.