Workshop on Building Capacity and Exploring Resources for Implementing STI4SDGs Roadmaps

Summary by the Secretariat | 8-9 October 2024 | Addis Ababa, Ethiopia

Background: On 8-9 October, UN Department of Economic and Social Affairs (DESA)/ Division for Sustainable Development Goals (DSDG), in collaboration with UN Economic Commission for Africa (ECA), organized a two-day Workshop on Building Capacity and Exploring Resources for implementing STI4SDGs Roadmaps, at UN Conference Center (UNCC), in Addis Ababa, Ethiopia. More than 70 participants from government, the scientific and engineering community, the donor community, private sector, academia, and other international and UN entities including several Resident Coordinators, participated in the workshop. Two representatives from the UN SG's 10 Member Group also attended the Workshop. Substantive and institutional support was provided by UN Educational, Scientific and Cultural Organization (UNESCO), Future Africa, European Commission – Joint Research Center (EC/JRC), International Science Council (ISC), Africa-Europe Science and Innovation Collaboration Platform (AERAP), and the International Research Center of Big Data for Sustainable Development Goals (CBAS). The Government of Ireland hosted a reception dinner for the workshop. The workshop focused on building partnerships and science, technology and innovation (STI) capacity to support Sustainable Development Goal (SDG) implementation in developing countries, took stock of national experiences in the Africa region that can contribute to the development of a global Guidebook for STI4SDGs Roadmaps, and explored the needs for support in the region and existing initiatives that could be leveraged. Issues on STI data, monitoring and evaluation, as well as voluntary funding models were highlighted. This workshop was a timely follow-up to the Pact of the Future, and its main outcomes will inform the preparation of the 10th Multi-stakeholder Forum on STI for the SDGs.

Key Discussions:

1. **Strengthening Innovation Ecosystems:** Participants emphasized the need for multi-stakeholder engagement to map STI potentials and integrate regional and national strategies. Several countries, including Ethiopia, Kenya, and Ghana, shared case studies of successful STI4SDG roadmap implementations.

2. **Funding and Institutional Mechanisms:** Discussions centered on creating mission-driven funding models and institutional frameworks to enhance national STI capacities. The workshop called for increased international partnerships to secure sustainable funding sources, in particular for Small Island Developing States (SIDS) and Low- and Middle-Income Countries (LMIC).

3. **Youth and Gender Inclusion:** Specific sessions addressed the inclusion of youth and women in STI for SDGs, with participants urging more gender-responsive policies and youth-focused capacity-building programs to foster leadership in STI sectors.

4. **Big Data and Digital Transformation:** The role of big earth data and AI in SDG progress was highlighted, with calls for enhancing Africa's capacity to harness cutting-edge digital technologies for monitoring and innovation. Leveraging big data and AI for monitoring SDG progress was highlighted. Participants emphasized capacity-building programs to equip African and SIDS nations with the tools and technologies needed for digital transformation.

5. **STI for Climate Action and Ocean Knowledge:**
The discussions emphasized that SIDS face unique challenges, such as limited technical capacity, data gaps, and financial constraints, which hinder their ability to deploy STI solutions for climate resilience. There was a focus on using STI to strengthen ocean knowledge and coastal resilience through regional cooperation and capacity-building programs as well as enhancing of infrastructure capabilities for data processing and analysis. Capacity-building programs and educational reforms aimed at increasing local expertise in STEM were recommended to develop future innovators within SIDS.

6. **Innovative Solutions and Data-Driven Decision Making:**
Participants called for enhanced data collection using Big Earth Data to monitor land use, coastal erosion, climate risks and hazards, and marine resources. Open-access platforms and interoperable systems were suggested to improve data sharing and foster regional and international cooperation.

7. **Public-Private Partnerships and Institutional Capacity Building:**
The need for stronger public-private partnerships and investments in local research institutions was highlighted to address infrastructure gaps and promote innovation. Governments were encouraged to foster a knowledge-based economy, improve regulatory frameworks, and attract private investments in STI. There were also discussions on the need to incorporate STEM, Innovation, Entrepreneurship and IP education in schools' curricula from early age to university level to foster STI and entrepreneurship culture.

8. **STI Funding Challenges:**
Participants highlighted the funding gaps for STI initiatives, especially in developing nations. Insufficient investments in research and development (R&D), over-reliance on external aid, and limited private sector involvement were noted as significant obstacles. Developing nations, particularly in Africa, invest far below the global average in R&D, further exacerbating these challenges.

9. **Innovative and Inclusive Funding Models:**
The session explored the need for more inclusive and flexible funding models that prioritize marginalized groups such as minorities, women, youth, and rural communities. Panelists emphasized embedding equity and sustainability principles in funding mechanisms to ensure long-term development, as well as the use of fair criteria to access to international funds, such as the multi-dimensional vulnerability index. The Joint SDG Fund, a multi-partner trust fund of the United Nations designed to facilitate collective action across the UN development system through joint programmes, was presented as an example of inclusive and innovative funding models. Its primary mandate is to catalyze

strategic investments and integrated policy solutions, leveraging innovations to accelerate progress across multiple SDGs and as well prioritizing inclusion of marginalized groups, women and youth.

10. **Proposed Global STI Trust Fund or UN Science Fund:**
    One of the most significant recommendations was the establishment of a **global trust fund for STI or UN Science Fund**. The meeting proposed creating a dedicated "STI for SDG Fund" or a multi-partner trust fund. This global trust fund would aim to support global STI initiatives, facilitate access to major funding windows, and distribute key technologies necessary for advancing the six key transitions of the SDGs. This fund could be aligned with the Joint SDG Fund and other Global UN Funds for Sustainable Development. The fund could play a critical role in the following areas at the global level among others:

    • **Global data portal** on STI Situation Room, including databases on STI related data from UN SDG data, UNESCO GOSPIN, WIPO's Global Innovation Index (GII), OECD's STIP Compass, Global Entrepreneurship Monitor (GEM), African Outlook Report, Visual presentations of the data (maps), and gaps reports.
    • **Global Advocacy** (e.g. UN STI Forum)
    • **Capacity building** on STI Policies, roadmaps; facilitating countries to have access to major funding windows for STI; think-tank networks
    • **Financing to distribute** the key technologies for the 6 transitions.

11. **Youth and Social Innovation:**
    Participants emphasized the need to finance youth-led social innovation projects and citizen science initiatives. These areas, often overlooked by traditional funding mechanisms, have the potential to contribute significantly to the SDGs. There was strong emphasis on ensuring SIDS, youth and women's participation in STI4SDGs, with measurable indicators to track their involvement and impact. The need for equitable STI implementation, particularly in under-resourced areas, was discussed.

12. **Collaborative Partnerships**: The workshop called for enhanced South-South, North-South, and Triangular collaboration to share knowledge, build capacity, and support innovation. Participants proposed reducing fragmentation by streamlining existing initiatives and fostering more inclusive research partnerships.

13. **Action-based scientific knowledge and research**: The workshop emphasized several key components within science systems that are essential for advancing contributions toward the SDGs. Universities, as critical institutions, should align both their research and education agendas to foster a blend of scholarship and practical, application-based solutions. Additionally, policy metrics and indicators must be strategically designed and embedded across science systems to maximize impact. Funding mechanisms require redesigning to promote collaborative research, capacity building, and co-production of knowledge. This marks a shift away from research agendas predominantly set by external funders, especially outside of Africa. Artificial intelligence offers significant potential to bridge the global North and South, particularly by facilitating investments in both data and the infrastructure necessary to process and distribute it. This stands in contrast to many data-scarce regions across the African continent. Metrics assessing the quality and efficiency of research must become more diverse and sensitive to the specific contexts in

which they are applied. In many parts of Africa, there is a notable overload of qualified individuals engaged in scientific work. It is also essential to prioritize support for vulnerable and underrepresented groups. While youth and women have been highlighted, scientists working in conflict zones or post-crisis settings must also have access to the support they need.

Key Recommendations:

- **Capacity Building:** Strengthen national and regional capabilities through targeted STI and engineering training and digital infrastructure support, as well as partnerships to foster long-term STI growth, to effectively implement STI policies and roadmaps.

- **Collaboration and Knowledge Sharing:** Encourage regional networks and public-private partnerships to share best practices and technological solutions, particularly in areas such as climate resilience and digital infrastructure.

- **Inclusion:** Ensure STI4SDG roadmaps explicitly incorporate SIDS, gender and youth perspectives, with measurable targets to track their involvement and impact.

- **Scaling Up:** Mobilize resources and partners to scale successful pilot projects across regions and sectors, using evidence-based approaches to inform global STI policies for SDGs.

- **Leverage remote sensed data for high resolution monitoring of environmental impacts, facilitating data-informed policy decisions:** Develop and integrate Big Earth Data systems for high-resolution monitoring of environmental impacts, facilitating data-driven policy decisions.

- **Strengthen Institutional Frameworks and Partnerships:** Build resilient institutions with clear legislative frameworks, supported by STI investments, to enhance coastal and climate resilience. Increase regional and global cooperation to scale successful initiatives across sectors and regions, guided by the UN Agenda 2030, the Antigua and Barbuda Agenda for SIDS (ABAS) and the African Union Agenda 2063.

- **Foster Regional Cooperation:** Promote knowledge sharing through regional and global platforms like the Alliance of Small Island States (AOSIS) and the African Island States Climate Commission (AISCC), the Coalition on STI for Africa's Development, and initiatives such as the Blue Economy and Pacific Islands STI networks, the RES Islands Initiative, the Great Blue Wall Initiative and the Sustainable Debt Coalition; and explore to extend to other regions, such as Asia-Pacific (incl. Pacific SIDS), Latin America and the Caribbean.

- **Develop Public-Private Partnerships:** Create innovation hubs and technology transfer mechanisms to foster collaboration between the private sector, governments, and

academic institutions, strengthening the linkages between academic institutions and industries.

- **Develop Strategic Investment Plans:** Countries should design investment plans that integrate STI into critical sectors such as education, healthcare, agriculture, and energy while prioritizing social inclusion, environmental sustainability, climate resilience and green and blue economies.

- **Strengthen International Collaboration:** Participants called for enhanced cooperation between governments, international donors, and private sector entities to mobilize funding for mission-driven STI initiatives aligned with SDG priorities, through global funding mechanisms, such as Joint SDG Fund; and proposed to set up a Global STI Trust Fund through multistakeholder partnerships including approaches to include private sector and philanthropy collaborations to leverage complementary funding and financing beyond traditional grant funding.

The workshop concluded with renewed dedication to continue building robust STI ecosystems and securing the necessary financial and institutional support for sustainable development.

It underscored the critical role of STI in achieving the SDGs and called for continued efforts to build capacity, secure sustainable funding, and promote inclusive partnerships. Moving forward, participants will focus on enhancing STI ecosystems and ensuring no one is left behind in the global effort toward sustainable development.

The workshop also reaffirmed the critical role of STI in supporting SIDS' climate resilience and SDG progress. Participants committed to continued collaboration, capacity building, and the development of tailored STI roadmaps to address the unique challenges of SIDS.

Finally, the workshop underscored the importance of innovative, inclusive, and sustainable STI financing mechanisms to drive SDG progress. The proposal to establish a global trust fund for STI financing emerged as a key highlight, signaling a potential avenue for closing the existing funding gap and ensuring equitable access to STI resources globally.