



United Nations

Department of
Economic and
Social Affairs



MEETING OUTCOME: BROWN BAG SEMINAR ON MAPPING STI CAPACITY FOR IMPLEMENTING STI ROADMAPS FOR THE SIX TRANSITIONS

Tuesday 27 February 2024, 1.00 pm – 2:30 pm

This document summarizes the key takeaways and action points from the "Brown Bag Seminar on Mapping STI Capacity for Implementing STI Roadmaps for the Six Transitions." This session aimed to inform and contribute, content-wise and on the organizational side, to Chapter 2 of the "Guidebook for the Development and Implementation of Science, Technology and Innovation (STI) for SDGs Roadmap for Six Transitions."

Intervention: Science for the SDGs across Africa's science ecosystem by Future Africa
(Dr. Heide Hackmann & Mr. Farai Kapfudzaruwa)

ACTION POINTS FOR THE GUIDEBOOK:

- Highlight the unifying power of the SDGs as a framework for STI policy and collaboration in Africa.
- Showcase African-led initiatives and best practices in implementing SDG-focused STI agendas.
- Address the role of the AU, national governments, and regional institutions in supporting and coordinating STI for SDGs efforts.
- Provide guidance on integrating the SDGs into university research and education strategies.
- Explore how academies can effectively utilize the SDGs for science advice and capacity building.
- Map funding landscapes for SDG-related STI initiatives, including national, regional, and international sources.
- Identify strategies to address the funding gap and promote increased public and private sector investment in African R&D.
- Develop recommendations for greater collaboration between African nations to support the development of robust national science systems across the continent.
- Explore approaches to encourage interdisciplinary collaboration and break down silos between STI and social sciences.
- Explore the feasibility and potential structure of an African STI Leaders' Forum.
- Highlight the potential benefits of such a forum in accelerating progress towards the SDGs in Africa.
- Identify potential partners and stakeholders for the forum's establishment.

SUMMARY:

- **Governmental Involvement**: Agenda 2063, 'The Africa We Want,' aligns with Agenda 2030, recognizing the significance of STI in sustainable development. The African Union (AU) STI strategy for Africa (STISA-2024) influences national policies and investments, with a strong focus on capacity-building.
- **Role of Universities**: Universities align their impact ambitions with the SDGs, increasingly using them as a reporting framework. SDGs frame collaborative initiatives, including research-based endeavors and policy dialogues.
- **Involvement of Academies**: Academies, such as the African Academy of Sciences (AAS) and the Network of African Science Academies (NASAC), have integrated SDGs into their policy development and advisory work.
- **Funding Support**: Various funders, both national and international, orient their strategies and initiatives towards the SDGs, supporting institutional capacity development and collaborative efforts.
- **Cross-Sectoral Initiatives**: Several cross-sectoral initiatives, including Future Earth Africa Hub, Africa Hub of the International Transformative Innovation Policy Consortium, and others, contribute to SDG-oriented activities across the region.

Critical Challenges Addressed:

1. Funding Realities:

- **Low Investment in R&D**: Most African countries exhibit low levels of public investment in Research and Development (R&D), with the average Gross Expenditure on R&D (GERD)/GDP remaining stagnant at around 0.3% for the past three decades, significantly lower than high-income countries.
- **Reliance on Foreign Funding**: Persistent reliance on foreign sources of funding fosters a competitive scientific culture, often leading to duplicated efforts and agendas that may not necessarily align with Africa's priorities.
- **Weak Engagement between Science and Industry**: Limited contribution from the business sector in R&D exacerbates the pressure on governments to fund scientific endeavors, hindering the transformative potential of African research.

2. Diversity and Inclusion:

- **Divides and Limited Collaboration**: Disparities across the continent result in divides, limiting the reach of Pan-African collaboration and leading to unequal access to development opportunities within science systems.
- **Need for Targeted Support Strategies**: The concept of 'African science' remains questionable, necessitating targeted strategies to support and develop diverse scientific capacities across the continent.

3. Siloed Action:

- **Interdisciplinary Challenges**: Remains a fundamental challenge, particularly in fully integrating the social and human sciences within the scientific domain.
- **Fragmentation and Lack of Integration**: Collaborative efforts predominantly occur within specific science sectors, such as governments, universities, academies, and funders, hindering the realization of integrated knowledge for transformative action.

A Way Forward: An African STI Leaders' Forum

The seminar explored a proactive approach to address the identified challenges through the establishment of an **African STI Leaders' Forum**. This strategic forum aims to unite committed and influential partners to work collaboratively towards common goals:

- **The Forum's Objectives**:
 - Reduce fragmentation, duplication, and competition within African STI efforts.
 - Define and advocate for African agendas based on the continent's needs and interests.
 - Unlock the collective transformative potential of African science for sustainable development.
- **Key Activities**:
 - Review and influence key developments in African STI.
 - Exchange strategic information and ideas for developing robust African STI systems.
 - Raise awareness and advocate for support for African STI needs, interests, opportunities, and challenges.
 - Provide scientific leadership and advice for Pan-African initiatives in research, policy, infrastructure, etc.
 - Represent African STI interests in international scientific organizations, including the ISC, IAP, and WFEO.
 - Amplify African STI's visibility and voice on the global stage, including within the UN.

Intervention: STI Capacity, STI Roadmaps, and the Six Transitions by the International Science Council (Dr. Morgan Seag)

ACTION POINTS FOR THE GUIDEBOOK:

- Highlight the role of science in addressing the Six Transitions.
- Explain the concept of mission-oriented science and its potential for achieving the SDGs.
- Emphasize the importance of strengthening science advisory systems to ensure effective science-policy communication.

SUMMARY:

1. Science and the Six Transitions:

- **Breaking Silos**: Encouraging collaboration across disciplines to address complex challenges.
- **Understanding Root Causes**: Investigating the underlying factors contributing to sustainability issues.
- **Addressing Synergies and Trade-offs**: Recognizing the interconnectedness of challenges and identifying solutions that consider both benefits and drawbacks.
- **Transforming Science and Funding Systems**: Rethinking how science is conducted and funded to better align with the needs of the Six Transitions.

2. Mission-Oriented Science for the SDGs:

- **Time-bound**: With clear deadlines for achieving ambitious goals.
- **Multistakeholder**: Involving collaboration between researchers, policymakers, and the public.
- **Transdisciplinary**: Bringing together different disciplines to tackle complex problems.
- **Co-designed**: Research questions and approaches are developed jointly by stakeholders.
- **Co-produced**: Knowledge is created collaboratively, ensuring relevance and ownership.
- **Systems Thinking**: Considering the interconnectedness of issues within a broader system.
- **Local Leadership**: Empowering local communities to lead and participate in research efforts.

3. Science Advisory Systems: A Critical Link

- **Credibility**: Trust from both the scientific community and policymakers.
- **Understanding of Needs and Resources**: Awareness of societal challenges and available resources.
- **Diversity of Expertise**: Representation from various scientific disciplines.
- **Integrity of Inputs**: Unbiased advice.
- **Independence**: Freedom from influence that could compromise advice.
- **Actionable Outputs**: Delivering recommendations that can be readily implemented for evidence-based decision-making.

Intervention: UNESCO's Role in Mapping STI Systems (Dr. Ana Persic)

ACTION POINTS FOR THE GUIDEBOOK:

- Emphasize the importance of robust STI data collection and analysis.
- Encourage the use of existing information platforms like the GO-SPIN platform and the UNESCO Science Report.
- Advocate for strengthening sub-regional collaboration in STI development.

- Promote alignment between STI roadmaps and international frameworks like the UNESCO Recommendation on Open Science.
- Explore the potential for revitalizing the STI Forum for Africa, potentially in conjunction with a Leaders' Forum.
- Acknowledge the importance of local action with global connections when implementing STI roadmaps.
- Encourage the integration of citizen science, local knowledge, and indigenous knowledge systems into STI roadmaps, particularly in the African context.

SUMMARY:

1. Global Observatory for Science, Technology and Innovation Policy Instruments (GO-SPIN) Platform:

- Allows member states to map their STI landscapes and generate country profiles based on specific assessments.
- These profiles offer valuable insights into traditional STI system components (e.g., R&D investment, human resources) and relevant science policies.
- They can serve as a starting point or inspiration for further STI capacity mapping exercises.

2. Data Collection and Analysis:

- Need for robust and comparable data on STI.
- UNESCO acknowledges the current challenges in data collection and emphasizes the importance of strengthening statistical institutions' capacity to gather STI data.
- This enables trend analysis and comparisons between countries.

3. STI Outlooks:

- UNESCO publishes regular outlooks that provide snapshots of specific STI trends.
- The recent Open Science Outlook explores the status and trends in open science practices globally, offering insights into regional variations.
- This type of information is valuable for mapping open science capacity within the Six Transitions framework.

4. Policy Instruments Database:

- The GO-SPIN platform houses a vast repository of policy instruments for STI from over 90 countries.
- Analyzing this existing information can be more efficient than creating new platforms for data collection.

5. UNESCO Science Report:

- Provides valuable insights for STI roadmap development exercises.
- Collaboration between teams working on different initiatives could lead to the integration of findings into future editions of the report, avoiding duplication of efforts.

Additional Considerations:

- **Sub-regional Collaboration:** While regional collaboration is crucial, working with sub-regional bodies like SADC (Southern African Development Community) or ECOWAS (Economic Community of West African States) can be highly effective. These bodies often have their own STI strategies that can be leveraged or integrated into broader initiatives.
- **STISA-2024 Revision:** The upcoming revision of the African Union's STI Strategy (STISA-2024) presents an opportunity to introduce innovative elements related to STI roadmaps and science integration.