



**Implementing TA in other
developing countries in
Africa and beyond as
well as capacity-building
support**

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**Workshop on
lessons learned from
the UNCTAD pilot
project on Technology
Assessment in Africa**

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Outline

- Status of Technology Assessment (TA) in Africa;
- Opportunities to use TA as a tool for policy in Africa;
 - STISA – 2034
 - STI Roadmap for SDGs
- Climate Change and TA
- TA and supplementary tools to enhance evidence-based policies;
- Conclusions

Status of TA in Africa

- Technology assessment (TA) is still in its infancy in Africa. Its application as a vital tool for technology policymaking is just starting to attract the attention of academics, technocrats and policymakers as well as legislatures on the continent.
- This UNCTAD TA pilot project for Africa brings along an opportunity for the participating sub-Saharan African states; Seychelles, South Africa and Zambia to adopt the methodology and build capacity for TA;
- This methodology is a form of capacity-building exercise for the continent in order to attain sustainability of new technologies implementation on the continent.

Opportunities to use TA as a tool for policy in Africa

The transformative entry points or key transitions can have catalytic and multiplier effects across the SDGs

six entry points for transformation.

- (1) human well-being and capabilities;
- (2) sustainable and just economies;
- (3) sustainable food systems and healthy nutrition patterns;
- (4) energy decarbonization with universal access;
- (5) urban and peri-urban development;
- (6) the global environmental commons.

The GSDR Six Entry Points	
Entry Point 1	Food systems
Entry Point 2	Energy access and affordability
Entry Point 3	Digital connectivity
Entry Point 4	Education
Entry Point 5	Jobs and social protection
Entry Point 6	Climate change, biodiversity loss and pollution
The Five Levers	
Lever 1	Governance
Lever 2	Economy and finance
Lever 3	Science and technology
Lever 4	Individual and collective action
Lever 5	Capacity-building

STISA – 2034 and the six transitional SGDs

- Rooted in the 17 Goals, there are transformative entry points or - key transitions that can have catalytic and multiplier effects across the SDGs; (1) food systems; (2) energy access and affordability; (3) digital connectivity; (4) education; (5) jobs and social protection; and (6) climate change, biodiversity loss and pollution;
- These goals are deeply intertwined – any action taken to achieve one can advance some others. All the entry points are aligned with STISA-2034 strategic priorities, which are:
 - Health
 - Energy
 - ICT
 - Agriculture
 - Environment

With the strategic priorities:

- Industrialization
 - Private Sector
 - Frontier Technologies
 - Gender and Youth Engagement
 - Science Diplomacy and Partnership
- This transition and transformative process leaning on the frontier technologies call for an integrated policy approach to achieve the sustainable development – one that navigates the synergies and trade-offs.

STISA – 2034 and the six transitional SGDs (cont...)

- TA as an effective participatory research policy tool is crucial for this transition for the following reason:
- It is a method that integrates new voices into science policy discussions. That encompasses various forms expertise advices, public and citizens' engagement, citizens' juries, and consensus building;
- In such approach, TA calls for an efficient and functional national system of innovation (NSI); thus the mapping of the NSI becomes a necessary part of this transition.
- In doing so, actors and stakeholders identification is important for;
 - Building synergies and consensus, thus building ownership of policies
 - Identifying specific capacity-building gaps in the system for actors and stakeholders, based on the level of support and influence;
 - Identifying the impacts of the technologies being assessed on societies;
 - Putting in place integrated STI Governance system for effective STI policy formulation and implementation; and
 - Identifying Investment frameworks for effective policy implementations.

STI Roadmap for SDGs and TA

- The STI roadmap for SDGs is an intersection of the national development plans and SDGs plans;
- A number of African country has participated in the initial pilot project, namely Ghana, Kenya and Ethiopia and lately Seychelles, Mauritius, Malawi, Gambia and Rwanda;
- The STI Roadmap for SDGs is a framework for leapfrogging through STI policies; and
- It allows participating countries to use STI as a transformative process to sustainable development.
- TA as a new policy tool kit serves this purpose of more participation is STI policy formulation and implementation; while identifying gaps such as reflected in some of the key recommendations of the latest workshop *“Workshop on Building Capacity and Exploring Resources for Implementing STI4SDGs Roadmaps held in Addis Ababa, Ethiopia, 8-9 October 2024”*:
 1. **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.
 2. **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.

STI Roadmap for SDGs and TA (cont...)

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

4. 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.

5. 6. Foster Regional Cooperation: Promote knowledge sharing through regional platforms like AOSIS and initiatives such as the Blue Economy and Pacific Islands STI networks, as well as global platforms like Coalition on STI for Africa's Development; and explore to extend to other regions, such as Asia-Pacific (incl. Pacific small islands states), Latin America and the Caribbean.

6. 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.

7. 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 and environmental sustainability.

8. 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

Climate Change and TA

- Climate Change presents a formidable challenge across the continent, putting at risk food and nutrition security and exacerbating issues such as health, environment degradation, brain drain and economic inequalities;
- However, most African countries are signatories of the Paris Agreement, therefore are committed to their National Determinant Contributions (NDCs);
- Their NDCs call for the implementation of an array of new technologies, mostly the frontier technologies such as AI;
- Those technologies would have profound impacts on societies and TA is a key policy instrument to contribute to the NDCs by ensuring that all the impacts of those technologies are assessed.
- **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 was one of the recommendations of the recent workshop.

TA and supplementary tools to enhance evidence-based policies

- TA alone may not be sufficient to transform the STI ecosystems for sustainable development;
- Other participatory research policy tools such as Technology Foresight and Transformative Innovation Policy framework(TIP);
- Technology Foresight is a systematic exercise aimed at looking into the longer-term future of science, technology, and innovation in order to make better-informed policy decisions”;
- While TIP is a strategic and proactive approach to shaping innovation in ways that drive substantial and positive changes in society, the economy, and the environment; and
- A combination of those transformative, participatory and evidence-based policy tools are crucial in sustainable development on the continent and beyond.

Conclusions

1. Implementing TA in other developing countries in Africa and beyond as well as capacity-building support is not an overstatement, it is crucial as Africa is in a transformative process with the strategic posturing of STISA-2034, the STI Roadmap for SDGs as well as its commitment to the Paris Agreement and other regional and global obligations.
2. TA in combination of transformative, participatory and evidence-based policy tools, such as Technology Foresight and TIP are crucial for sustainable development on the continent and beyond.