

STI Forum Special session: Science Technology, Innovation, and Engineering Solutions for the SDGs: Theory, Practice and Application

3 May, 8.15 - 09.30, Trusteeship Council Chamber, UN HQ

Summary

While science and engineering are recognized as an important part of the solution to many global and local sustainable development challenges, the gap between available knowledge, existing STI-based solutions and action on the ground is widening, threatening progress on the multilateral agenda.

Against this backdrop, the event organized by the International Science Council (ISC) and the World Federation of Engineering Organizations (WFEO) as co-chairs of the Science and Technology Major Group, discussed the need for a higher level of ambition to accelerate SDG implementation, requiring a more scaled up application of science, technology, innovation, and engineering (STIE) to accelerate progress towards these goals. To achieve this, the event was designed to communicate a better understanding among different stakeholders about how STIE can support SDG implementation to bolster the science-policy-society interface and improve uptake of STI solutions and knowledge.

The session showcased how STIE can support implementation of the SDGs in different contexts. The session focused on SDGs 6,7,8,11, and the organising theme was sustainable infrastructure- grey, green, and nature-based. Case studies highlighted existing technical solutions ranging from employing nature-based solutions for agrifood systems with examples of in-situ conservation of crop biodiversity in Peru, to solutions related to groundwater resources with community science monitoring in Benin, to sustainable infrastructure in Asia, Africa, and the United States. Notably there was also discussion of practices for sustainable infrastructure in Kenya and the Philippines.

Bringing together Member States, the scientific community and civil society groups, the event discussed aspirations, challenges and needs of different actors in relation to STI & E for the SDGs.

The following key messages emerged from the special event:

- **Need for improved communication and transdisciplinary partnerships:** Science and technology communities need to work with a range of expertise and knowledge systems to understand the barriers that can hinder the success of technology solutions and how to better leverage their power to contribute to advancing sustainable development. Crucially the Science and Technology community can play a role in communicating and fostering engagement among such stakeholders.
- **Need to engage a broad and inclusive citizenry:** realizing the full potential of STIE solutions requires engaging all demographic groups as co-creators as well as including them in the collective conceptualization of any empowered community of users. This approach can ensure their effectiveness.
- **Need for an enabling environment for STIE:** STIE solutions are not isolated encounters between scientists, engineers and users. It requires policy to support technological development, adaptation and transfer. This includes supportive patent regimes, adequate manufacturing capacities and access to necessary resources.
- **Need skills support to deliver STIE:** Investment in skills development and education infrastructure that can support national ownership and economic productivity for the next generation of the workforce is crucial.
- **STIE as an important component of ensuring peace and security:** STI solutions can address many of the problems that drive social unrest, political crises, and unsustainable migration flows. In this regard, national and multilateral policy should acknowledge the organised science community includes social science and that a goal of science engagement is social cohesion.