

Ninth Annual Multi-stakeholder Forum on Science, Technology and Innovation for the Sustainable Development Goals

Session 4: Building ecosystems for science, technology and innovation to drive economic growth and sustainable development in Small Island Developing States

(10:00 – 11:30, 10 May 2024; in-person, Trusteeship Council Chamber)

Background

Small island developing States (SIDS) are characterized by a number of common challenges, including their relatively small size, undiversified economies, distance from large markets and trade routes, and extreme vulnerability to exogenous shocks, especially natural disasters and climate change. These 39 Member States in the Caribbean, Pacific, Atlantic, Indian Ocean and South China Sea also share common obstacles to the growth and development of their science, technology and innovation (STI) ecosystems, including low levels of investment in research and development (R&D), inadequate access to financing, lack of high-quality disaggregated data, and limited budgetary resources for education. In addition, many SIDS struggle with underdeveloped STI infrastructure—both “hard” infrastructure like telecommunication systems and “soft” infrastructure like institutions and governance approaches that foster innovation (Massa et al., 2022) --with a lack of “bankable” infrastructure projects in the investment pipeline.

But while many of the physical and structural vulnerabilities are entrenched and largely unavoidable for SIDS, their STI-related vulnerabilities can be overcome, and in some cases the current challenges can actually be flipped to become advantages. The lack of “legacy” infrastructure can be a benefit when countries are seeking investment in new, green infrastructure (Meddeb, 2022). The small size of the governments and populations can make forging new partnerships and collaborations relatively simple, and awareness of new initiatives and approaches can spread relatively easily (Leal-Ayala, 2021). In some cases, digital- and knowledge-based sectors can take less initial investment than other business sectors, particularly when open science and open-source technology are available, making STI a logical target sector for small economies like SIDS.

The greatest strength and source of nourishment for SIDS STI ecosystems is the human capacity of these countries. SIDS innovation—inspired by necessity, developed over generations, and often rooted in local and indigenous knowledge—provides homegrown solutions in areas including health, agriculture, early warning systems, land and ocean stewardship, and climate adaptation. Citizen science and community-based data initiatives can fill gaps left by international research and data sets (UNDP, 2014). Many SIDS are investing in digital technology, and according to an upcoming UNDP report, “Small Island Digital States,” many score high in levels of gender parity in Internet access (UNDP, 2024). Building the human capacity of SIDS will be particularly crucial in the coming decades as many countries in this group face demographic shifts, notably a rise in the percentage of older persons, and a rising share of older persons (55-64 years of age) within the working-age population, who may require reskilling and support. At the same time, some SIDS will see a bulge in young people entering the work force, and these young people will be more productive if they receive high-quality education and technology access (UNDESA, 2023).

To capitalize on their rich potential in human capacity, SIDS will need investments from the international community. SIDS communities and governments have been longtime champions of genuine and durable partnerships—intuitively understanding that no one can “go it alone”—and they are leaders in novel, mutually beneficial approaches to collaboration that translates well in the STI arena. Partnerships for STI in SIDS will take many forms—North-South, South-South, SIDS-SIDS, public-private, and triangular. The role of the private sector will be crucial in building up a vibrant and productive STI ecosystem in SIDS. Opportunities for collaboration, support and investment will be addressed in the upcoming Fourth International Conference on SIDS (SIDS4) in Antigua and Barbuda in May 2024, acknowledging that partnerships are essential to achieve the goal articulated in the SIDS4 theme: *Charting the Course Toward Resilient Prosperity*.

Objectives

This session will take stock of the current state of STI for the SDGs in Small Island Developing States (SIDS), looking at the challenges as well as the strengths and opportunities in the SIDS STI arena, including in disaster risk reduction, renewable energy, agriculture, health, marine science and fisheries, and governance-related technology, among others. Noting that partnerships are central to strengthening the SIDS STI ecosystem, this session will spotlight successful North-South, South-South, public-private, and especially SIDS-SIDS STI partnerships.

Format

The session will be structured as a panel discussion, featuring representatives from government, academia, civil society, the private sector, and other relevant stakeholders. High-level respondents and lead discussants will add their own experience and comment on the panel discussion. This will be followed by an open Q&A session in which the audience will have the opportunity to ask questions and contribute to the discussion.

Guiding questions

The discussion will be guided by the following questions:

- *What challenges and opportunities do SIDS face in accessing and employing STI to accelerate economic growth and ensure sustainable development?*
- *How can STI roadmaps and other investments in institutions and capacity help to address these impediments?*
- *What cases can be highlighted showing the power of STI for SIDS’ implementation of the SDGs?*

Supporting documents/publications

Massa, I., et al. (2022). Policy brief: How do structural vulnerabilities impede progress towards achieving SDG 4 (Quality Education) in SIDS? https://irp.cdn-website.com/be6d1d56/files/uploaded/Education%20Policy%20Brief_09sept22_FINAL%20Version%20UN%20%20SDSN%20%28002%29.pdf

Meddeb, R., (2022). “How Innovation Can Shape a New Type of Development in Small Islands Developing States”, Columbia/SIPA Journal of International Affairs, <https://jia.sipa.columbia.edu/content/how-innovation-can-shape-new-type-development-sids>

Leal-Ayala, D. (2021) “How Small Island States Can Create Successful Innovation Policy” Cambridge Industrial Innovation Policy, <https://www.ciip.group.cam.ac.uk/reports-and-articles/how-small-island-states-can-create-successful-innovation-policy>

UNDP (2014). Community-Based Action In Small Island Developing States: Best Practices from the Equator Initiative. New York, <https://pacific-data.sprep.org/system/files/community-based-action-sids.pdf>

UNDP (2024). From developing to digital; charting the course for SIDS' transformation, Blog entry, 24 January 2024, <https://www.undp.org/blog/developing-digital-charting-course-sids-transformation>

UNDESA (2023). Harnessing demographic dividends for SIDS, Frontier Technology Issues, July 2023, https://sdgs.un.org/sites/default/files/2023-07/SIDS_FTII_2023_July_Final_0.pdf

Case studies

[Cichoski, T., et al., “Industrial Waste Valorization: Contributions to Achieving the SDGs In Brazil”.](#)

Science-policy briefs

[Alwahsh, S., and Bakthavatchalam, V., “Exploring Sustainability Challenges in the UK Aerospace Industry: Insights from a qualitative research”.](#)

[Arora, P., “The Failed Science Diplomacy of “Lab to Land” in the Culturing of Macroalgae and Food Security”.](#)

[Bostrom, A., and Nayyar, S., “The Summit of the Future: Health Technologies for the Common Good”.](#)

[Chrisdameria, D., et al., “Encouraging a Just Energy Transition Through Wave Energy Converters in Small Island Developing States \(SIDS\)”.](#)

[Isagah, T., “Responsible and Inclusive Urban AI: Opportunities and challenges for advancing Sustainable Development Goals”.](#)

[Lüdert, J., “Strengthening the Science-Policy-Society Interface: An Analytical Framework for Science Diplomacy in an Era of Accelerating Technological Change”.](#)

[Lui, R., “Precision Health: Emerging innovations for children and adolescents”.](#)

[Piesik, S., et al., “Nature-Based Industrial Revolution for Inclusive Sustainable Development”.](#)

[Umar, A., “Metaverse and Other Technology Bundles for UN SDGs – Opportunities and Challenges”.](#)