Press Release

UN Technology Bank's New Report Reveals the State of Science, Technology and Innovation in the World's Least Developed Countries

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- New UN report reaffirms the business case for investment in sustainable science, technology and innovation systems in least developed countries (LDCs) to contribute to long-term productivity upgrading, economic development, job creation as well as addressing societal challenges.
- However, a significant funding gap between the current investment levels and policy targets remains and requires international collaboration to close the gap.

The UN Technology Bank for Least Developed Countries' new report "The State of Science, Technology and Innovation in the Least Developed Countries" is launched today. The report is the first comprehensive analysis of the current status of science, technology and innovation (STI) in LDCs.

The global pandemic underlines the relevance of scientific knowledge and technologies in protecting health and sustaining economic and social wellbeing. Science, technology and innovation are powerful drivers of change and play a key role in transforming economies and driving sustainable development. LDCs cannot afford to lag behind in the new wave of rapid technological change. Instead, they need to harness the 'latecomer advantage' to leapfrog and directly adopt the latest and most effective STI solutions. The UN Technology Bank for Least Developed Countries (UN Technology Bank) is mandated to support LDCs to access relevant technologies and strengthen STI capacities in the world's most vulnerable 46 countries.

"The Doha Programme of Action for the LDCs has confirmed the UN Technology Bank's role as a focal point for LDCs to strengthen their STI capacity towards building sustainable productive capacities and promoting structural economic transformation", Dr. Taffere Tesfachew, Acting Managing Director of the UN Technology Bank highlighted, "As part of this role, this report and related discussion are a key step to support knowledge and best practices sharing around STI in LDCs. We call upon Governments, development partners and other UN entities to join us in this ambitious agenda and take actions at the national, regional and global level".

One finding pointed out that women in the LDCs remain significantly under-represented across STI sectors, particularly in the participation of technology usage and connectivity, scientific publications and patent registration. It is essential that the countries recognise the importance of gender parity in STI and ensure inclusive development. Other key report findings include:

Science

LDCs have very low government investment in science, with a large gap between current levels of expenditure and official policy targets, although countries closer to graduation typically spend more on science. Despite this, LDCs leverage lower costs and take frugal approaches to deliver scientific results and valuable knowledge with limited means. The number of scientific publications of LDCs grew significantly during 2000-2020 and was faster than the growth of OECD countries in the same period. Yet the quality of publications and capacity to access research networks still need to be improved. The variation in scientific outputs among LDCs is due to adequacy of governance, levels of institutional capacity and extent of international collaboration. LDCs can leverage a motivated diaspora to contribute to research development.

Technology

LDCs have low technology outputs and remain unequally prepared to seize the opportunities of digitalization and the Fourth Industrial Revolution, given the limited reliable infrastructures and skills constraints. While technological readiness has improved in some LDCs, such as Burkina Faso, LDCs need to get better at leveraging digital technologies to improve the productivity and efficiency of their companies. However, these 'absorptive capacities' are still very low in most LDCs, and companies will need to invest in skills to fill the gap, make organizational changes and eventually upgrade their business model.

Innovation

Some LDCs, such as Rwanda, have a more innovative business-friendly environment, including hubs and innovation centres for start-ups. Entrepreneurs and firm managers in LDCs are highly engaged in innovation, willing to invest in R&D and introduce high rates of innovation in their firm. However, both R&D and innovation outputs are relatively informal and modest in scope, due to a lack of access to finance, institutional maturity and access to international markets. There is a fertile ground for productivity increases through technology adoption. However, innovation-driven growth through export still requires heavy investment and the evolution of institutions, frameworks and support

STI policy landscape

Only a few LDCs display strong technology transfer collaboration between academia and industry. In many LDCs, National Innovation Systems are fragmented - there is a large range of actors involved in knowledge creation and exchange, but collaboration is poor. Best-performing LDCs often display more structured governance, including political willingness, clear institutions, roles, policies and strategies. Many LDCs have achieved some progress

though in terms of planning, programming, budgeting, promoting, and assessing STI policies and plans. LDCs, such as Bangladesh, Cambodia, Niger, Rwanda and Sierra Leone, are showing promising national innovation systems with strong policy and governance frameworks and clear political commitment.

The LDCs, while each has specific characteristics, share a number of similar features such as a high degree of informality and indigenous knowledge playing a role in terms of STI institutional arrangements and policies.

Recommendations

Priorities for donors and international cooperation

- Support the development of STI in LDCs for their achievement of the SDGs such as financing STI systems building, strengthening infrastructure towards digital transformation and ensuring that LDCs have access to existing technologies on mutually agreed terms.
- Support STI governance building and the strengthening of innovation ecosystems, by helping to build productive capacities and diversification towards higher-value-added production; develop national and regional networks with national innovation systems' actors; support existing innovation hubs and their network integration; foster collaborative research and innovation between academia, research institutes, the private sector, and citizens.
- Support sustainable STI interventions that are grounded in the LDC reality and consider social, cultural, political and environmental factors, and promote efforts to build capacity in use-oriented applied research. This calls for careful assessment of intended and unintended outcomes.

Priorities for national governments

- Mainstream STI in the national development agenda; enhance STI governance and address STI as a holistic system.
- Remove disincentives to investing in STI and support the development of an open innovation ecosystem by ensuring retention of the highly skilled.
- Build, strengthen and maintain complete STI information systems. Define adequate STI indicators that reflect the unique nature of STI.
- Foster widespread internet connectivity outside the capital city and the main cities to connect people.

To access *The State of Science, Technology and Innovation in the Least Developed Countries*, please submit the form at the link here. Once you submit the form, you will have direct access to the report, including the Executive Summary (in English and French), High-level Chapters and Country Case Studies (in English).

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About least developed countries:
Least developed countries (LDCs) are low-income countries confronting severe structural impediments to sustainable development. They are highly vulnerable to economic and environmental shocks and have low levels of human assets. There are currently 46 countries on the list of LDCs which is reviewed every three years by the Committee for Development (CDP). LDCs have exclusive access to certain international support measures in particular the areas of development assistance and trade.

About UN Technology Bank for Least Developed Countries:
The call for a mechanism to close the STI gap between LDCs and the rest of the world was first raised during the 4th UN Conference on LDCs held in Istanbul, Turkey in May 2011. The Conference outcome document, the Istanbul Programme of Action for LDCs for the decade 2011-2020, articulated the need for paying greater attention to the development of STI in LDCs, including through the transfer of technology and the strengthening of intellectual property rights. To reinforce this conference decision, the international community incorporated the establishment of a Technology Bank for LDCs as one of the targets (Target 17.8) of the 2030 Agenda for Sustainable Development and Sustainable Development Goals agreed upon in 2015. A year later, the General Assembly established the United Nations Technology Bank for Least Developed Countries as a subsidiary organ of the Assembly. The establishment of the Technology Bank marked the first and only target of the 2030 Agenda to be fulfilled well before 2030. The Technology Bank became operational in 2018 and has been supporting the world's 46 LDCs, including graduated countries for up to five years after graduation from the LDC category. More recently, the Doha Programme of Action for LDCs for the decade 2021-2030 strengthened the mandate of the Technology Bank by assigning the Bank the role of a focal point for LDCs on STI-related issues.