



# Technology Bank for the Least Developed Countries

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## Council

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### Annual report of the Managing Director

## Report on the work of the Technology Bank for the Least Developed Countries in 2021

1. The General Assembly established the Technology Bank for the Least Developed Countries and adopted the Charter of the Technology Bank (see [A/71/363](#)) on 23 December 2016, in its resolution [71/251](#). In that resolution, the Assembly reaffirmed the importance of improving the least developed countries' scientific research and innovation base, promoting networking among researchers and research institutions and helping the least developed countries to access and utilize critical and appropriate technologies. The Technology Bank is financed by voluntary contributions from Member States and other stakeholders, including the private sector and foundations.
2. The agreement between the United Nations and the Government of Turkey on financial and in-kind support for the Technology Bank will expire at the end of 2021, and negotiations were therefore held to review the implementation of the existing agreement and to agree the provisions of a new agreement. The new financial agreement has now been signed and will enter into force in January 2022.
3. In line with its budget and programme of work for 2021 ([TBLDC/2021/2](#)), the Technology Bank has focused on its core activities, including conducting technology needs assessments, strengthening national academies of science in the least developed countries in support of the 2030 Agenda for Sustainable Development and enhancing innovation and capacity-building. Owing to disruptions and restrictions related to the coronavirus disease (COVID-19) pandemic, the Technology Bank was unable to conduct a significant portion of its activities as planned.
4. The aim of the technology needs assessment programme is to undertake diagnostic work in order to validate the technology needs of each of the least developed countries. The first five technology needs assessments were completed in Bhutan, the Gambia, Guinea, Timor-Leste and Uganda, although there has been some delay in initiating the validation process for these countries owing to the restrictions imposed by the COVID-19 pandemic. In 2021, the technology needs assessment process was launched in 16 additional countries: Bangladesh (in collaboration with the Commonwealth Secretariat), Benin, Burkina Faso, Cambodia, the Democratic

\* [TBLDC/2021/1/Rev.1](#).



Republic of the Congo, Djibouti, Kiribati, Lesotho, Liberia, Malawi, Mozambique, Nepal, Rwanda, Sierra Leone, the Sudan and Zambia. A further technology needs assessment has been scheduled to commence in the United Republic of Tanzania in December 2021, in partnership with the Arab Bank for Economic Development in Africa. The assessment process presents an opportunity for Member States to reflect on their needs to achieve their development goals, identify gaps and determine the technologies needed to address those gaps or constraints. It also produces recommendations on the national strategies and policy frameworks needed to achieve key national priorities with regard to science, technology and innovation and development goals. To facilitate implementation of those recommendations, technology implementation plans will be drawn up. As there are close linkages between the digital technology platform to be managed by the Technology Bank and the findings of the technology needs assessments, the technology implementation plans will include the identified needs of the least developed countries on the technology platform. In 2022, the Technology Bank intends to expand and strengthen its collaborations and partnerships with both State and non-State actors, with a view to completing technology needs assessments in the remaining 25 countries while exercising agility and taking into consideration the changing contexts within those countries.

5. To implement its mandate of facilitating technology transfer, the Technology Bank has entered into negotiations with the United States Agency for International Development (USAID), the United States Department of State, and Research for Development regarding the transfer of ownership of the Global Innovation Exchange platform, which will serve as a repository of technologies and technology needs. The United States of America has agreed to the transfer of the platform to the Technology Bank, which has launched internal processes to prepare for the full acquisition of the platform and its adaptation to the needs of the least developed countries.

6. The Technology Access Partnership, a platform aimed at facilitating access to health technologies in the least developed countries, was initiated in the second quarter of 2020 by the Technology Bank, in partnership with the United Nations Conference on Trade and Development, the United Nations Development Programme (UNDP) and the World Health Organization. Additional experts also provided, in their institutional and individual capacities, guidance on the technical, legal, policy and regulatory issues required to support the effective transfer of technology to entities in least developed countries that are seeking to produce diagnostics, medical devices and personal protection equipment. In December 2020, the partners identified the priorities for and key challenges to the longer-term implementation of the Partnership. Capacity-building on manufacturing diagnostics was identified as a key priority, particularly in the light of repeated requests from small and medium-sized manufacturers for support in understanding the regulatory environment and the technical specifications needed to manufacture antigen-based rapid tests. A working group on local production and diagnostics was established under the Partnership's diagnostics work stream and provided unique input into a step-by-step handbook aimed at helping Governments and companies in the least developed countries to navigate the process of producing diagnostics locally for COVID-19 and other viruses. The comprehensive handbook will guide stakeholders in developing local manufacturing capability for affordable diagnostics in low- to middle-income countries and least developed countries and a framework to articulate the current context and guidelines required to address diagnostic access through local manufacturing. The handbook may be of benefit in tackling the COVID-19 emergency as well as other infectious diseases prevalent in the least developed countries (such as HIV/AIDS and tuberculosis) and other outbreaks. It was funded by the Technology Bank and Cambridge University and made possible by the expertise of the members of the working group. It will be completed in November 2021 and

launched in early 2022. The Technology Bank remains an implementing partner of the COVID-19 Technology Access Pool, a World Health Organization-coordinated initiative that promotes open innovation models and technology transfer to increase local manufacturing and supply capacity. Although the Partnership is now being wound down, the Technology Bank continues to actively participate in the meetings of the COVID-19 Technology Access Pool steering committee. The Partnership's working group on local production and diagnostics has made a valuable contribution and its first success has been on technology transfer in the area of diagnostics, in relation to which a licensing agreement with the Spanish National Research Council has now been finalized with the Medicines Patent Pool.

7. In April 2021, a trilateral memorandum of understanding was signed between the Technology Bank, the Scientific and Technological Research Council of Turkey and the Industry-University Collaboration Platform of Turkey. The memorandum identifies possible areas of collaboration between the three organizations and provides that the signatories will collaborate to develop a model technology transfer office for use in the context of the least developed countries. The Industry-University Collaboration Platform of Turkey will provide consultancy services for the model's development, while the Scientific and Technological Research Council of Turkey will support the process through its expertise and experience. The Gambia has been selected as the country in which the initiative will be piloted.

8. The Technology Bank, in collaboration with Medtronic Labs and the Global Foundation for Children with Hearing Loss, has established a consortium to provide support to Bhutan as part of the "Hear, Listen and Speak Programme for all Bhutanese Children" initiative. The programme will develop local professional capacity and services in the fields of newborn hearing screening, technology and habilitation, which are essential for Bhutanese children aged 0–6 who are deaf or hard of hearing. The programme also implements preventive screening and ear and hearing care services for Bhutanese children aged between 7 and 14 years to ensure that their ears remain healthy. Over a three-year period, the programme is projected to screen 190,000 children aged 0–14 for hearing loss and ear disorders. In partnership with Medtronic Labs, the programme will be extended to at least two more least developed countries in 2022, beginning with Malawi.

9. During the reporting period, the collaboration between the Technology Bank and the Network of African Science Academies supported the establishment of science academies in Angola, the Democratic Republic of the Congo, Lesotho and Malawi. The successful launches of those academies represent key milestones; however, providing the support required to establish institutional and operational capacity remains a challenge. Currently, the initiative is providing different levels of support to Chad, the Gambia, Liberia, the Niger and Sierra Leone. Academy champions have been identified to lead the national steering committees and the development of science academy constitutions, arrange workshops to validate the constitution and ensure that the academies become legal entities based on national laws and procedures. The model for establishing new academies is also supported by the regional lead academies in Egypt, Senegal, South Africa and Uganda. Those lead academies support new academies by offering mentorship and capacity development opportunities. Mobilizing resources and affiliating to regional and global networks of academies are key priorities for new academies to enable in-kind and financial support. The capacity development programme also prioritizes the strategic planning, resource mobilization and communications strategy of new and existing academies. In July 2021, the first quarterly meetings involving new, existing and lead academies were held to raise awareness of the importance of science for society and policy, as well as promoting inter-academy collaboration forums to strengthen networking through a virtual platform. The Technology Bank has also commenced discussions

with the African Academy of Sciences with a view to establishing a strategic partnership for capacity development in science and demystifying science in Africa. In addition, the Technology Bank has started collaboration discussions with the Human Resources, Science and Technology Department of the African Union on supporting the least developed countries in Africa to implement the five priority areas of the African Union Continental Green Recovery Action Plan 2021–2027. With regard to the Asia-Pacific region, the Technology Bank has engaged with the Australian Academy of Science and the Royal Society Te Apārangi of New Zealand to collaborate on setting up a regional academy of sciences for the least developed countries in the Pacific. Furthermore, the relationship with the Association of Academies and Societies of Sciences in Asia will be formalized through the signing of a memorandum of understanding that will include supporting academies in Asia. The initial focus will be on Cambodia, which expressed an interest in establishing an academy of sciences during the regional consultations held in 2020. Collaboration with global networks of academies, such as the InterAcademy Partnership and the World Academy of Sciences for the advancement of science in developing countries, will increase the need for academies to enhance science diplomacy, ensure the participation of youth and women, and build the capacity of journalists to report on science. A science diplomacy programme will be launched in 2022.

10. To continue enhancing the research capacity of the least developed countries, in 2021 the Technology Bank worked directly with Research4Life and new partner the Information Training and Outreach Centre for Africa, which promotes and builds capacity among scientists, researchers, practitioners and information professionals on the use of electronic resources and digital tools in Africa, replacing the Food and Agriculture Organization of the United Nations to lead the capacity development programme on scientific research at Research4Life. In April 2021, the first five-week massive open online course was held for librarians, information professionals, information technology specialists, researchers, academics, lecturers, educators, students, including graduates and postgraduates, and professionals from both developing and least developed countries, attracting 725 participants from the least developed countries. The French version of the course was launched in November 2021; to date, 1,406 participants have registered, 1,087 (77 per cent) of whom are from the least developed countries.

11. The Technology Bank and the Office for Outer Space Affairs have signed an inter-agency agreement based on two work streams. The first work stream will focus on enhancing the capacity of experts and supporting policymakers and decision makers. The United Nations Platform for Space-based Information for Disaster Management and Emergency Response of the Office for Outer Space Affairs includes promoting access and developing capacity to use all types of space-based information in support of the full disaster management cycle in Cambodia, the Lao People's Democratic Republic, Malawi, Nepal and the least developed countries in the Pacific. The second work stream will focus on the development of two 5-day webinars focusing on advancing women's participation in space technologies and water management through the Space for Women programme. The implementation of the programme has been impacted by the COVID-19 restrictions that have affected the travel of resource personnel. However, the training design for national training workshops has been developed, and implementation will begin in 2022.

12. In February 2021, a biotechnology programme was launched in collaboration with the International Centre for Genetic Engineering and Biotechnology and the World Academy of Sciences to promote networking among researchers and research institutions, while strengthening biotechnology capacity in the least developed countries. A call for 13 exchange visits of up to six months at the laboratories of the International Centre for Genetic Engineering and Biotechnology in Trieste (Italy),

New Delhi, and Cape Town (South Africa) was launched in May 2021, attracting 114 applications from 18 least developed countries. Scientists will be working in the fields of biomedicine, biotechnology and agriculture. The programme also includes a third scheme providing training in biotechnology policy and regulatory science by the International Centre's experts. The call for applications for training in regulatory science and biotechnology policy workshops was launched in August 2021. It is expected that 110 users from the least developed countries will benefit from the e-learning modules and a minimum of 33 trainees from the hybrid workshop. The outcome of autonomous, robust and structured regulation is the availability of healthier and safer food and products from fewer resources and reduced pressure on natural ecosystems. It also supports value added commodity trade, which, in turn, supports sustainable development, especially Sustainable Development Goals 2, 3, 9, 12, 15 and 17.

13. The partnership with the World Eco-Design Conference has resulted in a new initiative jointly organized by the Technology Bank, the World Eco-Design Conference and the International School of Design at Zhejiang University, Ningbo, China, to support students from the least developed countries to enhance their industrial design capacities. The establishment of the International Design Education Programme has resulted in 50 scholarships with a total value of approximately \$250,000 for students from the least developed countries to undertake a master's level degree. At the close of the call for applications, Zhejiang University had received 83 applications from 14 least developed countries including Afghanistan, Bangladesh, Cambodia, the Comoros, Ethiopia, Guinea, Lesotho, Mali, Nepal, Rwanda, Uganda, the United Republic of Tanzania, Yemen and Zambia. Some 15.6 per cent of applicants were women. After a comprehensive review, 36 students – 7 of them women – were awarded full scholarships and joined the International Design Education Programme at Zhejiang University in September. The three partners will facilitate collaboration between various universities and research institutions in the least developed countries and China in order to build an international design education network that promotes the integration of industry and education, with the aim of expanding innovative development in the design industry. To strengthen the institutional capacity of the Technology Bank Industrial Design Programme, the World Eco-Design Conference has made a contribution of \$250,000 to support two associate programme officers stationed in Gebze, Turkey, for a period of one year. The Technology Bank and the World Eco-Design Conference are also planning to co-host the World Eco-Design Conference Summit in early 2022. It will be held in a hybrid format owing to the COVID-19 measures in China.

14. In 2020, the Technology Bank, in partnership with Turkey and the UNDP Turkey country office, launched the SDG Impact Accelerator programme in Bangladesh and Uganda as one of the key steps to unlocking entrepreneurial talent that leverages emergent technologies to improve livelihoods. In January 2021, a call was issued inviting applications from entrepreneurs around the world. The Technology Bank encouraged entrepreneurs from the least developed countries to participate and offered them support in that endeavour. While the call was open to entrepreneurs globally, 52 per cent of applications were received from 16 least developed countries, clearly reflecting the huge potential and entrepreneurial drive in those countries, dynamics which the Technology Bank intends to cultivate and support. In February 2021, 40 start-ups were selected to participate in an online pre-accelerator programme. During the Accelerator Programme, those start-ups had the opportunity to participate in one-to-one sessions with members of the SDG Impact Accelerator global mentor network, which includes investors, founders, private sector professionals and public representatives, and to prepare their plans for local implementation in Bangladesh and Uganda.

15. The Technology Bank also had a role in mentoring the start-ups in various issues including intellectual property and branding. The start-ups are currently in the implementation phase of their projects. Five winning start-ups from Bangladesh and Uganda will each receive up to \$100,000 to put their cutting-edge ideas into practice to combat rural poverty and financial exclusion in those countries. In launching the SDG Impact Accelerator in Bangladesh and Uganda, the Technology Bank will be able to adapt it so that it can later be extended to other least developed countries as a key pillar for venture strengthening and scale-up.

16. In the first quarter of 2021, the Technology Bank conducted a mapping exercise of the different innovation activities being carried out within the United Nations, together with a study of the lessons learned and best practices put in place since the adoption of the Istanbul Programme of Action for the Least Developed Countries for the Decade 2011–2020. Those efforts were complemented by interviews with entrepreneurs, accelerators and technology hub leaders in the least developed countries, thereby providing a more comprehensive view of the current entrepreneurial and innovation ecosystems. Based on the insights and lessons derived from the study, an innovation programme strategy was defined to take advantage of unaddressed gaps and opportunities. The strategy includes six pillars that constitute the underlying infrastructure of the Technology Bank innovation portfolio. During the reporting period, the Technology Bank initiated a process to build regional innovation hubs through a network of innovation greenhouses located in Bangladesh and Rwanda and in a potential anchor host country that will provide substantive knowledge and resources. The innovation greenhouses will develop and implement a smart innovation portfolio that will be interactive. The greenhouses will be implementable and may form the basis for further improvements in the innovation system.

17. As part of work stream six of the United Nations inter-agency task team on capacity-building in science, technology and innovation for the Sustainable Development Goals under the auspices of the Technology Facilitation Mechanism, the Technology Bank had planned to conduct three courses (one in Asia-Pacific, two in Africa, in English and French) for policymakers. Unfortunately, owing to the ongoing COVID-19 pandemic and travel restrictions, the training had to be postponed; instead, three online capacity development webinars will be conducted by the inter-agency task team and all the least developed countries for which the Technology Bank has carried out a technology needs assessment are expected to participate. The Technology Facilitation Mechanism also contributed to the capacity-building programme of the Southern African Development Community through a science, technology and innovation policy training course for senior policymakers and experts, held in September 2021.

18. In follow-up to the Trade for Peace event organized in November 2020 with the World Trade Organization, the Technology Bank joined the Trade for Peace Network in March 2021. The Trade for Peace Programme of the World Trade Organization promotes the multilateral trading system as a pathway to development and sustainable peace by highlighting the role of trade and economic integration in peace, security and humanitarianism. The Technology Bank participated in a Trade for Peace podcast and is also contributing to the drafting of a white paper on trade for peace. In 2022, the Technology Bank will establish a programme on technology for peace, which will enable it to leverage science, technology and innovation to support least developed countries that are emerging from conflict to identify and use technologies to create opportunities that promote stability and peace. The Tech for Peace Programme, complemented by the Trade for Peace Programme, will act as the nexus between technology and trade, especially when it comes to integrating micro-, small and medium-sized enterprises into the mainstream economy.

19. Based on research conducted using grant funding from the International Development Research Centre, the Technology Bank supported the production of the report entitled “Cultivating small and medium-sized firms: entrepreneurship development, gender, and technology in Bangladesh, Cambodia, Ethiopia and Senegal”. The report examines and compares the strategies adopted by four least developed countries with regard to three specific, interlinked areas of policy: (a) promoting the development of small and medium-sized enterprises as a means of stimulating economic growth, increasing employment opportunities and encouraging more inclusive development; (b) bolstering information and communications technologies and integrating a focus on digitization within economic policies; and (c) emphasizing the empowerment of women as a means of contributing to economic gain and greater equity in societies. The report was launched during a webinar on 11 May 2021, along with an action research programme designed to deepen research and practice in small and medium-sized enterprise development in the least developed countries.

20. To enable an ecosystem that promotes entrepreneurial activity with the capacity to find, adapt and adopt technologies, it is critical to ensure greater access to and the affordability of the Internet. With that vision in mind, the Technology Bank joined the Alliance for Affordable Internet, a partnership with the World Wide Web Foundation that aims to ensure equitable access to the Internet in the least developed countries. The partnership under the Alliance for Affordable Internet will focus on sharing knowledge, experience and expertise with a view to helping the least developed countries to develop the necessary policies and instruments, including through immersive future design workshops, that will act as a catalyst to engineering the connected future that the least developed countries wish to achieve. The Technology Bank is exploring collaboration with the International Telecommunication Union and with the Office of the Envoy of the Secretary-General on Technology in order to support the least developed countries in bridging the digital divide. Moreover, the Technology Bank has formally applied to join the Broadband Commission for Sustainable Development.

21. In 2021, the Technology Bank launched a new programme on partnerships and coordination. Given the vast needs of the least developed countries in terms of science, technology and innovation, the Technology Bank – a small and growing United Nations entity – relies on core strategic partnerships within and outside the United Nations system and with non-State actors in order to meet the full range of objectives set out in its Charter and make the expected transformational impact in all the least developed countries. To that end, the Technology Bank has engaged with entities in the Russian Federation and has signed memorandums of understanding with the Roscongress Foundation, the Agency of Technological Development and the Russian Investment Agency. The Technology Bank has also held a series of meetings to discuss the organization of joint events with the secretariat of the Russia-Africa Partnership Forum and the holding of joint technology-oriented sessions on the sidelines of the second Russia-Africa Summit in 2022. The Technology Bank has also joined the United Nations Brussels Task Force on Digitalization for the Sustainable Development Goals, which was set up to act as a bridge between the United Nations system and the European Union with regard to digital transformation issues.

22. Resource mobilization remained a key priority for the Technology Bank in 2021 and activities to mobilize and identify resource mobilization opportunities among private sector companies, philanthropic foundations and other non-State actors continued throughout the year. Despite best efforts, 2021 proved to be a difficult year for resource mobilization owing to the COVID-19 pandemic. The Technology Bank resource mobilization strategy was finalized in December 2020 and is guiding mobilization activities going forward. The Council subcommittee responsible for

resource mobilization has met twice since the last Council meeting held in November 2020.

23. As outlined in the 2021 programme of work ([TBLDC/2021/2](#)), the focus has been to enhance administrative capacity in the areas of finance, procurement, human resources and travel by increasing internal capacity. During the reporting period, the Technology Bank signed a service level agreement with the United Nations Office at Geneva to provide support on trust fund management, recruitment and travel, including procurement. Internal capacity on initiating and approving transactions on travel and procurement has now been strengthened.

24. During the reporting period, the following positions were filled: three Programme Management Officers (P-4), one Public Information Officer (P-3), one Associate Programme Officer (P-2), three Programme Assistants (G-5), one Team Assistant (G-4) and one Administrative Assistant (G-5). The recruitment of the remaining two General Service positions at the G-5 level is under way. In addition, the process of transitioning from short-term United Nations Office for Project Services contracts to fixed-term United Nations contracts has been completed, with the exception of the Information and Communications Technology Assistant (G-6), which is in process. The Technology Bank continues to explore the possibility of recruiting additional officials supported externally, such as through secondments or non-reimbursable loan arrangements.

25. The administrative unit of the Technology Bank continues to build its capacity with a view to increasing the efficiency and effectiveness of Technology Bank operations. In that regard, staff have been trained to use Umoja for routine administrative tasks. Lastly, the Technology Bank has introduced administrative policies and continues to provide guidance in order to enhance the capacity of staff with regard to the administrative-related guidelines of the United Nations and to ensure better operations planning and accountability.

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