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Review of the first three years of the Technology Bank for the Least Developed Countries

Report of the Secretary-General

Summary

The present report is submitted pursuant to General Assembly resolution 71/251, in which the Assembly requests the Secretary-General to prepare a report to inform it about the results achieved by the Technology Bank in the years 2019–2021. The purpose of the report is to enable the Assembly to review, as appropriate, the arrangements for the effective functioning of the Technology Bank.

As requested in resolution 71/251, a thorough review of the Technology Bank and its activities and projects has been undertaken. The present report sets out the analysis, findings and recommendations for continuing to strengthen the Technology Bank, in addition to ways to increase support to ensure its mandate is fulfilled for least developed countries. It draws on the internal review conducted by the Technology Bank of its operations, as contained in its first three-year strategic plan, and incorporates consultations with stakeholders based on its interactions with least developed countries, United Nations agencies, Member States, science, technology and innovation partners, the staff of the Technology Bank and the members of the Governing Council of the Technology Bank.

* A/76/150.

Contents

I. Introduction

1. As Member States were preparing the 2030 Agenda for Sustainable Development, they recognized that the science, technology and innovation gaps between least developed countries and the rest of the world must be narrowed in order to achieve the goals of eradicating widespread poverty through sustainable development. The Technology Bank for the Least Developed Countries was recognized by the General Assembly as a pivotal mechanism for achieving the Sustainable Development Goals, when it was established through resolution 71/251. That ambition has now become a reality. In the first three years since its establishment, the Technology Bank has demonstrated its effectiveness in working with the least developed countries and multi-stakeholder partners to place science, technology and innovation priorities at the forefront of dialogue and action.

2. The establishment of the Technology Bank marks a significant step towards achieving the Sustainable Development Goals, in line with target 17.8 of the Goals: "Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology". According to the Government of Lesotho, the Technology Bank, as one of the first achievements of target 17.8 of the Goals, will help strengthen science and technology innovations essential to development, and it called on donor countries to support the Technology Bank.

3. The Technology Bank represents a crucial mechanism for facilitating transformation, recognizing the role of science, technology and innovation in accelerating sustainable returns on investment for least developed countries, and reflecting the underlying principle of the United Nations development system reform process, which is to ensure the system is fit for purpose to achieve the Goals.

4. A shift is occurring for least developed countries, which now have an entity dedicated to placing their science, technology and innovation priorities at the forefront of dialogue and action. Technology needs assessments are playing a vital role in this regard, transforming science, technology and innovation prioritization to become country-led, rather than donor-led. The Technology Bank has begun establishing itself uniquely as an advocate for least developed countries when it comes to science, technology and innovation.

5. The Road Map for Digital Cooperation underscores that there is no one-size-fits-all response, owing to the differences within and among countries and regions. This attests to the relevance of the support provided by the Technology Bank to least developed countries to define their own needs and priorities as well as the relevance of its approach, namely, to facilitate and broker partnerships, share technology and mobilize resources.

6. Within 18 months of its operationalization, the global coronavirus disease (COVID-19) pandemic starkly reinforced the relevance of the Technology Bank and highlighted the urgency of its work to continuously enhance science, technology and innovation capacity in least developed countries. Meanwhile, the Technology Bank demonstrated its own operational resilience, not only by continuing to build new partnerships but also by demonstrating its responsiveness to the pandemic with exploratory and bespoke initiatives. United Nations agencies and many partners have continued to provide critical support to the Technology Bank to deliver on its mandate throughout the pandemic.

7. Global advances in science, technology and innovation are at risk of increasing existing inequalities between countries, with serious implications for achieving the

Goals.[1] This long-standing recognition of the science, technology and innovation gap, and the necessity of closing it, was articulated by least developed countries in the call for the establishment of the Technology Bank contained in the Programme of Action for the Least Developed Countries for the Decade 2011–2020 (Istanbul Programme of Action).

8. Advances in science, technology and innovation could bring numerous benefits. Science, technology and innovation are crucial to support development opportunities and job creation in countries where the humanitarian-development nexus approach is being implemented and thus stabilize peace and reduce needs for aid in the long run. Innovative solutions are needed to combat climate change, while the inclusion of women entrepreneurs in advancing science, technology and innovation could contribute to achieving gender equality. Furthermore, advances in science, technology and innovation are instrumental for least developed countries to graduate or maintain graduated least developed country status, and science, technology and innovation feature in national development plans and agendas and in the visions of least developed countries of becoming middle-income countries.

9. The relevance of the establishment of the Technology Bank is shown by its alignment with key science, technology and innovation support actions for development partners endorsed by the General Assembly, such as supporting the development of science and technology to increase agricultural production and productivity; facilitating the transfer of appropriate and affordable technology under mutually agreed terms; and supporting the development of clean and renewable energy technologies in accordance with relevant international agreements.

10. When the General Assembly endorsed the concept of a Technology Bank focused on least developed countries, a high-level panel was established by the Secretary-General in 2014 to undertake a feasibility study. The panel's report confirmed the feasibility and desirability of the Technology Bank, an entirely unprecedented organization with a lean structure that would build incrementally, working with multiple development partners to deliver an ambitious programme.

11. First and foremost, the panel identified the importance of putting least developed countries in the driver's seat to achieve the Goals, and for the Technology Bank to respond to aspirations and priorities as defined by countries themselves. The Technology Bank offers a mechanism for working with least developed countries to help initiate a virtuous cycle of high growth, sustained social progress and robust resilience.

12. The relevance of the focus and work of the Technology Bank is reflected in the feedback received from least developed countries, including Bhutan, the Gambia, Guinea, Malawi, Mozambique and Uganda, which confirms its engagement is much in demand to contribute practically to closing technology gaps. The Government of Bhutan, for instance, has expressed appreciation for the fact that Bhutan was one of the first countries to work with the Technology Bank, since the organization enables least developed countries to identify their needs and to adapt and implement science, technology and innovation initiatives. As stated by the Resident Coordinator Office in Bhutan, the Technology Bank is highly relevant to countries such as Bhutan that are preparing to graduate from the least developed country category and are therefore emphasizing the importance of harnessing the power of technology and digitalization.

13. As the least developed countries continue to further define their priorities and road maps to implementation through the technology needs assessments facilitated by the Technology Bank, it is more urgent than ever for the General Assembly to reaffirm

[1] United Nations Conference on Trade and Development, *Technology and Innovation Report 2021: Catching technological waves, Innovation with equity* (Geneva, 2021).

its commitment to and support for the Technology Bank and its purpose, and to support the Technology Bank and least developed countries in accelerating technology access and transfer as an integral condition for achieving the Goals.

14. The partnerships and initiatives of the Technology Bank with Member States, United Nations agencies and the private sector have demonstrated that resources can be more intentionally focused towards least developed countries. As has long been understood, developing countries face genuine obstacles to innovation: [2] this is precisely why there is a science, technology and innovation gap and the reason that a dedicated focus on least developed countries is needed to close the gap. It is imperative that donors support the Technology Bank and intentionally target resources towards least developed countries to increase technology capacity and capability and close the science, technology and innovation gap. What the Technology Bank has achieved in a short amount of time with a fraction of its budgetary needs is extraordinary, and to reach its full capacity and fulfil its mandate, both least developed countries and the Technology Bank need the full support of Member States.

II. Progress to date

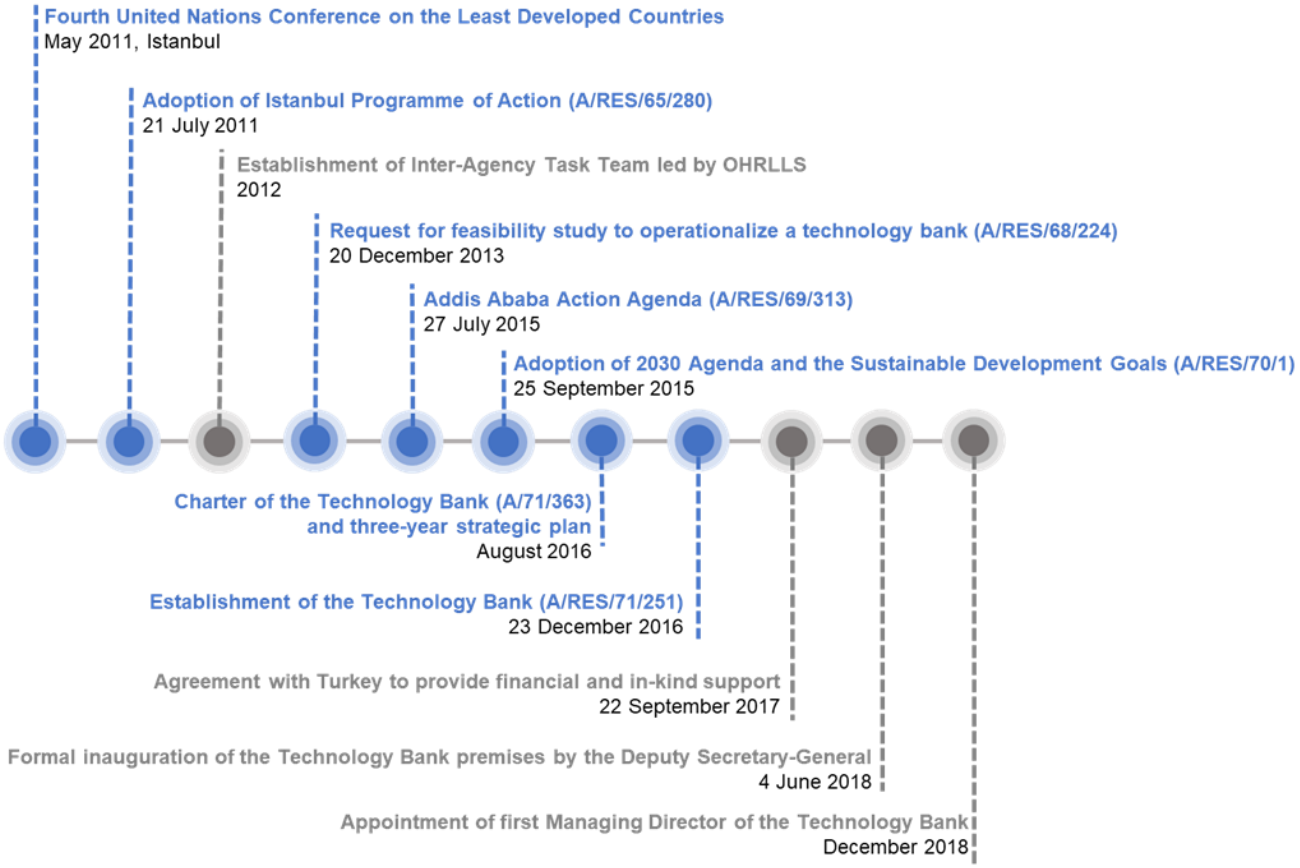
A. Establishment of the Technology Bank

15. In resolution 71/251, the General Assembly affirmed the Technology Bank as a subsidiary organ of the Assembly, reaffirmed its acceptance of the offer by Turkey to host the Technology Bank and welcomed the pledge made by the Government of Turkey to the trust fund for the operationalization of the Technology Bank. The General Assembly welcomed the establishment and operationalization of the Technology Bank in resolutions 72/228 and 72/231, which was a firm recognition by the Assembly of the importance of science, technology and innovation for development to achieve the Sustainable Development Goals.

16. The Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States was mandated to operationalize the Technology Bank, which included setting up its initial structures, budget and staff. The Technology Bank was fully operationalized by 2019, a relatively short period of time. The Secretary-General appointed the members of the Governing Council in March 2017, for a term ending in 2019. The Under-Secretary-General of the Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States was appointed as the Secretary-General's representative on the Governing Council. Agreements with Turkey as host country and on financial support were concluded in September 2017 and a trust fund was established. The operationalization was completed with the inauguration by the Deputy Secretary-General of the premises in Gebze, Turkey in June 2018 and the appointment of the Managing Director in November 2018. The full timeline of the establishment of the Technology Bank is shown in figure I.

[2] Jean-Eric Aubert, "Promoting Innovation in Developing Countries: A Conceptual Framework", World Bank Policy Research Working Paper, No. 3554 (Washington, D.C., World Bank, April 2005).

Figure I
Timeline of the establishment of the Technology Bank



Abbreviations: OHRLLS: Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States.

17. The achievements to date reflect both the process in which the Technology Bank established itself as an entity and the efforts invested across six programme areas envisaged by the feasibility study of 2015, which formed the basis of the first three-year strategic plan. The six programme areas are shown in figure II.

Figure II
Programme areas of the Technology Bank

18. The report covers a period in which the effects of the COVID-19 pandemic interrupted activities but also illustrated the ability of the Technology Bank to react and respond. In light of this particularly challenging context, it is perhaps even more important to confirm and document the successes, progress and learning to date. These reflect considerable achievements for the Technology Bank and its partners to build on.

19. It is impressive that the Technology Bank has forged ahead with its operationalization, navigated the global pandemic and established the foundations, partnerships and programmes needed to demonstrate proof of concept. As intended, it has placed least developed countries at the heart of its mandate, and is in a strong position to move forward into its next phase.

B. COVID-19 challenges and the rapid response of the Technology Bank to programme countries

20. The COVID-19 pandemic negatively impacted the planned activities of the Technology Bank, which relied heavily on in-person engagement, both to build relationships and to compensate for the reality of the unreliability of the existing technology infrastructure. Some activities slowed down, but virtual working enabled others to move forward.

21. Yet the pandemic further highlighted the science, technology and innovation gap for least developed countries and showed the value of the Technology Bank as it made its contribution to the United Nations response. The Technology Bank responded to

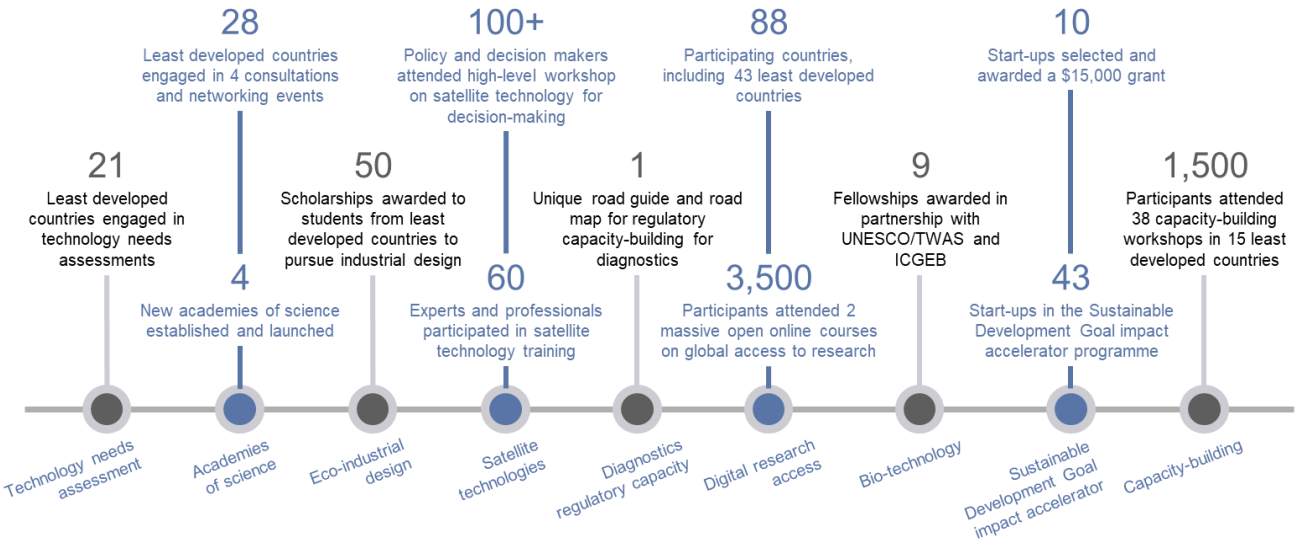
the pandemic in partnership with the World Health Organization, the United Nations Development Programme (UNDP) and the United Nations Conference on Trade and Development (UNCTAD) by establishing the Technology Access Partnership. The Partnership provided a unique opportunity to test mechanisms for future technology transfer programmes, a core pillar of the future work of the Technology Bank. The rapidly changing dynamics of both the pandemic and the world's response demonstrated that the Technology Bank could react quickly to initiate processes, such as technology transfer and supply chain strengthening, which assisted with the production of personal protective equipment and provided support for prototype solutions for quick, targeted and effective responses.

22. For instance, a workstream of the Technology Access Partnership on diagnostics provided unique inputs and the Local Production and Diagnostics Working Group will soon publish its step-by-step guides for Governments and companies in least developed countries to navigate the process of producing diagnostics locally for COVID-19 and other viruses. This guidance and road map for least developed countries are the first of their kind; they were funded by the Technology Bank and made possible by the expertise of the working group members. The Technology Bank will also continue to play a crucial role by enhancing science, technology and innovation capacity in least developed countries to ensure that their recovery from the pandemic is sustainable, just and resilient and that we leave no one behind.

C. Programme impact in alignment with national priorities

23. In its first three years, the programme of work of the Technology Bank delivered across the six priority areas identified in the feasibility study. A summary of the state of play in each area is provided in the sections below. Progress was achieved and, as intended, the on-the-ground experience of implementation has generated essential insights into current and future potential challenges, which will inform the strategies and priorities of the Technology Bank for its next phase.

Figure III
Technology Bank: achievements in numbers



Abbreviations: ICGEB: International Centre for Genetic Engineering and Biotechnology; TWAS: The World Academy of Sciences for the advancement of science in developing countries; UNESCO: United Nations Educational, Scientific and Cultural Organization.

24. A major focus ahead is the development by the Technology Bank of its innovation strategy, which will support the least developed countries in leveraging existing technologies through entrepreneurial activity and strengthen their capacity to identify and utilize both existing off-the-shelf and new indigenous technologies.

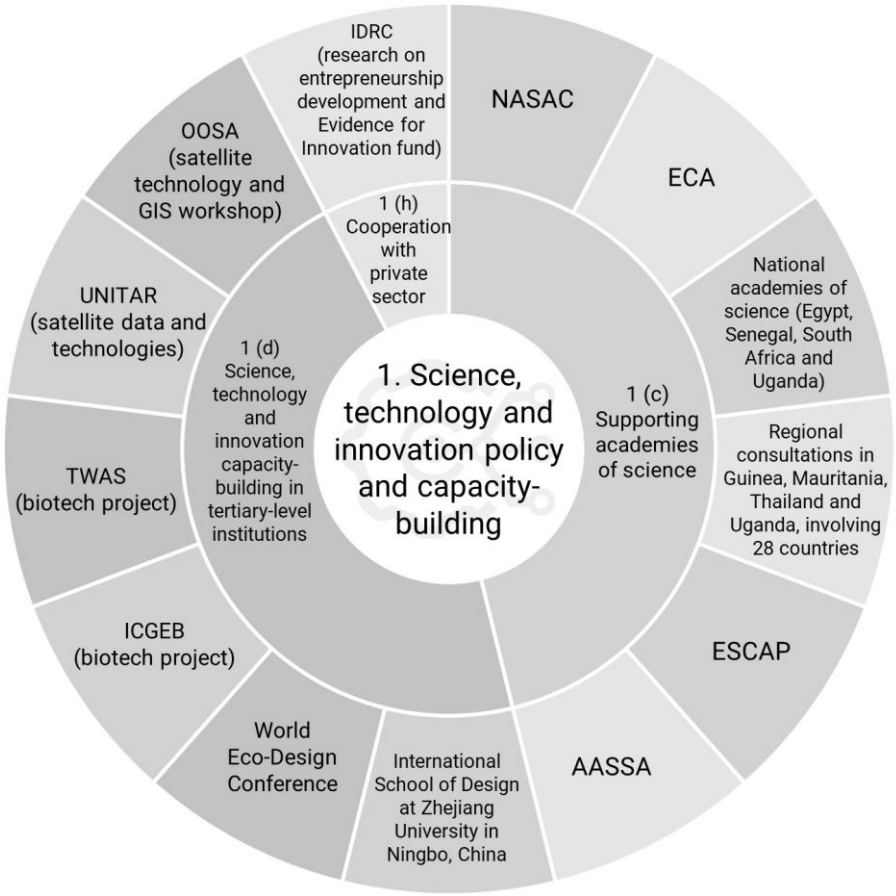
Programme area 1: science, technology and innovation policy and capacity-building

25. This programme area focused on strengthening networks of scientists, technologists and public institutions in least developed countries to enhance collaboration globally. Significant progress has been made by the Technology Bank in science, technology and innovation capacity-building efforts and supporting the establishment of academies of sciences in least developed countries. Some examples include:

- Satellite data for disaster risk reduction and disaster management: demand-driven capacity-building of tertiary institutions in partnership with the United Nations Institute for Training and Research (UNITAR) began with a pilot in 2020 in the Gambia, Mozambique and Uganda. A representative of the National Disaster Management Agency of the Gambia reflected that the training was very constructive and helpful, enabling the participants to learn, share ideas and improve their knowledge, which he would share with colleagues in his organization and region.
- Advanced satellite technologies training was held on the use of space solutions for disaster management and emergency response, in partnership with the Office for Outer Space Affairs (OOSA) in Bangladesh, Cambodia, the Lao People's Democratic Republic, Malawi, Nepal, the Niger and Solomon Islands.
- The biotechnology fellowships programme was launched in January 2021, which is a collaboration with the International Centre for Genetic Engineering and Biotechnology and The World Academy of Sciences for the advancement of science in developing countries[3] to promote networking among researchers and research institutions, and strengthen biotechnology capacity in the least developed countries. According to these two partners, the collaboration has been excellent and is tailored to build the capacity of scientists in least developed countries, which is a critical priority. They would like to see a way to expand the programmes and increase their impact for the benefit of sustainable growth in those countries.
- The partnership with the World Eco-Design Conference resulted in scholarships for 50 students from least developed countries to enhance their industrial design capacity.
- A new partnership with the Network of African Science Academies and the United Nations Economic Commission for Africa facilitated the acceleration of the establishment of 11 academies of science and paved the way for further regional initiatives to strengthen science, technology and innovation for least developed countries.
- The Evidence for Innovation fund was launched in May 2021, in partnership with the International Development Research Centre of Canada, to generate new evidence on the performance and the distributional impacts of policies in support of small and medium-sized enterprises in the least developed countries.

[3] A programme of the United Nations Educational, Scientific and Cultural Organization.

Figure IV
Programme area 1: partners and projects



Abbreviations: AASSA: Association of Academies and Societies of Science in Asia; ECA: Economic Commission for Africa; ESCAP: Economic and Social Commission for Asia and the Pacific; ICGEB: International Centre for Genetic Engineering and Biotechnology; IDRC: International Development Research Centre of Canada; NASAC: Network of African Science Academies; OOSA: Office for Outer Space Affairs; TWAS: The World Academy of Sciences for the advancement of science in developing countries; UNITAR: United Nations Institute for Training and Research.

Programme area 2: technology needs assessments for transformative change

26. Technology needs assessments have successfully placed least developed countries in the driver's seat of their technology ambitions and priorities. In 2019, the first five assessments were launched in Bhutan, the Gambia, Guinea, Timor-Leste and Uganda, in partnership with UNCTAD and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

27. The second round of technology needs assessments, which includes 16 countries,[4] will be completed by the end of 2021. The assessments will be carried out in close collaboration with a designated group of public and private sector experts in each least developed country.

[4] Afghanistan, Bangladesh, Benin, Cambodia, Djibouti, Kiribati, Lesotho, Liberia, Malawi, Mozambique, Nepal, Rwanda, Sao Tome and Principe, Sierra Leone, the Sudan and Zambia.

The unique purpose of technology needs assessments

The technology needs assessment process provides an analysis of the national science, technology and innovation environment and identifies the specific needs of the country that can be addressed with the use of technology. In parallel, it identifies and prioritizes relevant technologies to address those needs. The process results in a technology implementation plan, which is specific to each country and will serve as a basis for the country's technological development in line with the Sustainable Development Goals.

Technology implementation plans are a powerful tool to support a demand-driven approach to innovation and technology transfer and assist each least developed country in identifying specific needs and appropriate technologies to address them. The technology implementation plan is formulated through an iterative participatory process, converting the assessment into an actionable plan that can be taken up by the country but also helps development partners to shape their engagement with the least developed country on science, technology and innovation-related initiatives.

The technology needs assessment in Uganda

Uganda completed its technology needs assessment in 2020. The process was country-led; it was headed by the Ministry of Science, Technology and Innovation, in partnership with key national stakeholders in the agricultural and other relevant sectors, with technical and financial support from the Technology Bank. The technology needs assessment was also informed by the UNCTAD science, technology and innovation policy review and complemented by the technology needs assessment process of the United Nations Framework Convention on Climate Change.

Agriculture was identified by the Ministry as the main priority sector for Uganda, together with five other priority sectors: tourism, minerals, oil and gas, infrastructure and human capital development, in line with the third national development plan of Uganda.

The process led to the identification of key technologies with the potential for transformational change in the country as well as the challenges in the access and use of such technologies, and to outlining a strategy to overcome those challenges.

28. National stakeholders have highlighted the value of the technology needs assessments conducted to date and believe they are a significant example of the value added brought by the Technology Bank. According to the Ministry of Science, Technology and Innovation of Uganda, where the Technology Bank is assisting with networking and accessing different platforms, the Technology Bank brings what others lack in practicability and places the Ministry and its needs at the centre, listening to citizens' concerns, discussing challenges and appreciating the work of others. This country-led process, supported and facilitated by the Technology Bank, involves Governments, academia, the private sector and other relevant national stakeholders in the science, technology and innovation landscape. Additional synergies could be explored in the future once a significant number of technology needs assessments have been conducted, facilitating collaboration at the regional

level among least developed countries that are experiencing similar challenges and have aligned priorities.

Programme area 3: digital research access and networking

29. Digital access to research is an essential component of connecting knowledge and technologists, and this dedicated programme area supports least developed countries by facilitating and increasing access to digital scientific and technical resources.

Table 1
Programme area 3: projects and partners

Project	*Partner(s)*
Massive open online courses	Food and Agriculture Organization of the United Nations
	Research4Life
	Information Training and Outreach Centre for Africa
Bridging the Digital Divide	Alliance for Affordable Internet

- Digital access to research was increased for 1,500 researchers and professionals through 38 in-person workshops in 15 least developed countries.[5]
- Increased online access to scientific journals, books, and databases for researchers, students, scientists and policymakers, in partnership with the Food and Agriculture Organization of the United Nations (FAO) and Research4Life. The Technology Bank responded to the challenges of the COVID-19 pandemic with two massive open online courses attended by more than 3,500 participants from 88 countries, including 43 least developed countries. The value of the massive open online courses has been emphasized by participants; one participant from Ethiopia stated that the training represented a road map showing the direction of global research and the efforts of global communities, after he had lost time and energy trying to obtain real information and connect to the real world.[6]
- A partnership with the Alliance for Affordable Internet will support least developed countries in developing appropriate policies and instruments for enhanced connectivity and in advancing technology and innovation to reduce the digital divide.

Programme area 4: information access to support research, development and demonstration

30. The least developed countries experience considerable challenges in gaining access to existing evidence and information, which makes it difficult for them to operate on an equal playing field with other nations in the areas of science, technology and innovation. The Technology Bank works towards strengthening national capabilities to ensure that least developed countries are not left behind.

[5] Bangladesh, Bhutan, Burkina Faso, Comoros, Liberia, Madagascar, Malawi, Mozambique, Nepal, Rwanda, Senegal, Sierra Leone, Uganda, United Republic of Tanzania and Zambia.

[6] FAO, *Project report on Research4Life Massive Online Open Course on Global Access to Research in health, food and agriculture, environment, innovation and law* (Rome, 2021).

Table 2
Programme area 4: projects and partners

Project	*Partner(s)*
Pilot Hearing Loss Project in Bhutan	Bhutan
	Medtronic Labs
	Global Foundation for Children with Hearing Loss
Sustainable Development Goal impact accelerator	United Nations Development Programme
	Government of Turkey
Memorandum of understanding	Office of Information and Communications Technology of the Secretariat

- Information access will be increased for all least developed countries through the adaptation of the Global Innovation Exchange technology transfer platform (see programme area 6 below for more information on technology transfers).
- Partnering with the UNDP-led Sustainable Development Goal impact accelerator programme has pivoted focus to specifically benefit least developed countries with two pilots focused on digital agriculture in Uganda and financial inclusion in Bangladesh, with the aim of accelerating entrepreneurial talent to improve the science, technology and innovation landscape and improve livelihoods.

Programme area 5: intellectual property training and technical assistance

31. A major concern for advancing science, technology and innovation is integrating the least developed countries into the global intellectual property system. This was identified as a major gap, with a large asymmetry between least developed countries and intellectual property-holding countries, which significantly limits technology transfer. To address the technical knowledge and capacity gap in this area, the Technology Bank has integrated training and technical assistance on intellectual property across multiple activities as follows:

- Increasing understanding of patents and patentability criteria and the role of scientists in intellectual property protection and commercialization is part of the biotechnology programme.
- Manufacturers in partner countries have increased their capacity concerning intellectual property and patent-related issues through the Technology Access Partnership (see below).
- Intellectual property and copyright issues are included in the massive open online courses on global access to research.
- The importance of intellectual property systems and legislation for attracting investors and facilitating technology transfers is an integral part of the technology needs assessments.

Programme area 6: supporting intellectual property rights acquisition and technology transfer

32. The COVID-19 pandemic posed a particular challenge to least developed countries without technology transfer capacity to introduce aspects of medical equipment as part of their responses. The Technology Bank took stock of the urgency of the capacity gaps

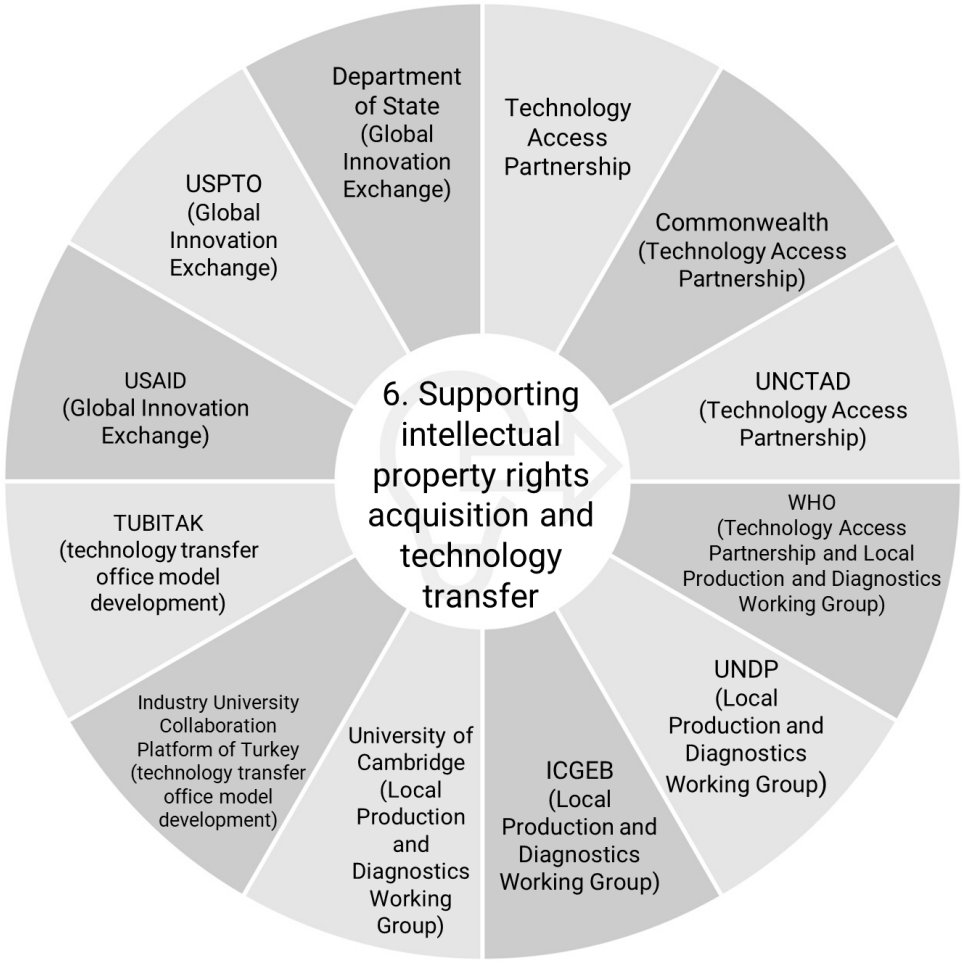
and launched the Technology Access Partnership, which aimed to support least developed countries in gaining access to, utilizing and circulating appropriate technologies to manufacture medical equipment and personal protective equipment to combat COVID-19. This project provided proof of concept in rapid technology transfer, which contributed to better health outcomes and strengthened local supply chains.

33. The Technology Access Partnership was launched in May 2020 in partnership with UNDP, UNCTAD and WHO, and joined by the Commonwealth. Within six months, the partnership triggered and supported technology transfers that equipped developing and least developed countries with essential diagnostics, personal protective equipment and medical device technologies to deal with the challenges of the COVID-19 pandemic. A technology transfer project between Costa Rica and Turkey saw N95 masks produced locally in Costa Rica and distributed in Costa Rica, Honduras and Panama. The Local Production and Diagnostics Working Group is due to publish its handbook and road map for diagnostics in September 2021, the first of its kind globally, providing a step-by-step guide for companies and Governments to navigate the process of locally producing diagnostics for COVID-19 (and other viruses).

34. Technology transfer initiatives included two major initiatives:

- A technology transfer office model for implementation in the least developed countries is being developed and piloted with the Gambia, with the support of the Scientific and Technological Research Council of Turkey and the Industry University Collaboration Platform of Turkey.
- The Global Innovation Exchange is a knowledge platform that aims to scale up the most promising global development innovations. Over 16,000 development innovations have been shared through the platform, facilitating $2.6 billion of cumulative funding for innovation projects. The United States Patent and Trademark Office, the United States Agency for International Development and the Department of State are negotiating the transfer of ownership of the Global Innovation Exchange platform from the United States of America to the Technology Bank.

Figure V
Programme area 6: projects and partners



Abbreviations: ICGEB: International Centre for Genetic Engineering and Biotechnology; TUBITAK: Scientific and Technological Research Council of Turkey; UNCTAD: United Nations Conference on Trade and Development; UNDP: United Nations Development Programme; USAID: United States Agency for International Development; USPTO: United States Patent and Trademark Office; WHO: World Health Organization.

III. Learning from the first three years

35. The Charter of the Technology Bank (A/71/363) set out the principal features of the arrangements for its functioning: small and with limited resources when established, the Technology Bank was envisioned to attract significant resources and progressively develop its corporate functions to deliver its mandate.

A. Governance and accountability

General Assembly

36. Reporting to the General Assembly is a feature of the accountability system, as seen in its request for the Governing Council to report annually on the work of the Technology Bank and that it receive the budget and programme of work.

37. The General Assembly has already emphasized the policy importance that should be attached to the Technology Bank. There would be significant advantages if it further considers or gives guidance or feedback to the Technology Bank, and promotes links across mechanisms and initiatives within the United Nations system. Member States can facilitate links with their development cooperation and ministries that are investing in science, technology and innovation in least developed countries. This would have the twin additional benefits of deepening the understanding among Member States of its role and strengthening the collaboration of the Technology Bank with other United Nations entities working in related fields.

Managing Director

38. The delegation of authority to the Managing Director as the executive head of a subsidiary body of the General Assembly has proven to provide the appropriate level of decision-making for the Technology Bank and the agility to adapt to changing contexts as needs emerge and as the science, technology and innovation landscape evolves, as evidenced by its work during the COVID-19 pandemic.

Governing Council

39. The Governing Council is still a new governing body of a new organ and is in the midst of its second three-year cycle, in which almost all members are completing a second term. Looking ahead to the next cycle, appointments in 2022 will continue to reflect the requisite balance between scientists, innovators and entrepreneurs. Within the remaining months of the current term, there is still much to capitalize on by continuing to draw on the experience and connections of the expert members to foster partnerships and support resource mobilization.

40. The Council is greatly interested in remaining apprised of the activities of the Technology Bank between sessions, and, as a means of keeping stakeholders informed, the Managing Director has initiated a system of quarterly reports which supplement the reporting requirements prescribed in the Charter.

41. The Charter also provides for the participation as observers of representatives of the World Bank, UNCTAD, UNESCO and the World Intellectual Property Organization. All United Nations entities should renew their commitment to support the Technology Bank through participation in the Governing Council in order to enrich its reflection on the appropriate work on science, technology and innovation matters as related to the mandate of the Technology Bank.

B. Programme direction

42. In terms of its programme of work, the Technology Bank has made significant achievements in several areas, while others have reflected the complexity of the landscape that least developed countries must navigate in strengthening science, technology and innovation holistically. In practice, some components require high levels of technical expertise and more time to configure the approaches of the Technology Bank. As the Technology Bank prepares for its multi-year planning cycle, it will build on its achievements and experience to date.

43. Two operational units – the Science, Technology and Innovation Supporting and Enabling Mechanism and the Intellectual Property Bank – could not be set up as envisaged, for two main reasons. First, the structure was premised on vastly more resources than were available. Second, the intention was to develop the activities of the Technology Bank progressively over time, with initial emphasis on capacity-building for science, technology and innovation. That was the function of the

Supporting Mechanism and has indeed been the focus of the work of the Technology Bank to date.

44. Concerning the Intellectual Property Bank, its overarching objective was to help to build the national intellectual property capacity of the least developed countries and to facilitate technology transfers (A/70/408, para. 28). Least developed country requirements for support in these areas have not abated, and as it develops its next strategic plan, the Technology Bank will directly address the issues and challenges related to the transfer of technology from intellectual property owners to least developed countries and the related role it can play.

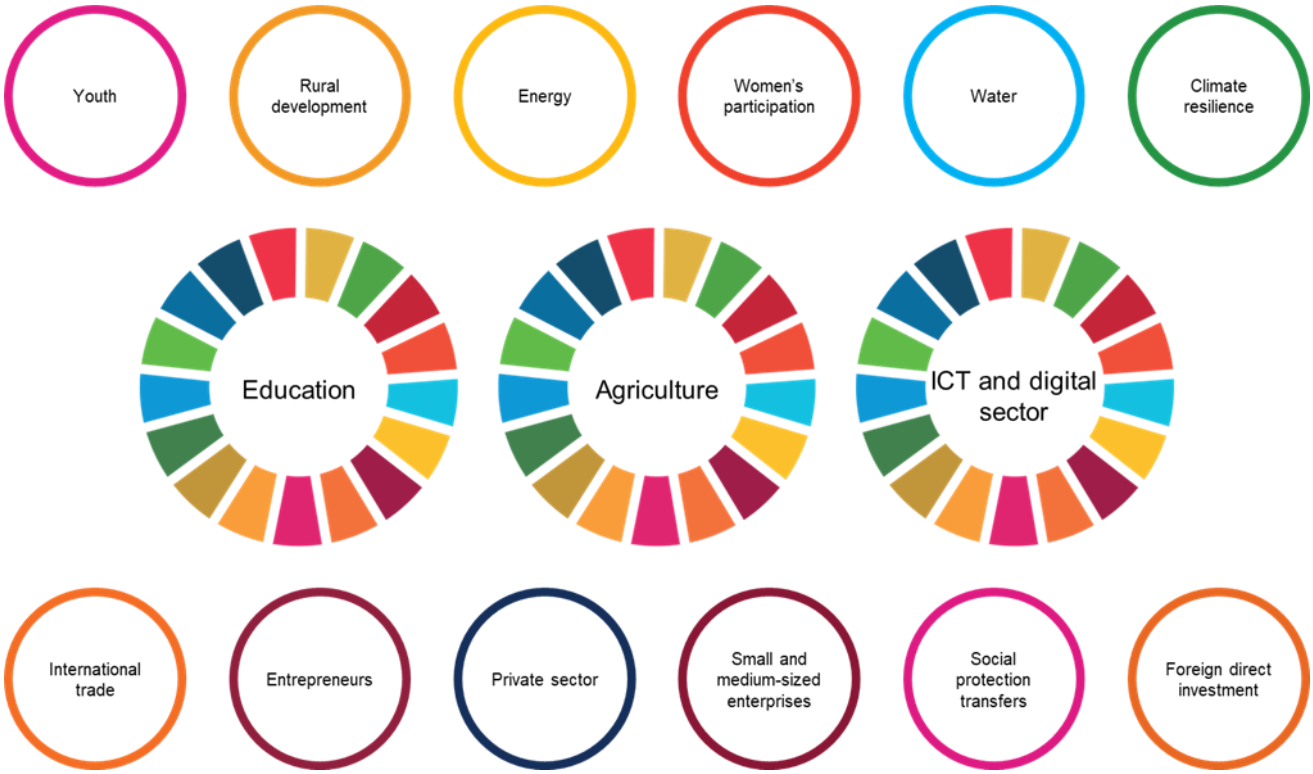
45. With respect to helping least developed countries develop their internal intellectual property policy and their capacity to participate in the global intellectual property system, the Technology Bank will define measures within its competence and capacity to catalyse progress, taking into account the competencies and mandates of other organizations in order to ensure that it avoids duplication. This will build on the preliminary foundations and partnerships that the Technology Bank has created in its first phase. In subsequent budgets, the Technology Bank will articulate the structural arrangements needed to undertake that work.

46. Least developed countries have identified the need for technology development across multiple linked sectors to increase economic growth and ultimately achieve the Sustainable Development Goals.[7] The technology needs of least developed countries shine a particular light on the interconnectedness of economic self-reliance (Goal 2), climate mitigation (Goals 6, 7 and 14), sustainable access to health technologies (Goal 3), local skills development (Goal 8), sustainable industrialization (Goal 9) and education and academic cooperation (Goal 17). The agriculture sector is high on the agenda in multiple countries, owing to the potential impact of technology on productivity, including in rural areas and in the context of strengthening climate resilience and adaptation. This focus on agriculture is linked to the need for sustainable energy and water security, and includes an emphasis on the role of women as producers and farmers.

47. Advancing the information and communications technology (ICT) and digital sector is an imperative for least developed countries, both as an end and as a means of strengthening multiple other sectors such as international trade and foreign direct investment, and it opens up the possibility of including previously unbanked populations and facilitating social protection transfers.

[7] Based on the technology needs assessments completed to date and the available national reports submitted to the Fifth United Nations Conference on the Least Developed Countries, a wide range of sectors are priorities for science, technology and innovation investments.

Figure VI
Science, technology and innovation priorities of least developed countries



C. Funding, sustainability and predictability

48. The Technology Bank must be fully resourced in order for it to achieve its mandate and be the catalyst for technology's role in achieving the Sustainable Development Goals.

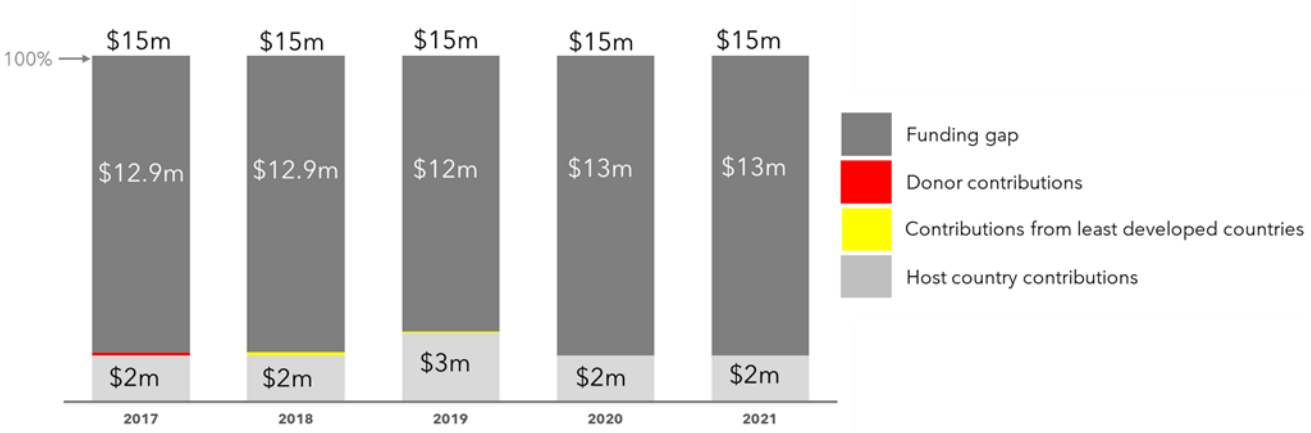
49. For the initial start-up, a staff of 36 and a biennial budget of $17.6 million was envisaged (A/70/408, para. 73). The resource mobilization strategy (2020) revisited and re-forecasted the budget needs of the Technology Bank at $15 million annually. Actual available resources were a fraction of this, at 13 per cent in most years, with the opportunities for resource mobilization during and after the COVID-19 pandemic having changed significantly. Resourcing is the fulcrum of arrangements for the effective functioning of the Technology Bank. The Technology Bank is mandated to operate on the basis of voluntary contributions and to solicit them from Member States and other actors. The reality is that, despite the importance attached to the establishment of the Technology Bank and the recognition that science, technology and innovation can foster growth and sustainable development, allocations for science, technology and innovation remain a small share of public and private development assistance.

50. As host country, Turkey pledged to provide, for five years initially, $2 million annually as well as premises, and an additional $1 million in 2020 toward the Sustainable Development Goal impact accelerator programme. Consultations are currently under way to renew the agreement for another five years. In a statement in

February 2021,[8] the Government of Turkey said that it continued to support the Technology Bank to help its efforts in bridging the digital divide and invited development partners and the least developed countries to contribute to the Technology Bank, which relied on voluntary donations.

51. In 2017, Norway provided NOK 1 million. Italy financed a Junior Professional Officer position, with requests for similar positions made to other Member States. These contributions have been supplemented by welcome contributions of $100,000 from India and $50,000 from both Bangladesh and Guinea. In line with these examples, all development partners should convey their support and make financial contributions to the Technology Bank. The Government of Guinea has expressed its satisfaction at being a donor and is hoping to increase its engagement, believing the Technology Bank and the technology needs assessments to be an important tool for the least developed countries that can improve social and economic conditions.

Figure VII
Technology Bank: funding received and funding gap, 2017–2021



52. Assuming conservatively that the annual budget forecast in the resource mobilization strategy is constant, the Technology Bank has in practice faced an 87 per cent funding gap in most years, as shown in figure VII. While the funding allocated in 2017 and 2018 accrued for the year 2019 – the first operational year of the Technology Bank – the overall funding gap and particularly the absence of predictable financial commitments have severely hampered the ability of the Technology Bank to hire its full complement of staff and plan ahead.

53. Inadequate resourcing for the Technology Bank will jeopardize our achievement of the 2030 Agenda if the science, technology and innovation gap between countries is not closed. Sufficient funding would allow the Technology Bank to enlarge its reach and engage even more significantly with all 46 least developed countries and a wider range of partners, ensuring the comprehensiveness of its technology needs assessments programme in all least developed countries as well as proper follow-up of the technology implementation plans.

54. Moreover, this would ensure full operationalization of its upcoming innovation strategy, and further expansion of its science, technology and innovation capacity-building programmes to include more countries and other relevant technology areas. Without the appropriate investment in the Technology Bank, there is a risk that least developed countries will not receive the catalytic inputs needed in science,

[8] Africa Regional Review meeting, in preparation for the Fifth United Nations Conference on the Least Developed Countries, 22–26 February 2021.

technology and innovation. Compared to the considerable leaps forward that the Technology Bank can facilitate with least developed countries, the annual budget is a very modest investment that is highly attainable with the support of Member States.

55. The initial phase of the work of the Technology Bank was expected to facilitate the consolidation of its financial base (A/70/408, para. 9). As detailed above, this consolidation has not yet been completed, and will be addressed through action on several levels in the next phase. One major advance is the new resource mobilization strategy of the Technology Bank, which defines short- and longer-term targets and options for realizing them. The Governing Council has established a committee to help drive resource mobilization. The Technology Bank is also continuing its efforts to develop partnerships with non-traditional donors.

56. Member States are strongly urged to make a commitment to funding the Technology Bank at this critical time in the form of predictable funding and unrestricted donations. It remains an urgent priority for Member States, beyond the host country, to become financial or programmatic champions for the Technology Bank. This is particularly important in the context of the new strategic planning process of the Technology Bank, as well as the upcoming programme of action for least developed countries that will follow the Fifth United Nations Conference on the Least Developed Countries. In February 2021, the Minister of Science, Technology and Innovation of Uganda called on Member States and in particular development partners to provide in-kind and/or financial support to the Technology Bank as the focal point on science, technology and innovation for the least developed countries.[9]

57. The paramount importance that the Technology Bank has placed on giving least developed countries a voice in charting their own technology development is reassuring. This needs to be made more widely known, and will require deepening the unique position of the Technology Bank as a one-stop shop for least developed countries to access science, technology and innovation services from United Nations system actors.

58. Member States can contribute practical support to the Technology Bank by strengthening its human resources and professional expertise. As a small United Nations entity, the Technology Bank is faced with the limitation that – so far – it can offer prospective staff members interesting work but not currently a career path. To attract capable staff from other United Nations entities, it needs to be able to position itself as a valuable but time-limited professional experience for staff while it continues to establish itself. The Technology Bank will become a signatory of the inter-agency agreement for facilitating the movement of staff.[10]

59. Member States can also support the Technology Bank by funding Junior Professional Officers, United Nations Volunteers, secondments and other facilitation mechanisms for professional staff to resource the Technology Bank.

D. Integration into the United Nations system and support for the Technology Bank

60. From the outset, the Technology Bank was expected to work in close collaboration with United Nations entities to leverage existing initiatives (A/70/408, para. 13).

[9] Africa Regional Review meeting, in preparation for the Fifth United Nations Conference on the Least Developed Countries, 22–26 February 2021.

[10] Inter-Organization Agreement Concerning Transfer, Secondment or Loan of Staff among the Organizations Applying the United Nations Common System of Salaries and Allowances, 2012.

61. In line with its drive for closer United Nations engagement as part of the wider system reform efforts, the Technology Bank has been engaging within the United Nations system and aligning itself with United Nations agencies, funds and programmes. Partnerships with UNDP, WHO, UNCTAD, UNESCO, UNITAR, OOSA and FAO, and the engagement with United Nations system-wide initiatives including the Technology Facilitation Mechanism[11] ensure that the Technology Bank is building on the experience of others, avoiding duplication and leveraging further partnerships.

62. Opportunities for collaboration at the country level are an important focus. They have been improved by the increased space for non-resident entities to participate in the United Nations country teams. The Technology Bank works very closely with United Nations resident coordinators, and the resident coordinator system is critical for the work of the Technology Bank in least developed countries. The Resident Coordinator Office of Bhutan has stated that the Technology Bank should work in close coordination with the Resident Coordinator Office to harmonize and explore collaboration and partnerships with other United Nations resident agencies and relevant government agencies, and to seek feedback when designing its strategic plan.

63. The resident coordinator system supports the responses of the Technology Bank to the priorities identified in intergovernmental frameworks such as the Istanbul Programme of Action, the SIDS Accelerated Modalities of Action (SAMOA) Pathway, the Vienna Programme of Action, and the Buenos Aires outcome document of the second High-level United Nations Conference on South-South Cooperation. With sufficient resources to extend its programme, the Technology Bank intends to progressively become a non-resident member of the United Nations country teams in least developed countries. This depth of engagement requires commensurate capacity and resources for the Technology Bank to advocate for science, technology and innovation issues in development cooperation frameworks and to serve as a resource for United Nations country team members in carrying out the science, technology and innovation dimensions of their programmes.

IV. The way forward to fully deliver on the potential of the Technology Bank

64. The objectives of the Technology Bank, in accordance with its Charter, continue to set its direction. The next phase of its operations and focus will benefit significantly from the detailed articulation of the priorities for least developed countries achieved through the technology needs assessments, ensuring it remains relevant in this decade following the Programme of Action for the Least Developed Countries for the Decade 2011–2020 and in the efforts to deliver on the expectations of the decade of action for the Sustainable Development Goals.

65. With each series of assessments, the individual priorities and science, technology and innovation landscapes of least developed countries come more sharply into focus, as do the specific barriers and challenges that need to be addressed. The Technology Bank will remain responsive and adaptive to the priorities and needs of least developed countries. According to the Ministry of Science and Technology of Mozambique, the Technology Bank is the voice of the least developed countries with regard to advancing science and technology to meet economic and social needs.

[11] The Technology Facilitation Mechanism was announced in paragraph 70 of the 2030 Agenda for Sustainable Development. It is particularly relevant as it aims to facilitate information exchange through multi-stakeholder collaboration and partnerships across all Member States and wider stakeholders to support implementation of the Sustainable Development Goals.

66. The report on the Programme of Action for the Least Developed Countries for the Decade 2011–2020 highlighted the important role the Technology Bank has to play in advancing science, technology and innovation, as well as in bridging the digital divide and contributing to COVID-19 response and recovery. But building blocks are required, with adequate resourcing from partners, and an incremental and achievable workplan going forward that aligns with the financial and human resources that are made available.

67. A major focus is the development by the Technology Bank of its innovation strategy and the related programme of work, which will support the least developed countries in leveraging existing technologies through entrepreneurial activity and strengthening their capacity to identify and utilize both existing off-the-shelf and new indigenous technologies. The next stage in this process will include the development of the innovation programme and a portfolio of projects co-designed with local stakeholders. The projects will cover different aspects of innovation, with a focus on assessing the entrepreneurship journey, enabling ecosystems, talent acceleration, strengthening of ventures and scale up, and network- and community-building. A proposal is already under discussion to establish an innovation facility with two regional hubs, which Member States are invited to support.

68. The Technology Bank will continue to raise its profile. Linked to this is the need for increased resource commitments and the ability of the Technology Bank to communicate the multiplicity of initiatives it is engaged with and to promote further engagement. This will require the Technology Bank to increase its internal capacity for knowledge management and for communications in several directions.

69. There are numerous audiences for the Technology Bank, including least developed countries, United Nations agencies, research institutions, the private sector, other development cooperation partners, and its own governance structures, all requiring tailored approaches to sharing information and increasing the accessibility of the Technology Bank. Aligned with this is the ability of the Technology Bank to demonstrate its results, for the purposes of encouraging greater engagement in both its activities and its financing. This requires the Technology Bank to invest in the appropriate monitoring and demonstration of expertise.

70. Practically, with a small and lean team, as the Technology Bank has been designed, it is essential to fill the vacant positions and identify mechanisms within the United Nations system to facilitate this. Closing the resource gap is essential for current operations, and without this, the sustainability of the Technology Bank and any ability for long-term planning and delivery is undermined.

71. Within three years, the Technology Bank has demonstrated its relevance to least developed countries and institutionalized the processes for it to remain relevant to countries going forward. It is appropriate and necessary to reinvigorate broad support and financial resources for the Technology Bank to ensure the success of its next phase and beyond.

72. The welcome financial support that has been received has also been complemented by in-kind contributions from Member States, United Nations agencies and development cooperation partners. However, it is evident that, overall, the financial resourcing of the Technology Bank has been far lower than envisaged. The Technology Bank will continue to establish its credibility by demonstrating effectiveness and results, which in turn builds confidence and attracts the investment from partners needed to create a track record.

73. The relevance of the Technology Bank is more vital than ever: it was conceived by least developed countries and established by the General Assembly, and least developed countries continue to affirm that building their science, technology and

innovation capacities and improving access to technology are fundamental to their development.

V. Conclusions and recommendations

74. **The Technology Bank has been established and operationalized successfully despite lacking full resourcing, and in the context of a global pandemic. The programme of work is demand-led, and strongly promotes national ownership. Its customized approach is welcomed by least developed countries and shows context-relevant results. The integration of the Technology Bank into the United Nations system has started and will continue. With the Fifth United Nations Conference on the Least Developed Countries taking place in 2022, this is a critical time to increase support to the Technology Bank, both as part of the post-COVID-19 recovery and to fulfil the agenda to leave no one behind.**

75. **To fulfil the commitment to the least developed countries, and for science, technology and innovation to benefit all the Sustainable Development Goals, the following recommendations are made to ensure the sustainability of the critical work of the Technology Bank and to spur science, technology and innovation investments as part of the shared responsibility of meeting the Goals:**

(a) **To the General Assembly:**

(i) **Reiterate its commitment to the Technology Bank and its mandate, and provide the Technology Bank with the full suite of support that it needs to succeed;**

(ii) **Engage with the Technology Bank and its mandate by providing relevant guidance and feedback on how it can further benefit from the support of the United Nations system and Member States;**

(iii) **Request a further update on the progress of the Technology Bank and its results at the end of its next phase of operations in three years' time.**

(b) **To Member States:**

(i) **Provide the necessary financial resources for predictable funding to the Technology Bank to ensure it can continue its establishment and fulfil its mandate as a fully operationalized entity;**

(ii) **Propose in-kind contributions to the work of the Technology Bank, including identifying new partnerships and opportunities for collaboration.**

(c) **To United Nations entities:**

(i) **Continue engaging with the Technology Bank to identify complementarities and new partnerships for accelerating access to and advancements in science, technology and innovation for least developed countries;**

(ii) **Include the needs of and opportunities provided by the Technology Bank when examining workforce mobility across the United Nations common system.**

76. **Furthermore, the Fifth United Nations Conference on the Least Developed Countries, scheduled for January 2022 in Doha, presents a crucial opportunity to mobilize increased support for enhancing the capacity of least developed countries to acquire new, transformative technologies while building domestic capacity and a knowledge base. The Conference comes at a critical time for least developed countries, as they push to recover from the COVID-19 pandemic and**

get back on track with implementation of the 2030 Agenda and the Sustainable Development Goals, with less than 10 years left in the decade of action. As such, it is recommended that a special session be held at the forthcoming Fifth United Nations Conference on the Least Developed Countries, at which the Technology Bank can engage with various stakeholders with regard to programme consultation and pledges of support, such as Member States, least developed countries and private sector actors. In addition, it is also recommended that the new programme of action for the least developed countries be adopted at the Fifth United Nations Conference on the Least Developed Countries, to ensure that engagement with the Technology Bank and science, technology and innovation are high on the agenda.

77. **General Assembly resolution 71/251 on establishing the Technology Bank has yielded results through the work of the Technology Bank over the past three years. Science, technology and innovation have proven to be critical in the sustainable development of least developed countries, but the COVID-19 pandemic has led to serious setbacks and widened existing gaps. The Technology Bank has the mandate and the capability to work side by side with least developed countries to close the science, technology and innovation gap and meet the Goals by 2030.**