Accelerating the Deployment of Cost-Effective and Affordable Technologies through the Technology Deployment Cooperation Program (TDCP)

Isatou Cham, Islamic Development Bank (icham@isdb.org)

Abstract

The Technology Deployment Cooperation Program (TDCP) of the Islamic Development Bank (IsDB) aims to accelerate the transfer and deployment of cost-effective technologies to address the key development challenges facing its 57 member countries. Technology and innovations are crucial for achieving sustainable development goals (SDGs) like ending poverty (#1), zero hunger (#2) and industry, innovation and infrastructure (#9), by 2030, leveraging on and partnerships (#17). However, 44% of IsDB member countries are Least Developed Member Countries (LDMCs) with low technology access. IsDB is cognizant of the challenges that MCs face in financing science and technology development and has taken steps to address these through cooperation and partnership. It is against this background that the TDCP seeks to forge strategic partnerships with the private sector and Centers of Excellence in both public and private sectors using North-South and South-South international cooperation mechanisms, as well as national collaboration to scale up innovative solutions. The program builds on the lessons learnt from the Reverse Linkage program which is an IsDB pioneer program promoting South-South Cooperation (SSC) initiatives.

TDCP Features

The Technology Deployment Cooperation Program (TDCP) is an innovative means to accelerate the deployment of technologies to boost the capacities of member countries by addressing their development challenges. The program supports priority technologies that promote inclusive development in target sectors, such as: agriculture and food security; health diagnostics, products, and services; quality of education systems; high-quality construction of infrastructure; and promote application of Information and Communication Technology (ICT).

The general principles of the program require that identified technologies must be relevant and aligned with the recipient countries' national development plans and priorities, as well as the IsDB Strategy 2025. Moreover, the program supports turnkey deployment of technologies that promote inclusive economic development and promote triple-win partnerships for the member country, the technology provider, and IsDB. A member country-led process is essential to the proper adoption and adaptation of the technological solution, likewise the commitment of all parties. Identified technologies must be cost-effective, practical, and inclusive, in addressing development challenges. The innovative nature of this program is reflected in its features as follows:

- Innovative blended financing option for increased access to concessionary financing.
- Member country-driven needs-based identification, design, and appraisal process.
- Solution-driven approach that goes beyond financing provided.
- Turnkey solution deployment services .
- Capacity development-oriented in transferring operational know-how for sustainability.
- Increased private sector engagement potential for the exchange of knowledge and expertise.

TCDP's innovative operational features are supported by:

- Policy dialogue and awareness-raising meetings to identify member country challenges and needs.
- Identification of potential technological solutions that can be harnessed.
- Pledges from Technology Providers (TPs) to buy-down the IsDB cost of financing for deployment of their technologies as Technology Provider Partners (TPP).
- Technology demonstrations and matchmaking with potential technology providers.
- Value for Money (VFM) assessments of the technology to ensure the validity of claims on the technology.

Practical experiences of the TDCP

The Technology Deployment Cooperation Program has generated a lot of interest from IsDB member countries and resulted in two demonstration workshops with countries that have identified aquaculture and road construction as priority sectors. In 2023, opportunities were presented for learning and exchange of experiences to facilitate awareness creation on the potential for transformation of both sectors. The innovative Soil Stabilisation and Sealing Technologies Workshop demonstration in Dakar, Senegal, raised awareness of the importance and benefits of such, for rural road construction in improving access to agricultural land and growth. Staff from eight (8)

national road and infrastructure agencies of West and Central African countries participated. Furthermore, during the Aquaculture Value Chain Technology Workshop hosted by the King Abdullah University of Science and Technology (KAUST), national agencies responsible for aquaculture from 4 countries participated in discussions on potential activities, and how to leverage the opportunities developing their industries through cooperation.

These demonstration visits created awareness of how such technologies can address challenges and enhance competitiveness. It is a key part of the matchmaking process to bring countries together for technology demonstrations, followed by evaluations for the identification of the right-sized technologies needed by countries. The TDCP has generated a pipeline of potential projects/programs that have the potential to make a difference in the lives of millions of people.

Progress

Resource Mobilization. To date, approximately US$95 million of grant resources have been mobilised under the TDCP from technology providers. In the first year of implementation, the program has already mobilized 47% of the total grants targeted for achievement by the end of the first five-year period. These grant pledges cover the following technologies: i) Innovative soil stabilization and sealing technologies for rural road construction, from Malaysia; ii) Aquaculture value chain solutions; iii) Innovative systems for wastewater recycling for horticultural use; iv) Innovative date palm management technologies.

The redemption of the grant pledges was catalyzed by IsDB through i) Support for matching the needs of interested member countries through conducting technology demonstrations and workshops. ii) Technology evaluations were conducted to confirm the validity and appropriateness of the technologies to meet project requirements, before launching the project design and approval process.

Partnerships. Key collaborations to date, include *unlocking aquaculture industry potential* in collaboration with King Abdullah University for Science and Technology (KAUST), in collaboration with Innovative Contractors for Advanced Dimensions (ICAD) for aquaculture industry development to improve food and nutrition security, livelihoods, employment and growth. ICAD has pledged to co-invest 20% of the project value, up to USD 20 million, as grants for future aquaculture projects to be deployed with IsDB financing. Technologies will be deployed from KSA to several countries that are interested in turnkey services along the aquaculture value chain. Another partnership was developed for the *application of innovative soil stabilization technologies for rural roads* with Probase Manufacturing Sdn Bhd (Probase) from Malaysia. Partnerships were also fostered, for the indpendant evaluations of these technologies including the Morocco Ministry of Equipment and Water.

Prospects

The program is on track for achieving the targets as follows:

- At least 10 IsDB member countries are targeted to benefit from the program by 2028. The actual number of interested countries in 2025, are 11 as at the first year of implementation.
- US$ 200 million in grants mobilised through pledges by 2028. Grant pledges as at 2024 are US$ 95 million
- 80% concessional financing mobilised for MCs are at less than 3% per annum.

Policy recommendations / conclusions

The following are key considerations observed during the implementation process for policy:

1. Concerted efforts are necessary for resource mobilisation to provide concessional resources through innovative means of financing.
2. Blended financing, is necessary to increase the concessionality of resources needed for technology transfer and deployment. This is an important factor, influencing access and the decision of countries to invest in much-needed technological solutions for development.
3. Private sector involvement is key, with the potential for immense benefits from South-South cooperation. University-industry partnerships are practical and must also be encouraged.
4. Collaboration and Networking: Conditions can be enhanced for countries through developing networks that bring together technology providers and recipients.

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Kagere, Technology Deployment Specialist, Syed Hassan Alsagoff, Manager STI, Islamic Development Bank.

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